

**TERMS OF REFERENCE****Demand Survey for Conformity Assessment services required by regulatory and supervisory bodies and Strategy Development****Peru  
IFD/CTI****PE-T1417****Strengthening of the National Quality and Standardization System****1. Background and Justification**

- 1.1 In the past few decades, Peru has shown an improvement in the reduction of the gross domestic product gap and average per capita income gap; however, no substantial progress has been made in reducing technological gaps and gaps in innovation processes. One of the greater challenges faced by the country is that of implementing and developing a Quality Infrastructure (QI) that can be used as a pivot point from which to reach an acceptable level of competitiveness and which allows for the creation of new sources of growth, generating jobs and reducing dependency on primary exports.
- 1.2 In order to increment the competitiveness of the country, the Peruvian Congress approved Law No. 30224, through which the National Quality System (NQS), as well as the National Quality Institute (INACAL, according to its initials in Spanish); were created as a functional system that integrates and articulates principles, norms, procedures, techniques, instruments and institutions, in order to promote and ensure compliance with the National Policy for Quality with the purpose of boosting development and increasing the competitiveness of economic activities, as well as consumer protection<sup>1</sup>. The NQS is composed of:
- The National Quality Council (CONACAL, according to its initials in Spanish).
  - The National Quality Institute (INACAL) and its Permanent and Technical Committees.
  - Public and private entities forming part of the QI.
- 1.3 The National Quality Institute (INACAL) is a Public Specialized Technical Body attached to the Ministry of Production, with legal identity under public law, with national jurisdiction and administrative, functional, technical, economic and financial autonomy. It is the governing body and the maximum technical and regulatory authority of the NQS, being responsible for its operation. Its purpose is to contribute with the development and compliance of the National Policy for Quality with the purpose of boosting development and increasing the competitiveness of economic

---

<sup>1</sup> Article 3 of Law No. 30224

activities, as well as consumer protection. All matters of standardization, accreditation and metrology are the responsibility of INACAL.

- 1.4 Standardization contributes to the generation of economic and social benefits because the existence of internationally harmonized standards improves production efficiency and facilitates international trade, which helps expedite trade flows, reduce costs and achieve greater integration of production networks. These benefits may be obtained if the aforementioned standards guarantee the coherence of the essential characteristics of goods and services, such as quality, ecology, safety, economy, reliability, compatibility, interoperability, efficiency and effectiveness.
- 1.5 Through accreditation, the technical competence of Conformity Assessment Bodies (CAB) is formally recognized after each CAB has undergone an audit to demonstrate compliance with internationally recognized standards and guidelines. To allow for faster trade flows, reduced costs and greater integration of production networks, it is vital for the country to have an adequate accreditation capacity and a sufficient supply of Accredited Conformity Assessment Bodies which can serve the different productive sectors.
- 1.6 The use of metrology helps generate trust on the local markets and allows companies to ensure that their products meet international standards and specifications. For that reason, the international recognition of a country's measurement system and recognition of its measurement capacity are essential for access to the global market since precise and reliable measurements are vital for productivity, competitiveness and innovation.
- 1.7 With the objective of strengthening the capacities of the NQS, the QI and its pillars (standardization, accreditation and metrology), INACAL continuously develops strategic actions that allow for improvement opportunities; these strategic actions are carried out both with the support of the central government as with the support of international cooperation. The development of quality infrastructure in the country has been, for some time now, one of the areas prioritized by the IDB, being within its line of action related to competitiveness and innovation. In Peru, in 2011, the IDB in coordination with the Ministry of Economy and Finance, financed the project "Diagnosis of the Peruvian national quality system and plan of action for its strengthening" which was focused on improving competitiveness.
- 1.8 Although INACAL has made significant progress regarding the National Quality System, there are still pending matters to resolve which have been identified as a condition to INACAL's consolidation at the national level. These issues can be summarized as follows<sup>2</sup>:
  - Limited use of QI services by the private and public sector, which hinders the application of better control and surveillance practices in the country.

---

<sup>2</sup> Institutional Perception

- High concentration of QI services in Lima, and very limited offer of these services in other regions of the country.
- Product value chains are not applying quality standards.
- The criteria and concepts used by consumers are not enough to create a demand for public services which offer quality standards.
- Mismatch between demand and supply, since some areas of metrology (such as chemistry or electronics) have not yet been developed; as is the case with the application of standards or duly certified processes and products.
- Low level of coordination between the public and private sectors to accelerate the implementation of the National Policy for Quality in the country.

On the other hand, the strategic orientation of the country, through its policy instruments, establishes a series of conditions that the QI must provide:

- The National Plan for Productive Diversification<sup>3</sup>, in its pillar of promotion of productive development, establishes as a key action “the generation of favorable conditions to increase productivity and competitiveness through the development of technical standards, laboratory accreditations and financing instruments for the certification of products under the leadership of INACAL”.

1.9 The National Policy on Competitiveness and Productivity<sup>4</sup> (NPCP), recognizes the importance of MSMEs in the Peruvian business scheme, and also identifies their low competitiveness and production to be a result of their low adoption of quality aspects, among other things. In this regard, the NPCP, under its priority objective 6 – to generate conditions for a productive business environment, established the objective of facilitating the application of quality standards and conformity assessment of the goods and services commercialized. The National Competitiveness and Productivity Plan contains a set of policy measures organized according to each primary objective and in line with policy guidelines. INACAL contributes to the improvement of the country's competitiveness by participating directly with actions aimed at increasing the use of QI services in public procurement<sup>5</sup>, improving the effectiveness of compliance with regulations through the use of IC services in the control and surveillance functions of regulatory and supervisory bodies<sup>6</sup>, and strengthening capacities for the internationalization of companies through the use of IC services that allow them to meet the technical requirements of the countries of destination<sup>7</sup>.

1.10 The compliance with mandates of policy guidelines, including the National Policy for Quality, the National Plan for Productive Diversification and the new National Policy on Competitiveness and Productivity, as well as the resolution of the problems identified, requires addressing the limitations of the supply and demand that hinder further development of the National Quality System. This

---

<sup>3</sup> Supreme Decree No. 345-2018-EF

<sup>4</sup> Supreme Decree No. 237-2019-EF

<sup>5</sup> Policy Measure 6.7: “Quality standards and environmental sustainability in public procurement”

<sup>6</sup> Policy Measure 6.8: “Application of quality standards in regulatory and supervisory entities”

<sup>7</sup> Policy Measure 7.1: “Service platform for the development of the exportable offer and internationalization of companies”

revealed need is the justification for the implementation of interventions that contribute to achieving this objective.

- 1.11 Law No. 30224, which creates NQS and INACAL, in its Article 33 establishes that "Public entities that require the use of conformity assessment bodies to exercise the functions of control and surveillance of their technical regulations, shall provide for the participation of conformity assessment bodies accredited by the directorate responsible for accreditation matters of INACAL; and only in their absence can they temporarily authorize organizations outside the framework of accreditation."
- 1.12 Within the framework of this mandate, in recent years there has been a growing demand from regulatory and supervisory bodies for accredited conformity assessment services which can support their control and surveillance actions. Recently, various legal instruments have been approved which establish a requirement for the accreditation of Conformity Assessment Bodies by INACAL:
  - Supreme Decree No. 013-2019-MINAM, which approves the Regulations of Law N° 30754, Framework Law on Climate Change, in which Article 49, 2. The verification at scale of mitigation measures, which consists of submitting reports of monitoring prepared by the institution in charge of the mitigation measure, in accordance with the provisions of the guidelines of the National Registry of Mitigation Measures and article 56.5 of these Regulations. In the case of mitigation measures that participate in payment by result mechanisms or in carbon markets, such verification is an independent process carried out by a conformity assessment body (CAB) accredited by INACAL or an accreditation body that is a member of the International Accreditation Forum (IAF). For the verification of GHG emission reductions under the Peruvian Technical Standard NTP ISO 14065: 2016. Equivalent to ISO 14065-1: 2013 or its updated equivalent; as well as by entities accredited by the UNFCCC for the verification of GHG reduction projects. State and non-state actors, such as indigenous or native peoples, collaborate in the verification process of the measures in which they are involved.
  - Supreme Decree No. 002-2020-MINAGRI, Supreme Decree amending the Regulation of Law N° 29196, Law for the Promotion of Organic or Ecological Production, approved by Supreme Decree No. 010-2012-AG and approving the Regulation of Certification and Inspection of Organic Production.
    - Article 21.- Requirements for the authorization of the Certification Bodies

The following are requirements for the authorization of a Certification Body: Product accreditation certificate within the scope of this Regulation and in accordance with the NTP ISO / IEC 17065 or equivalent standard, which must be demonstrated with an accreditation certificate issued by the National Quality Institute or with a certificate issued by another accreditation body that is a member of the Multilateral Recognition Agreement of the International Accreditation Forum (IAF) or the Inter-American Accreditation Cooperation (IAAC), in simple copy.
  - Urgency Decree No. 019-2020, Second Final Provision "Article 5.- On requirements and impediments. Legal entities requesting authorization to operate as a Vehicle Technical

Inspection Center (CITV, according to its initials in Spanish) must have adequate infrastructure, equipment and accredited professional-technical personnel. Likewise, they must have a training and advisory body on vehicular technical information, which can be accessed by the owners of mechanic workshops that function formally. In addition, they must be accredited as an inspection body by the National Quality Institute, according to the procedure provided for in the Regulations of this Law.

- 1.13 In addition, it should be noted that the National Plan for Competitiveness and Productivity, approved by Supreme Decree No. 237-2019-EF, assigned INACAL the responsibility of implementing the following policy measures:

- Policy Measure 6.7: Quality standards and environmental sustainability in public purchases
- Policy Measure 6.8: Application of quality standards in regulatory and supervisory entities

These policy measures contemplate the inclusion of quality standards in technical regulations, sanitary and phytosanitary measures, as well as environmental quality standards as appropriate, through the support of Conformity Assessment Bodies (CABs). This will allow, on the one hand, for regulatory or supervisory bodies to observe the referred quality standards in their procedures of supervision, control and sanction; and on the other hand, for market expansion for the creation of a greater number of CABs to exercise control and surveillance tasks at national level.

- 1.14 By 2030, it is expected to have 14 entities that apply quality standards in their work of regulation, control or surveillance, and this affects the potential development of CABs and MSMEs to market their goods and services with the quality required by citizens. The timely and efficient attention of these services requires improving the capacities of the Accreditation Directorate in its role as national authority for the policy and management of accreditation in the country.

- 1.15 As shown in the table below, Peru currently has 221 accredited conformity assessment bodies, which is equivalent to one (01) CAB for every 12,000 active companies<sup>8</sup>. The number of conformity assessment bodies in Peru is significantly lower compared to other Latin American countries.

Description	No observations	Total suspension	Total Voluntary Suspension	Partial Suspension	Partial Voluntary Suspension	Total	Total Active
Testing laboratories	103	1	2	3	1	110	107
Clinical laboratories	2					2	2
Calibration laboratories	40		1			41	40
Product Certification Bodies	8					8	8
Management Systems Certification Bodies	4					4	4

<sup>8</sup> Stock of companies III Quarter 2019 = 2 662 940. Technical Report "Business Demography in Peru" - INEI. Estimate:

$$coverage = \frac{Stock}{CAB} = \frac{2\,662\,940}{217} = 12\,049 \cong 12\,000$$

Inspection Bodies	60					60	60
Totals	217	1	3	3	1	225	221

- 1.16 In order to know the number and location of non-accredited conformity assessment bodies that provide services to companies and the public sector; INACAL has carried out a Census of Conformity Assessment Bodies with the support of the National Institute of Statistics and Informatics (INEI, according to its initials in Spanish). In this context, it is considered of vital importance to strengthen the Accreditation Directorate of INACAL and other NQS entities for the timely and efficient attention to the conformity assessment services required by regulatory and supervisory bodies.

## 2. **Objectives of the consultancy**

- 2.1 The general objective of this consultancy is to strengthen the Accreditation Directorate and the entities of the NQS (Accreditation ecosystem) for a timely and efficient attention current and future demand for conformity assessment services required by regulatory and supervisory bodies, as well as in the processes of public purchases.

- 2.2 Specific objectives of this consultancy are as follows:

- Identify the needs for conformity assessment services, from both regulatory and supervisory bodies, as well as those responsible for public policies, and identify the current and future demand for these services in support of their control and surveillance activities. For this, four sectors prioritized in the National Plan for Productivity and Competitiveness - Policy Measure 6.8 “Application of quality standards in the regulatory and supervisory entities”, will be selected.
- Identify the needs of conformity assessment services in public procurement processes and determine current and future demand, to ensure the quality of the products or services provided to the State.
- Identify the current offer of conformity assessment services.
- Determine the gap in conformity assessment services and capacities of the Accreditation Directorate, CABs and public sector entities<sup>9</sup>.
- Propose strategies and actions aimed at reducing gaps and in support of the State’s control and surveillance actions.

## 3. **Key activities**

- 3.1 Draft the work plan in coordination with the Accreditation Directorate of INACAL
- 3.2 Review available information to be used as base information, especially: “Results of the census of conformity assessment bodies” (inspection bodies, certification bodies, testing and calibration laboratories) executed by INACAL and “Determination of the demand - supply gap of laboratory accreditation services, current and potential.” SECO Swiss Cooperation.

<sup>9</sup> The results of the Census of Conformity Assessment Bodies of INACAL will be used.

- 3.3 Identify the supervisory and regulatory bodies of the selected sectors and carry out an information survey in order to identify the current and future needs of conformity assessment services and accreditation services. Future projection must be worked on a horizon of at least 10 years, while historically data must be considered at most up to 5 years prior to the present.
- 3.4 Review policy guidelines and management instruments of the identified regulatory and supervisory bodies as well as the norms and regulations issued to support their control and surveillance activities, in order to identify potential needs for conformity assessment services.
- 3.5 Analyze the public procurement processes (especially the Peru Compras Program) and identify the potential needs for conformity assessment services.
- 3.6 Analyze the technical convenience of the requirements of conformity assessment services in the normative and regulatory devices that incorporate them (both in support of control and surveillance actions, and in public purchases), and propose the most convenient services and types of conformity assessment needed, where applicable.
- 3.7 Analyze the institutional framework, strategic articulation and operational dynamics between the actors (both public and private) that influence on the generation of conformity assessment service needs, both in support of control and surveillance actions, and in public purchases.
- 3.8 Evaluate and systematize the operation of national accreditation systems from other countries allowing for the identification of adaptation opportunities in Peru, in terms of support for control and surveillance actions, and for public purchases; also considering the dynamics of institutionalism, articulation between actors and strategies to increase the participation of the private sector.
- 3.9 Evaluate the policy guidelines of regional governments and estimate the potential decentralized demand for conformity assessment services.
- 3.10 Propose the methodological framework for determining the demand, supply and gap for conformity assessment services.
- 3.11 Estimate the current and projected demand and supply of conformity assessment services required in the country. The information obtained from the INACAL CAB Census will be used.
- 3.12 Determine the gap in service provision for evaluated period.
- 3.13 Characterize the current operations of the Accreditation Directorate in its institutional relationship with the INACAL standardization and metrology areas with CABs, with State entities, with international organizations, and with other related actors.
- 3.14 Propose an intervention strategy aimed at reducing the gap in conformity assessment services.
- 3.15 Propose actions to strengthen the Accreditation Directorate and the NQS entities and their inter-institutional coordination.
- 3.16 Present the results to the authorities of INACAL and the IDB.

#### **4. Expected Outcome and Deliverables**

The deliverables are as follows:

#	Deliverable	Expected result
---	-------------	-----------------

1.	Work Plan	Detailed Work Plan including proposed activities, their sequence and timing, the proposed technical team, and the methodology to be used, specifying people responsible for each step.
2.	Survey	Draft survey to identify the current and future needs of conformity assessment services and accreditation services
3.	Analysis Report	<p>Report containing at least:</p> <ol style="list-style-type: none"> <li>1. Identification and characterization of regulatory and supervisory bodies, including an identification of current and future needs form conformity assessment services and accreditation services.</li> <li>2. Review of the policy guidelines and prospective management instruments of the regulatory and supervisory bodies identified.</li> <li>3. Analysis of the standards and regulations issued by regulatory and supervisory bodies and detailed identification of potential needs for conformity assessment bodies' services and Accreditation services.</li> <li>4. Analysis of public purchasing processes (especially Peru Compras), and identification of potential needs for conformity assessment and Accreditation services.</li> <li>5. Analysis of the technical convenience of conformity assessment services and bodies considered in norms or regulations (both in control and surveillance actions, and in public purchases) and proposal for improvement where appropriate.</li> <li>6. Analysis of institutional framework, strategic articulation and operational dynamics between the actors of the Peruvian conformity assessment and accreditation system, for control and surveillance actions, and for public purchases.</li> <li>7. Systematization of the operation of national accreditation systems in other countries, considering the dynamics of institutionalism, the articulation between actors and strategies to increase the participation of the private sector, portfolio of public and private services, replicable points; and proposal of activities to incorporate in the action strategy.</li> <li>8. Analysis of the regional dynamics regarding control and surveillance actions, and public purchases, and identification of potentially required services.</li> </ol>
4.	Final Report with detailed investment plan	<p>Integrated report containing, in addition to the aforementioned items:</p> <ol style="list-style-type: none"> <li>1. Description of the methodologies used for the estimation of demand, supply and gap of conformity assessment services, considering assumptions, parameters, among others.</li> <li>2. Estimation of the current and projected demand for: (a) conformity assessment services required in the country (b) Types of CABs required at the regional level to cover the detected needs of conformity assessment at the national level.</li> <li>3. Characterization of the current operations of the CABs in Peru, identifying the offer of services (accredited and non-accredited, national and international), and the current operations of the Accreditation Directorate, in terms of the provision of accreditation services, including installed capacity of attention (technical resources, management and infrastructure).</li> </ol>



		<p>4. Estimation and projection of the Supply of CA services and the Accreditation services and determine the gap for the projected period (CA and accreditation services).</p> <p>5. Proposal, and expected budget, for an intervention strategy aimed at reducing gaps in conformity assessment and accreditation in the country, especially in support of control and surveillance actions, and public purchases. The proposal should establish institutional requirements and strategic coordination necessary.</p>
5.	Final Presentation	1. Presentation of the results to INACAL.

## 6. Acceptance Criteria

- 5.1. 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.
- 5.2. Meetings with interested parties must be attended and coordinated by an INACAL official, especially from the Accreditation Directorate. Work meetings or similar processes must be evidenced with the corresponding minutes, which must be signed by the participants.

## 6. Qualifications

- 6.1. General requirements: The team must have national and / or international experience of at least 5 years in advising on accreditation and conformity assessment activities at international level. The team must include at least one team leader that will be responsible for the overall coordination of the project activities and management of the team and will act as the primary contact for communications with the IDB and the INACAL.
- 6.2. Team Composition: The team should be comprised of specialist in certification and inspection activities, specialist in public procurement, and specialist testing laboratory activities.
- a) Specialist in certification and inspection activities
- Qualified professional with Bachelor's degree or higher in engineering and/or related sciences; preferable with a Master's related to public management.
  - Experience:
    - Regarding quality infrastructure (QI), with a focus on Accreditation and ability to link accreditation with other related QI actors. Preferably international experience.
    - Minimum work experience of 2 years at a recognized Accreditation Body member of ILAC and IAF.
    - Minimum of 5 years working in a certification or inspection CAB or implementing management systems for this type of institution.

- Experience in studies determining installed capacity of organizations or process optimization. Development of accreditation and certification schemes, and evaluation or audits of management systems.
  - Leadership of work teams in the improvement of management systems.
  - Knowledge of:
    - Accreditation systems of peer accreditation bodies.
    - National political framework and national regulation framework or public management.
- b) Specialist in Public Procurement and public management
- Qualified professional with Bachelor's degree or higher according to country of studies in engineering and/or other related sciences.
  - At least 5 years of creditable experience in the management, administration and operation of public procurement processes.
  - Have the accreditation granted by the State Procurement and Procurement System with knowledge of Public Procurement.
- c) Specialist in testing laboratory activities
- Qualified professional with Bachelor's degree or higher according to country of studies, i.e.: in engineering and/or related sciences; preferably with a master's degree in science and/or public management.
  - With at least 5 years of creditable experience in implementing testing laboratory management systems. With experience in evaluation or audits of management systems.
  - Preferably with at least 2 years of work experience in an accreditation body.

## 7. Characteristics of the Consultancy

- Contract category and modality: Products and External Services Contractual, International, Firm, Lump Sum
- Workplace: Lima, Peru
- Contract duration: 6 months

## 8. Schedule of Deliverables and Milestones

Deliverables	Deadline
1. Work Plan	15 days after signing the contract
2. Survey	1 month
3. Preliminary Report	3 month
4. Final Report	5 month
5. Final Presentation	6 month

## 9. Supervision and Reporting

- 9.1 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 consulting firm's responsibility to ensure to ensure that all required meetings in the countries are conducted and reports are submitted to the Bank.

- 9.2 For technical coordination in the service development the supplier will have the Director of INACAL's Directorate of Accreditation as a focal point. The focal point monitors the development of the consultancy, supporting the supervision work of the Team Leader of IDB. INACAL 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, INACAL may issue observations, comments or instructions for changes, or a favorable technical opinion.

#### **10. Payment and Conditions**

- 10.1 Payment for this lump-sum contract is up to \$75,000 and the payment terms will be based on project milestones or deliverables. The Bank wishes to receive the most competitive cost proposal for the services described herein. The official IDB exchange rate indicated in the RFP will be applied for the necessary conversions of payments in local currency. Payments are made pending the approval of the corresponding deliverables, according to the detailed schedule:

<b>Payment Schedule</b>	
<b>Deliverable</b>	<b>%</b>
1. Contract signed and upon submission and approval of the work plan	20%
2. Upon reception and approval of Deliverable 2	20%
3. Upon reception and approval of Deliverable 3	30%
4. Upon reception and approval of Deliverable 4&5	30%
<b>Total</b>	<b>100%</b>

## **Consultancy for developing a proposal for a public investment project to strengthen the conformity assessment system**

**Peru  
IFD/CTI**

**PE-T1417**

### **Strengthening Peru's National Quality System**

#### **TERMS OF REFERENCE**

##### **Background**

In the past few decades, Peru has shown an improvement in the reduction of the gross domestic product gap and average per capita income gap; however, no substantial progress has been made in reducing technological gaps and gaps in innovation processes. One of the greater challenges faced by the country is that of implementing and developing a Quality Infrastructure (QI) that can be used as a pivot point from which to reach an acceptable level of competitiveness and which allows for the creation of new sources of growth, generating jobs and reducing dependency on primary exports.

In order to increment the competitiveness of the country, the Peruvian Congress approved Law No. 30224, through which the National Quality System (NQS), as well as the National Quality Institute (INACAL, according to its initials in Spanish); were created as a functional system that integrates and articulates principles, norms, procedures, techniques, instruments and institutions, in order to promote and ensure compliance with the National Policy for Quality with the purpose of boosting development and increasing the competitiveness of economic activities, as well as consumer protection. The NQS is composed of:

- a) The National Quality Council (CONACAL, according to its initials in Spanish).
- b) The National Quality Institute (INACAL) and its Permanent and Technical Committees.
- c) Public and private entities forming part of the QI.

The National Quality Institute (INACAL) is a Public Specialized Technical Body attached to the Ministry of Production, with legal identity under public law, with national jurisdiction and administrative, functional, technical, economic and financial autonomy. It is the governing body and the maximum technical and regulatory authority of the NQS, being responsible for its operation. Its purpose is to contribute with the development and compliance of the National Policy for Quality with the purpose of boosting development and increasing the competitiveness of economic activities, as well as consumer protection. All matters of standardization, accreditation and metrology are the responsibility of INACAL.

Standardization contributes to the generation of economic and social benefits because the existence of internationally harmonized standards improves production efficiency and facilitates international trade, which helps expedite trade flows, reduce costs and achieve greater integration of production networks. These benefits may be obtained if the aforementioned standards guarantee the coherence of the essential characteristics of goods and services, such as quality, ecology, safety, economy, reliability, compatibility, interoperability, efficiency and effectiveness.

Through accreditation, the technical competence of Conformity Assessment Bodies (CAB) is formally recognized after each CAB has undergone an audit to demonstrate compliance with internationally recognized standards and guidelines. To allow for faster trade flows, reduced costs and greater integration of production networks, it is vital for the country to have an adequate accreditation capacity and a sufficient supply of Accredited Conformity Assessment Bodies which can serve the different productive sectors.

The use of metrology helps generate trust on the local markets and allows companies to ensure that their products meet international standards and specifications. For that reason the international recognition of a

country's measurement system and recognition of its measurement capacity are essential for access to the global market since precise and reliable measurements are vital for productivity, competitiveness and innovation.

With the objective of strengthening the capacities of the NQS, the QI and its pillars (standardization, accreditation and metrology), INACAL continuously develops strategic actions that allow for improvement opportunities; these strategic actions are carried out both with the support of the central government as with the support of international cooperation.

The development of quality infrastructure in the country has been, for some time now, one of the areas prioritized by the IDB, being within its line of action related to competitiveness and innovation. In Peru, in 2011, the IDB in coordination with the Ministry of Economy and Finance, financed the project "Diagnosis of the Peruvian national quality system and plan of action for its strengthening" which was focused on improving competitiveness.

On the other hand, Korea has also provided support for strengthening the QI . In September 2016, a Memorandum of Understanding was signed between INACAL and the Korean Agency for Technology and Standards (KATS), valid for 5 years; in this context, technical support has been received through the International Standards Infrastructure Cooperation Program (ISCP). In 2018, KATS conducted the National Standards Capability Assessment Framework (NSCAF) to diagnose the national standards system and analyze the level of national standards capabilities of Peru to identify possible areas of cooperation . In addition, efforts have been made to include INACAL in the Annual Plan for the ISCP and other Korean institutions such as the Korean Standards Association - KSA and Korea Testing & Research Institute - KTR.

Although INACAL has made significant progress regarding the National Quality System, there are still pending matters to resolve which have been identified as a condition to INACAL's consolidation at the national level. These issues can be summarized as follows :

- Limited use of QI services by the private and public sector, which hinders the application of better control and surveillance practices in the country.
- High concentration of QI services in Lima, and very limited offer of these services in other regions of the country.
- Product value chains are not applying quality standards.
- The criteria and concepts used by consumers are not enough to create a demand for public services which offer quality standards.
- Mismatch between demand and supply, since some areas of metrology (such as chemistry or electronics) have not yet been developed as is the case with the application of standards or duly certified processes and products.
- Low level of coordination between the public and private sectors to accelerate the implementation of the National Policy for Quality in the country.

On the other hand, the strategic orientation of the country, through its policy instruments, establishes a series of conditions that the QI must provide:

- The National Plan for Productive Diversification , in its pillar of promotion of productive development, establishes as a key action "the generation of favorable conditions to increase productivity and competitiveness through the development of technical standards, laboratory accreditations and financing instruments for the certification of products under the leadership of INACAL".
- The National Policy on Competitiveness and Productivity (NPCP), recognizes the importance of MSMEs in the Peruvian business scheme, and also identifies their low competitiveness and production to be a result of their low adoption of quality aspects, among other things. In this regard, the NPCP, under its priority objective 6 – to generate conditions for a productive business environment, established the objective of facilitating the application of quality standards and conformity assessment of the goods and services commercialized.

- The National Competitiveness and Productivity Plan contains a set of policy measures organized according to each primary objective and in line with policy guidelines. INACAL contributes to the improvement of the country's competitiveness by participating directly with actions aimed at increasing the use of QI services in public procurement , improving the effectiveness of compliance with regulations through the use of IC services in the control and surveillance functions of regulatory and supervisory bodies , and strengthening capacities for the internationalization of companies through the use of IC services that allow them to meet the technical requirements of the countries of destination .

The compliance with mandates of policy guidelines (National Policy for Quality, the National Plan for Productive Diversification and the new National Policy on Competitiveness and Productivity), as well as the resolution of the problems identified, requires addressing the limitations of the supply and demand that hinder further development of the National Quality System. This revealed need is the justification for the implementation of interventions that contribute to achieving this objective. In this context, it is considered of vital importance to strengthen the Accreditation Directorate of INACAL and other NQS entities for the timely and efficient attention to the conformity assessment services required by regulatory and supervisory bodies.

### **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 prepare an investment plan aimed at increasing the number of accredited conformity assessment organizations at the national level as well as to strengthen INACAL's own capacity as the accreditation body.

### **What you'll do**

The consultant shall perform the following activities:

- Develop the methodological proposal for determining the level of institutional capacity, considering for this the projected gap in conformity assessment services, which will be provided by INACAL in a timely manner.
- In coordination with the Accreditation Directorate, determine level of maximum expected attention capacity that is intended to be achieved for the projection period.
- Analyze the operation of successful experiences in other countries' national accreditation systems, in order to determine application and replication opportunities to reduce the identified gap.
- Propose actions of the investment plan necessary to achieve the determined attention capacity.
- To determine, as a reference the incremental amounts and characteristics of resources (infrastructure - if applicable -, equipment, personnel, intangibles) necessary to reduce the service gap established, in coordination with the Accreditation Directorate.
- Estimate a referential budget for the required actions and the total of the investment proposal, by component and activity.
- Carry out a preliminary cost benefit analysis of the investment plan, estimating for this the operation and maintenance costs, as well as social benefits for the evaluation period and the normative evaluation parameters for public investment projects.
- Propose the monitoring indicators of the investment plan, baseline and expected achievements.

## Deliverables

- Deliverable 1: Detailed Work Plan proposed activities, their sequence and timing (Gantt), the proposed technical team, and the methodology to be used, specifying people responsible for each step.
- Deliverable 2: Interim report including a proposed methodology for determining the level of institutional attention capacity; level of institutional attention capacity for the identified service gap and an analysis of successful experiences of national accreditation systems of other countries and proposal for replication in Peru.
- 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.

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 that all required meetings in the countries are conducted and reports are submitted to the Bank.

For technical coordination, the consultant will communicate with the Director of Accreditation Directorate of INACAL as a focal point. The focal point monitors the development of the consultancy, supporting the supervision work of the person in charge assigned by IDB. INACAL 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, INACAL 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 Consulting Firm 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:

- 30% after the contract signed and upon submission and approval of the work plan
- 30% upon the approval of the Deliverable 2
- 40% upon the approval of the Deliverable 3

## Qualifications

- **Education:** Bachelor's degree (preferably Master's or similar postgraduate degree) in economics, engineering and/or related sciences.
- **Experience:** Experience of at least 5 years in private and / or public evaluation of investment projects and knowledge of cost-benefit analysis methodology.
- **Languages:** Proficiency in written and spoken Spanish.
- **Core and Technical Competencies:** Excellent written and verbal communication skills with an extensive knowledge of the public investment system of Peru. Experience of working in similar projects is desirable.

## Characteristics of Consultancy

- Type of contract and modality: PEC, Lump Sum
- Length of contract: 3 months
- Starting date: July 2021
- Location: Lima, Peru
- Responsible person: Gustavo Crespi, Science and Technology Principal Specialist, IFD/CTI

**Payment and Conditions:** Compensation will be determined in accordance with Bank's policies and procedures. The Bank, pursuant to applicable policies, may contribute toward travel and moving expenses. In addition, candidates must be citizens of an IDB member country.

**Visa and Work Permit:** The Bank, pursuant to applicable policies, may submit a visa request to the applicable immigration authorities; however, the granting of the visa is at the discretion of the immigration authorities. Notwithstanding, it is the responsibility of the candidate to obtain the necessary visa or work permits required by the authorities of the country(ies) in which the services will be rendered to the Bank. If a candidate cannot obtain a visa or work permit to render services to the Bank the contractual offer will be rescinded.

**Consanguinity:** Pursuant to applicable Bank policy, candidates with relatives (including the fourth degree of consanguinity and the second degree of affinity, including spouse) working for the Bank as staff members or Complementary Workforce contractual, will not be eligible to provide services for the Bank.

**Diversity:** The Bank is committed to diversity and inclusion and to providing equal opportunities to all candidates. We embrace diversity on the basis of gender, age, education, national origin, ethnic origin, race, disability, sexual orientation, religion, and HIV/AIDs status. We encourage women, Afro-descendants and persons of indigenous origins to apply.



## **TERMS OF REFERENCE**

### **Design of Information Platform for control and monitoring of the services provided by the Accreditation Directorate at INACAL**

**Peru  
IFD/CTI**

**PE-T1417**

### **Strengthening of the National Quality and Standardization System**

#### **1. Background and Justification**

- 1.1 In the past few decades, Peru has shown an improvement in the reduction of the gross domestic product gap and average per capita income gap; however, no substantial progress has been made in reducing technological gaps and gaps in innovation processes. One of the greater challenges faced by the country is that of implementing and developing a Quality Infrastructure (QI) that can be used as a pivot point from which to reach an acceptable level of competitiveness and which allows for the creation of new sources of growth, generating jobs and reducing dependency on primary exports.
- 1.2 In order to increment the competitiveness of the country, the Peruvian Congress approved Law No. 30224, through which the National Quality System (NQS), as well as the National Quality Institute (INACAL, according to its initials in Spanish); were created as a functional system that integrates and articulates principles, norms, procedures, techniques, instruments and institutions, in order to promote and ensure compliance with the National Policy for Quality with the purpose of boosting development and increasing the competitiveness of economic activities, as well as consumer protection<sup>10</sup>. The NQS is composed of:
  - The National Quality Council (CONACAL, according to its initials in Spanish).
  - The National Quality Institute (INACAL) and its Permanent and Technical Committees.
  - Public and private entities forming part of the QI.
- 1.3 The National Quality Institute (INACAL) is a Public Specialized Technical Body attached to the Ministry of Production, with legal identity under public law, with national jurisdiction and administrative, functional, technical, economic and financial autonomy. It is the governing body and the maximum technical and regulatory authority of the NQS, being responsible for its operation. Its purpose is to contribute with the development and compliance of the National Policy for Quality with the purpose of boosting development and increasing the competitiveness of economic

---

<sup>10</sup> Article 3 of Law No. 30224

activities, as well as consumer protection. All matters of standardization, accreditation and metrology are the responsibility of INACAL.

- 1.4 Standardization contributes to the generation of economic and social benefits because the existence of internationally harmonized standards improves production efficiency and facilitates international trade, which helps expedite trade flows, reduce costs and achieve greater integration of production networks. These benefits may be obtained if the aforementioned standards guarantee the coherence of the essential characteristics of goods and services, such as quality, ecology, safety, economy, reliability, compatibility, interoperability, efficiency and effectiveness.
- 1.5 Through accreditation, the technical competence of Conformity Assessment Bodies (CAB) is formally recognized after each CAB has undergone an audit to demonstrate compliance with internationally recognized standards and guidelines. To allow for faster trade flows, reduced costs and greater integration of production networks, it is vital for the country to have an adequate accreditation capacity and a sufficient supply of Accredited Conformity Assessment Bodies which can serve the different productive sectors.
- 1.6 The use of metrology helps generate trust on the local markets and allows companies to ensure that their products meet international standards and specifications. For that reason, the international recognition of a country's measurement system and recognition of its measurement capacity are essential for access to the global market since precise and reliable measurements are vital for productivity, competitiveness and innovation.
- 1.7 With the objective of strengthening the capacities of the NQS, the QI and its pillars (standardization, accreditation and metrology), INACAL continuously develops strategic actions that allow for improvement opportunities; these strategic actions are carried out both with the support of the central government as with the support of international cooperation. The development of quality infrastructure in the country has been, for some time now, one of the areas prioritized by the IDB, being within its line of action related to competitiveness and innovation. In Peru, in 2011, the IDB in coordination with the Ministry of Economy and Finance, financed the project "Diagnosis of the Peruvian national quality system and plan of action for its strengthening" which was focused on improving competitiveness.
- 1.8 Although INACAL has made significant progress regarding the National Quality System, there are still pending matters to resolve which have been identified as a condition to INACAL's consolidation at the national level. These issues can be summarized as follows<sup>11</sup>:
  - Limited use of QI services by the private and public sector, which hinders the application of better control and surveillance practices in the country.

---

<sup>11</sup> Institutional Perception

- High concentration of QI services in Lima, and very limited offer of these services in other regions of the country.
- Product value chains are not applying quality standards.
- The criteria and concepts used by consumers are not enough to create a demand for public services which offer quality standards.
- Mismatch between demand and supply, since some areas of metrology (such as chemistry or electronics) have not yet been developed; as is the case with the application of standards or duly certified processes and products.
- Low level of coordination between the public and private sectors to accelerate the implementation of the National Policy for Quality in the country.

On the other hand, the strategic orientation of the country, through its policy instruments, establishes a series of conditions that the QI must provide:

- The National Plan for Productive Diversification<sup>12</sup>, in its pillar of promotion of productive development, establishes as a key action “the generation of favorable conditions to increase productivity and competitiveness through the development of technical standards, laboratory accreditations and financing instruments for the certification of products under the leadership of INACAL”.

1.9 The National Policy on Competitiveness and Productivity<sup>13</sup> (NPCP), recognizes the importance of MSMEs in the Peruvian business scheme, and also identifies their low competitiveness and production to be a result of their low adoption of quality aspects, among other things. In this regard, the NPCP, under its priority objective 6 – to generate conditions for a productive business environment, established the objective of facilitating the application of quality standards and conformity assessment of the goods and services commercialized. The National Competitiveness and Productivity Plan contains a set of policy measures organized according to each primary objective and in line with policy guidelines. INACAL contributes to the improvement of the country's competitiveness by participating directly with actions aimed at increasing the use of QI services in public procurement<sup>14</sup>, improving the effectiveness of compliance with regulations through the use of IC services in the control and surveillance functions of regulatory and supervisory bodies<sup>15</sup>, and strengthening capacities for the internationalization of companies through the use of IC services that allow them to meet the technical requirements of the countries of destination<sup>16</sup>.

1.10 The compliance with mandates of policy guidelines, including the National Policy for Quality, the National Plan for Productive Diversification and the new National Policy on Competitiveness and Productivity, as well as the resolution of the problems identified, requires addressing the limitations of the supply and demand that hinder further development of the National Quality System. This

---

<sup>12</sup> Supreme Decree No. 345-2018-EF

<sup>13</sup> Supreme Decree No. 237-2019-EF

<sup>14</sup> Policy Measure 6.7: “Quality standards and environmental sustainability in public procurement”

<sup>15</sup> Policy Measure 6.8: “Application of quality standards in regulatory and supervisory entities”

<sup>16</sup> Policy Measure 7.1: “Service platform for the development of the exportable offer and internationalization of companies”

revealed need is the justification for the implementation of interventions that contribute to achieving this objective.

- 1.11 Law No. 30224, which creates NQS and INACAL, in its Article 33 establishes that "Public entities that require the use of conformity assessment bodies to exercise the functions of control and surveillance of their technical regulations, shall provide for the participation of conformity assessment bodies accredited by the directorate responsible for accreditation matters of INACAL; and only in their absence can they temporarily authorize organizations outside the framework of accreditation."
- 1.12 Within the framework of this mandate, in recent years there has been a growing demand from regulatory and supervisory bodies for accredited conformity assessment services which can support their control and surveillance actions. Recently, various legal instruments have been approved which establish a requirement for the accreditation of Conformity Assessment Bodies by INACAL:
  - Supreme Decree No. 013-2019-MINAM, which approves the Regulations of Law Nº 30754, Framework Law on Climate Change, in which Article 49, 2. The verification at scale of mitigation measures, which consists of submitting reports of monitoring prepared by the institution in charge of the mitigation measure, in accordance with the provisions of the guidelines of the National Registry of Mitigation Measures and article 56.5 of these Regulations. In the case of mitigation measures that participate in payment by result mechanisms or in carbon markets, such verification is an independent process carried out by a conformity assessment body (CAB) accredited by INACAL or an accreditation body that is a member of the International Accreditation Forum (IAF). For the verification of GHG emission reductions under the Peruvian Technical Standard NTP ISO 14065: 2016. Equivalent to ISO 14065-1: 2013 or its updated equivalent; as well as by entities accredited by the UNFCCC for the verification of GHG reduction projects. State and non-state actors, such as indigenous or native peoples, collaborate in the verification process of the measures in which they are involved.
  - Supreme Decree No. 002-2020-MINAGRI, Supreme Decree amending the Regulation of Law Nº 29196, Law for the Promotion of Organic or Ecological Production, approved by Supreme Decree No. 010-2012-AG and approving the Regulation of Certification and Inspection of Organic Production.
    - Article 21.- Requirements for the authorization of the Certification Bodies

The following are requirements for the authorization of a Certification Body: Product accreditation certificate within the scope of this Regulation and in accordance with the NTP ISO / IEC 17065 or equivalent standard, which must be demonstrated with an accreditation certificate issued by the National Quality Institute or with a certificate issued by another accreditation body that is a member of the Multilateral Recognition Agreement of the International Accreditation Forum (IAF) or the Inter-American Accreditation Cooperation (IAAC), in simple copy.
  - Urgency Decree No. 019-2020, Second Final Provision "Article 5.- On requirements and impediments. Legal entities requesting authorization to operate as a Vehicle Technical

Inspection Center (CITV, according to its initials in Spanish) must have adequate infrastructure, equipment and accredited professional-technical personnel. Likewise, they must have a training and advisory body on vehicular technical information, which can be accessed by the owners of mechanic workshops that function formally. In addition, they must be accredited as an inspection body by the National Quality Institute, according to the procedure provided for in the Regulations of this Law.

1.13 In addition, it should be noted that the National Plan for Competitiveness and Productivity, approved by Supreme Decree No. 237-2019-EF, assigned INACAL the responsibility of implementing the following policy measures:

- Policy Measure 6.7: Quality standards and environmental sustainability in public purchases
- Policy Measure 6.8: Application of quality standards in regulatory and supervisory entities

These policy measures contemplate the inclusion of quality standards in technical regulations, sanitary and phytosanitary measures, as well as environmental quality standards as appropriate, through the support of Conformity Assessment Bodies (CABs). This will allow, on the one hand, for regulatory or supervisory bodies to observe the referred quality standards in their procedures of supervision, control and sanction; and on the other hand, for market expansion for the creation of a greater number of CABs to exercise control and surveillance tasks at national level.

1.14 By 2030, it is expected to have 14 entities that apply quality standards in their work of regulation, control or surveillance, and this affects the potential development of CABs and MSMEs to market their goods and services with the quality required by citizens. The timely and efficient attention of these services requires improving the capacities of the Accreditation Directorate in its role as national authority for the policy and management of accreditation in the country.

1.15 As shown in the table below, Peru currently has 221 accredited conformity assessment bodies, which is equivalent to one (01) CAB for every 12,000 active companies<sup>17</sup>. The number of conformity assessment bodies in Peru is significantly lower compared to other Latin American countries.

Description	No observations	Total suspension	Total Voluntary Suspension	Partial Suspension	Partial Voluntary Suspension	Total	Total Active
Testing laboratories	103	1	2	3	1	110	107
Clinical laboratories	2					2	2
Calibration laboratories	40		1			41	40
Product Certification Bodies	8					8	8
Management Systems Certification Bodies	4					4	4

<sup>17</sup> Stock of companies III Quarter 2019 = 2 662 940. Technical Report "Business Demography in Peru" - INEI. Estimate:

$$coverage = \frac{Stock}{CAB} = \frac{2\,662\,940}{217} = 12\,049 \cong 12\,000$$

Inspection Bodies	60					60	60
Totals	217	1	3	3	1	225	221

- 1.16 In order to know the number and location of non-accredited conformity assessment bodies that provide services to companies and the public sector; INACAL has carried out a Census of Conformity Assessment Bodies with the support of the National Institute of Statistics and Informatics (INEI, according to its initials in Spanish). In this context, it is considered of vital importance to strengthen the Accreditation Directorate of INACAL and other NQS entities for the timely and efficient attention to the conformity assessment services required by regulatory and supervisory bodies.

## **2. Objectives of the consultancy**

- 2.1 The general objective of this consultancy is to design a management, monitoring and control system of the accreditation services, which allows INACAL to simplify its interaction with clients, optimize services time and monitor the quality of services by accredited entities.

## **3. Key activities**

- 3.1 Draft the work plan in coordination with the Accreditation Directorate of INACAL.
- 3.2 Define the scope, processes and system requirements for the platform, as well as the scope and complementary processes for the scalability framework (incremental model), in coordination with the Accreditation Directorate.
- 3.3 Design a modular system, which should include modules for facilitating and processing customer services and for facilitating information management and monitoring. Each module must clearly define the functional specifications.
- 3.4 Establish a processes map of the system and functional relationships in detail.
- 3.5 Program the system using UX and UI design which consider applications that ensure future scalability.
- 3.6 Elaborate technical documentation for database and platform.
- 3.7 Propose at least three designs which must consider INACAL's corporate image guidelines.
- 3.8 Participate in internal workshops showing the operation of the proposed system.
- 3.9 Identify, record and systemize the feedback of the participants in the workshops.
- 3.10 Present the results to the authorities of INACAL and the IDB.

## **4. Expected Outcome and Deliverables**

The deliverables are as follows:

#	Deliverable	Expected result
1.	Work Plan	<ul style="list-style-type: none"> <li>Detailed Work Plan including proposed activities, their sequence and timing, the proposed technical team, and specifying people responsible for each step.</li> </ul>
2.	System design	<ul style="list-style-type: none"> <li>System Requirements, Scope and System Processes.</li> </ul>

		<ul style="list-style-type: none"> <li>• Complementary scope and processes within the scalability framework (incremental model).</li> <li>• Map of processes and modules of the system.</li> <li>• Detailed functional relationships</li> </ul>
3.	System programming	<ul style="list-style-type: none"> <li>• Alternatives of platforms and graphic designs.</li> <li>•</li> </ul>
4.	Final Report	<ul style="list-style-type: none"> <li>• Recommendations and suggestions of INACAL professionals in the final design of the platform.</li> </ul>
5.	Final Presentation	<ul style="list-style-type: none"> <li>• Presentation of the results to INACAL.</li> </ul>

## 5. Acceptance Criteria

- 10.1. 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.
- 10.2. Meetings with interested parties must be attended and coordinated by an INACAL official, especially from the Accreditation Directorate. Work meetings or similar processes must be evidenced with the corresponding minutes, which must be signed by the participants.

## 11. Qualifications

- 11.1. General requirements: The firm must have at least 5 years of experience providing services for design and implementation of WEB applications or computer systems in public or private entities. The team must include at least one team leader that will be responsible for the overall coordination of the project activities and management of the team and will act as the primary contact for communications with the IDB and the INACAL.
- 11.2. Team Composition: The team should be comprised of a team manager and programmer.
- a) Team Manager
- Bachelor's degree or higher in computer or software engineering and/or other related engineering; preferable with a Master's degree related to public management.
  - Experience:
    - Minimum of 5 years working in web or app design in private or public entities.
- b) Programmer
- Bachelor's degree or higher according to country of studies in in computer or software engineering and/or other related engineering.
  - Experience:
    - Minimum of 5 years of experience programing for web or apps design in private or public entities.

- Experience as a team member in at least 3 similar projects.

## **12. Characteristics of the Consultancy**

- Contract category and modality: Products and External Services Contractual, Firm, Lump Sum.
- Workplace: Lima, Peru.
- Contract duration: 6 months.

## **13. Schedule of Deliverables and Milestones**

<b>Deliverables</b>	<b>Deadline</b>
1. Work Plan	15 days after signing the contract
2. System design	30 days.
3. System programming	3 months
4. Final Report	5 months
5. Final Presentation	6 months

## **14. Supervision and Reporting**

- 9.1 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 consulting firm's responsibility to ensure to ensure that all required meetings in the countries are conducted and reports are submitted to the Bank.
- 9.2 For technical coordination in the service development the supplier will have the Director of INACAL's Directorate of Accreditation as a focal point. The focal point monitors the development of the consultancy, supporting the supervision work of the Team Leader of IDB. INACAL 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, INACAL may issue observations, comments or instructions for changes, or a favorable technical opinion.

## **15. Payment and Conditions**

- 10.1 Payment for this lump-sum contract is up to \$22,000 and the payment terms will be based on project milestones or deliverables. The Bank wishes to receive the most competitive cost proposal for the services described herein. The official IDB exchange rate indicated in the RFP will be applied for the necessary conversions of payments in local currency. Payments are made pending the approval of the corresponding deliverables, according to the detailed schedule:

<b>Payment Schedule</b>	
<b>Deliverable</b>	<b>%</b>
1. Contract signed and upon submission and approval of the work plan	10%



## ANNEX II

2. Upon reception and approval of Deliverable 2	20%
3. Upon reception and approval of Deliverable 3	30%
4. Upon reception and approval of Deliverable 4	40%
Total	100%

## **TERMS OF REFERENCE**

### **Diagnosis of gaps in specialized metrology services in Peru**

**Peru  
IFD/CTI**

**PE-T1417**

### **Strengthening of the National Quality and Standardization System**

#### **1. Background and Justification**

- 1.1 In the past few decades, Peru has shown an improvement in the reduction of the gross domestic product gap and average per capita income gap; however, no substantial progress has been made in reducing technological gaps and gaps in innovation processes. One of the greater challenges faced by the country is that of implementing and developing a Quality Infrastructure (QI) that can be used as a pivot point from which to reach an acceptable level of competitiveness and which allows for the creation of new sources of growth, generating jobs and reducing dependency on primary exports.
- 1.2 In order to increment the competitiveness of the country, the Peruvian Congress approved Law No. 30224, through which the National Quality System (NQS), as well as the National Quality Institute (INACAL, according to its initials in Spanish); were created as a functional system that integrates and articulates principles, norms, procedures, techniques, instruments and institutions, in order to promote and ensure compliance with the National Policy for Quality with the purpose of boosting development and increasing the competitiveness of economic activities, as well as consumer protection<sup>18</sup>. The NQS is composed of:
  - The National Quality Council (CONACAL, according to its initials in Spanish).
  - The National Quality Institute (INACAL) and its Permanent and Technical Committees.
  - Public and private entities forming part of the QI.
- 1.3 The National Quality Institute (INACAL) is a Public Specialized Technical Body attached to the Ministry of Production, with legal identity under public law, with national jurisdiction and administrative, functional, technical, economic and financial autonomy. It is the governing body and the maximum technical and regulatory authority of the NQS, being responsible for its operation. Its purpose is to contribute with the development and compliance of the National Policy for Quality with the purpose of boosting development and increasing the competitiveness of economic activities, as well as consumer protection. All matters of standardization, accreditation and metrology are the responsibility of INACAL.

---

<sup>18</sup> Article 3 of Law No. 30224

- 1.4 Standardization contributes to the generation of economic and social benefits because the existence of internationally harmonized standards improves production efficiency and facilitates international trade, which helps expedite trade flows, reduce costs and achieve greater integration of production networks. These benefits may be obtained if the aforementioned standards guarantee the coherence of the essential characteristics of goods and services, such as quality, ecology, safety, economy, reliability, compatibility, interoperability, efficiency and effectiveness.
- 1.5 Through accreditation, the technical competence of Conformity Assessment Bodies (CAB) is formally recognized after each CAB has undergone an audit to demonstrate compliance with internationally recognized standards and guidelines. To allow for faster trade flows, reduced costs and greater integration of production networks, it is vital for the country to have an adequate accreditation capacity and a sufficient supply of Accredited Conformity Assessment Bodies which can serve the different productive sectors.
- 1.6 The use of metrology helps generate trust on the local markets and allows companies to ensure that their products meet international standards and specifications. For that reason, the international recognition of a country's measurement system and recognition of its measurement capacity are essential for access to the global market since precise and reliable measurements are vital for productivity, competitiveness and innovation.
- 1.7 With the objective of strengthening the capacities of the NQS, the QI and its pillars (standardization, accreditation and metrology), INACAL continuously develops strategic actions that allow for improvement opportunities; these strategic actions are carried out both with the support of the central government as with the support of international cooperation. The development of quality infrastructure in the country has been, for some time now, one of the areas prioritized by the IDB, being within its line of action related to competitiveness and innovation. In Peru, in 2011, the IDB in coordination with the Ministry of Economy and Finance, financed the project "Diagnosis of the Peruvian national quality system and plan of action for its strengthening" which was focused on improving competitiveness.
- 1.8 Although INACAL has made significant progress regarding the National Quality System, there are still pending matters to resolve which have been identified as a condition to INACAL's consolidation at the national level. These issues can be summarized as follows<sup>19</sup>:
  - Limited use of QI services by the private and public sector, which hinders the application of better control and surveillance practices in the country.
  - High concentration of QI services in Lima, and very limited offer of these services in other regions of the country.
  - Product value chains are not applying quality standards.

---

<sup>19</sup> Institutional Perception

- The criteria and concepts used by consumers are not enough to create a demand for public services which offer quality standards.
- Mismatch between demand and supply, since some areas of metrology (such as chemistry or electronics) have not yet been developed; as is the case with the application of standards or duly certified processes and products.
- Low level of coordination between the public and private sectors to accelerate the implementation of the National Policy for Quality in the country.

On the other hand, the strategic orientation of the country, through its policy instruments, establishes a series of conditions that the QI must provide:

- The National Plan for Productive Diversification<sup>20</sup>, in its pillar of promotion of productive development, establishes as a key action “the generation of favorable conditions to increase productivity and competitiveness through the development of technical standards, laboratory accreditations and financing instruments for the certification of products under the leadership of INACAL”.

1.9 The National Policy on Competitiveness and Productivity<sup>21</sup> (NPCP), recognizes the importance of MSMEs in the Peruvian business scheme, and also identifies their low competitiveness and production to be a result of their low adoption of quality aspects, among other things. In this regard, the NPCP, under its priority objective 6 – to generate conditions for a productive business environment, established the objective of facilitating the application of quality standards and conformity assessment of the goods and services commercialized. The National Competitiveness and Productivity Plan contains a set of policy measures organized according to each primary objective and in line with policy guidelines. INACAL contributes to the improvement of the country's competitiveness by participating directly with actions aimed at increasing the use of QI services in public procurement<sup>22</sup>, improving the effectiveness of compliance with regulations through the use of IC services in the control and surveillance functions of regulatory and supervisory bodies<sup>23</sup>, and strengthening capacities for the internationalization of companies through the use of IC services that allow them to meet the technical requirements of the countries of destination<sup>24</sup>.

1.10 The compliance with mandates of policy guidelines, including the National Policy for Quality, the National Plan for Productive Diversification and the new National Policy on Competitiveness and Productivity, as well as the resolution of the problems identified, requires addressing the limitations of the supply and demand that hinder further development of the National Quality System. This revealed need is the justification for the implementation of interventions that contribute to achieving this objective. The need to provide INACAL with the conditions necessary to meet the requirements of the productive sectors and to fulfill the mandates established in line with national

---

<sup>20</sup> Supreme Decree No. 345-2018-EF

<sup>21</sup> Supreme Decree No. 237-2019-EF

<sup>22</sup> Policy Measure 6.7: “Quality standards and environmental sustainability in public procurement”

<sup>23</sup> Policy Measure 6.8: “Application of quality standards in regulatory and supervisory entities”

<sup>24</sup> Policy Measure 7.1: “Service platform for the development of the exportable offer and internationalization of companies”

policies, requires the implementation of actions that lead to the improvement of the operational capabilities in Metrology.

- 1.11 The results of the recent National Quality Survey for MSMEs in the Manufacturing Sector show that more than 50% of firms hire informal non-accredited technicians to calibrate their measuring equipment and 36% of them do so in their own workshops. The "Study of Industrial and Scientific Metrological Needs at National Level" of the Ministry of Economy and Finance, concluded that 20% of the metrological services are not provided nationwide, which demonstrates the need to develop new metrological laboratories with high accuracy measurements for a wide range of metrological magnitudes.
- 1.12 On the other hand, the productive development and technological advancement of products rely on the support of measurement and calibration of equipment with high levels of accuracy to provide traceability to the International System of Units (SI), for the equipment itself, for accredited calibration laboratories and for recognized metrological verification units that provide support to supervisory bodies in the field of legal metrology. Although there is some reference information regarding metrological needs in the country, it is pertinent to obtain complementary information that allows to establish an estimation of metrological service gaps, based on the modeling of national demand and the current capacity of INACAL to satisfy said demand, as well as the institutional prospective vision of INACAL.

## **2. Objectives of the consultancy**

- 2.1 The general objective of this consultancy is to prepare a study that estimates the current and future demand for metrological services by productive sectors; regulation, control and surveillance bodies; and from academia, until 2030. Additionally, determine the strategy and action plan that can ensure the adequate and timely attention of said demand, taking into account the current services available in the country.
- 2.2 Specific objectives of the consultancy are to Determine the characteristics of current and projected demand for industrial, scientific and legal metrology services at national level; determine the current and future status of both public and private supply of services, detailing the characteristics of said services; estimate the gaps in metrological services at national level and determine strategies aimed at reducing said gaps.

## **3. Key activities**

- 3.1 Draft the work plan in coordination with the Metrology Directorate Technical team.
- 3.2 Identify the relevant entities of the private, public and academic sectors, related to the use of metrological services (services of industrial, scientific and legal metrology) as well as experts in the topic, and carry out the necessary procedures to obtain relevant information.

- 3.3 Analyze the base documentation provided by INACAL<sup>25</sup>, analysis of demand for CAB and Accreditation services, as well as guidelines for national, sectorial and regional policies, in order to identify potential metrological service requirements.
- 3.4 Develop the methodological framework for the identification of current and projected demand for services (services of industrial, scientific and legal metrology) at the national level (cross-cutting and according to prioritized regions).
- 3.5 Design, apply and systematize specialized surveys to obtain relevant information in selected representative regions, in coordination with INACAL's Metrology Directorate.
- 3.6 Determine base tendencies for the estimation of demand (industrial, scientific and legal metrology) considering the followings:
- 3.7 The identification of projected international requirements that will influence the future demand for services, both in the public, private and academic sectors.
- 3.8 The identification of prioritized productive sectors in the national and regional policy guidelines.
- 3.9 Regulatory and / or technical guidelines that may influence on the requirement of metrological services.
- 3.10 Analyze the productive sectors of the prioritized regions, as reference, according to their potential for future growth and establish their potential specific needs of metrological services.
- 3.11 Determine the current and projected demand for metrological services and detail their characteristics. Consider the accuracy class (industrial, scientific and legal metrology), magnitudes and specialized laboratories required, identifying the new requirements. In addition, differentiation must be considered according to the public, private and academic sectors.
- 3.12 Carry out a survey of information referring to the conditions of service provision in the national metrology system, considering focal points in the private and public sectors.
- 3.13 Analyze the structure of the service offer of the Peruvian metrological system and that of the Directorate of Metrology (considering the differentiation according to industrial, scientific and legal metrology).
- 3.14 Analyze the historical and current quantitative supply of services according to the structure of the supply of services, considering the public and private supply, and the type of services provided.
- 3.15 Characterize the current service supply of INACAL's Metrology Directorate and describe the state of its resources. Identify and describe the projects aimed at strengthening the national metrology system, in current or forthcoming execution.
- 3.16 Projection of the supply of services according to the current characteristics of the resources in the national metrology system, especially INACAL's Metrology Directorate.
- 3.17 Determine the service gap, quantitatively, and detail the characteristics of metrological services according to type, quantity, laboratories and prioritized geographical areas.
- 3.18 Analyze and propose possible strategies to reduce the identified service gap.
- 3.19 Present the results of the study to the authorities of INACAL and the IDB.

---

<sup>25</sup> Among them "Encuesta Nacional de Calidad para las PYME del Sector Manufacturero", "Estudio de las Necesidades Metrológicas Industriales y Científicas a Nivel Nacional" and "Demand study of conformity assessment services by regulatory bodies and public procurement agencies"

#### 4. Expected Outcome and Deliverables

The deliverables are as follows:

#	Deliverable	Expected result
1.	Work Plan	Detailed Work Plan including proposed activities, their sequence and timing, the proposed technical team, and the methodology to be used, specifying people responsible for each step.
2.	Preliminary diagnostic study	Containing at least: <ol style="list-style-type: none"> <li>1. Systematization of information survey retrieved from representatives of institutions relevant to the use of metrological services (of industrial, scientific and legal metrology) and experts.</li> <li>2. Analysis of base documentation provided by INACAL and obtained from national, sectorial and regional policy guidelines.</li> <li>3. Methodological proposal for identification of the current and projected demand for metrological services (of industrial, scientific and legal metrology) at the national level (cross-cutting and according to prioritized regions), including parameters and assumptions used for projection of service demand.</li> <li>4. Sample design (observation unit, sample size, stratification, level of confidence, key informants, among others), information gathering tools, systematization of surveys and technical report of information analysis.</li> </ol>
3.	Demand study	<ol style="list-style-type: none"> <li>1. Analysis of base tendencies for demand estimation (of industrial, scientific and legal metrology).</li> <li>2. Referential analysis of prioritized regional productive sectors, according to their potential for future growth and their potential specific needs for metrological services.</li> <li>3. Quantitative and qualitative projection of demand of metrological services (of industrial, scientific and legal metrology), according to magnitudes and laboratories, identifying the need for new requirements and according to each sector (private, public and academia). Future projections must be worked on a horizon of at least 10 years and all the procedures of historical variables must be worked in a horizon of 5 years, counted from the previous year before the year in which the service is performed.</li> </ol>
4.	Final Report	Integrated report, including, in addition to the aforementioned items: <ol style="list-style-type: none"> <li>1. Systematization of information gathered.</li> <li>2. Analysis of the structure of the supply of metrological services at the national level.</li> <li>3. Analysis of the historical supply of services according to the developed structure.</li> <li>4. Characterization of the current service supply and description of the state of the resources of the Metrology Directorate and other entities. Identification and description of the projects in execution</li> </ol>

		<p>or forthcoming execution destined to the strengthening of the Peruvian metrological system.</p> <p>5. Projection of the supply of services in accordance with the current characteristics of the national metrology system and INACAL's Metrology Directorate.</p> <p>6. Determination of the service gap, and description of the characteristics of metrological services required according to type, magnitudes, laboratories and prioritized geographical areas and sector (public, private or academic).</p> <p>7. Proposal of strategies to reduce the identified service gap.</p>
5.	Final Presentation	<p>Presentation of the diagnosis of the gaps, description of the metrological services required, and strategies to reduce the service gap to the authorities of INACAL and the Bank</p>

## 6. 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.
- 6.2. Meetings with interested parties must be attended and coordinated by an INACAL official, specifically from the Metrology Directorate. Work meetings or similar processes must be evidenced with the corresponding minutes, which must be signed by the participants.

## 7. Qualifications

- 7.1. General requirements: The team must have national and / or international experience of at least 10 years in the management, administration and operation of Metrological entities. The team should provide a list of relevant projects or consulting services provided in the last 10 years. The team must include at least one team leader that will be responsible for the overall coordination of the project activities and management of the team and will act as the primary contact for communications with the IDB and the INACAL.
- 7.2. Team Composition: The team must be comprised of a metrology specialist, market research specialist and field staff with the following qualifications:
  - a) Metrology Specialist: Qualified professional with bachelor's degree or higher in engineering and/or related areas of sciences with solid experience of at least 7 years in the planning and management of metrological services; master's degree in related subjects desirable. With proven experience in at least 5 metrological service planning processes.
  - b) Market Research Specialist: Qualified professional with bachelor's degree or higher in industrial engineering, systems engineering, economics or related areas of studies with at least 5 years of



experience in the development of market studies for public services or specialized services. Proven experience in at least 5 market identification processes in the services sector.

- c) Field staff: Qualified professions with bachelor's degree or higher in science or engineering with at least 2 years of work experience in the field of metrology

## **8. Characteristics of the Consultancy**

- Contract category and modality: Products and External Services Contractual, International, Firm, Lump Sum
- Workplace: Lima and regions in Peru. The regions shall be discussed and coordinated with Metrology Directorate of INACAL.
- Number of deliverables: 4
- Contract duration: 6 months

## **9. Schedule of Deliverables and Milestones**

<b>Deliverables</b>	<b>Deadline</b>
Work Plan	15 days after signing the contract
Preliminary diagnostic report	2.5 months
Demand study	4 months
Final report	5 months
Final presentation	6 months

## **10. Supervision and Reporting**

- 10.1 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 consulting firm's responsibility to ensure that all required meetings in the countries are conducted and reports are submitted to the Bank.
- 10.2 For technical coordination in the service development the supplier will have the Director of INACAL's Directorate of Metrology as a focal point. The focal point monitors the development of the consultancy, supporting the supervision work of the person in charge assigned by IDB. INACAL 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, INACAL may issue observations, comments or instructions for changes, or a favorable technical opinion.

## **11. Payment and Conditions**

- 11.1 Payment for this lump-sum contract is up to \$100,000 and the payment terms will be based on project milestones or deliverables. The Bank wishes to receive the most competitive cost proposal for the services described herein. The official IDB exchange rate indicated in the RFP will be applied for the necessary conversions of payments in local currency. Payments are made pending the

approval of the corresponding deliverables, according to the detailed schedule:

Payment Schedule	
Deliverable	%
1. Contract signed and upon submission and approval of the work plan	20%
2. Upon reception and approval of Deliverable 2	20%
3. Upon reception and approval of Deliverable 3	30%
4. Upon reception and approval of Deliverable 4 &5	30%
Total	100%

**Consultancy for benchmarking best practices for enhancing metrology services in Peru**

**Peru**  
**IFD/CTI**

**PE-T1417**

**Strengthening Peru's National Quality System****TERMS OF REFERENCE****Background**

In the past few decades, Peru has shown an improvement in the reduction of the gross domestic product gap and average per capita income gap; however, no substantial progress has been made in reducing technological gaps and gaps in innovation processes. One of the greater challenges faced by the country is that of implementing and developing a Quality Infrastructure (QI) that can be used as a pivot point from which to reach an acceptable level of competitiveness and which allows for the creation of new sources of growth, generating jobs and reducing dependency on primary exports.

In order to increment the competitiveness of the country, the Peruvian Congress approved Law No. 30224, through which the National Quality System (NQS), as well as the National Quality Institute (INACAL, according to its initials in Spanish); were created as a functional system that integrates and articulates principles, norms, procedures, techniques, instruments and institutions, in order to promote and ensure compliance with the National Policy for Quality with the purpose of boosting development and increasing the competitiveness of economic activities, as well as consumer protection. The NQS is composed of:

- a) The National Quality Council (CONACAL, according to its initials in Spanish).
- b) The National Quality Institute (INACAL) and its Permanent and Technical Committees.
- c) Public and private entities forming part of the QI.

The National Quality Institute (INACAL) is a Public Specialized Technical Body attached to the Ministry of Production, with legal identity under public law, with national jurisdiction and administrative, functional, technical, economic and financial autonomy. It is the governing body and the maximum technical and regulatory authority of the NQS, being responsible for its operation. Its purpose is to contribute with the development and compliance of the National Policy for Quality with the purpose of boosting development and increasing the competitiveness of economic activities, as well as consumer protection. All matters of standardization, accreditation and metrology are the responsibility of INACAL.

Standardization contributes to the generation of economic and social benefits because the existence of internationally harmonized standards improves production efficiency and facilitates international trade, which helps expedite trade flows, reduce costs and achieve greater integration of production networks. These benefits may be obtained if the aforementioned standards guarantee the coherence of the essential characteristics of goods and services, such as quality, ecology, safety, economy, reliability, compatibility, interoperability, efficiency and effectiveness.

Through accreditation, the technical competence of Conformity Assessment Bodies (CAB) is formally recognized after each CAB has undergone an audit to demonstrate compliance with internationally recognized standards and guidelines. To allow for faster trade flows, reduced costs and greater integration of production networks, it is vital for the country to have an adequate accreditation capacity and a sufficient supply of Accredited Conformity Assessment Bodies which can serve the different productive sectors.

The use of metrology helps generate trust on the local markets and allows companies to ensure that their products meet international standards and specifications. For that reason the international recognition of a country's measurement system and recognition of its measurement capacity are essential for access to the

global market since precise and reliable measurements are vital for productivity, competitiveness and innovation.

With the objective of strengthening the capacities of the NQS, the QI and its pillars (standardization, accreditation and metrology), INACAL continuously develops strategic actions that allow for improvement opportunities; these strategic actions are carried out both with the support of the central government as with the support of international cooperation.

The development of quality infrastructure in the country has been, for some time now, one of the areas prioritized by the IDB, being within its line of action related to competitiveness and innovation. In Peru, in 2011, the IDB in coordination with the Ministry of Economy and Finance, financed the project “Diagnosis of the Peruvian national quality system and plan of action for its strengthening” which was focused on improving competitiveness.

On the other hand, Korea has also provided support for strengthening the QI . In September 2016, a Memorandum of Understanding was signed between INACAL and the Korean Agency for Technology and Standards (KATS), valid for 5 years; in this context, technical support has been received through the International Standards Infrastructure Cooperation Program (ISCP). In 2018, KATS conducted the National Standards Capability Assessment Framework (NSCAF) to diagnose the national standards system and analyze the level of national standards capabilities of Peru to identify possible areas of cooperation . In addition, efforts have been made to include INACAL in the Annual Plan for the ISCP and other Korean institutions such as the Korean Standards Association - KSA and Korea Testing & Research Institute - KTR.

Although INACAL has made significant progress regarding the National Quality System, there are still pending matters to resolve which have been identified as a condition to INACAL’s consolidation at the national level. These issues can be summarized as follows :

- Limited use of QI services by the private and public sector, which hinders the application of better control and surveillance practices in the country.
- High concentration of QI services in Lima, and very limited offer of these services in other regions of the country.
- Product value chains are not applying quality standards.
- The criteria and concepts used by consumers are not enough to create a demand for public services which offer quality standards.
- Mismatch between demand and supply, since some areas of metrology (such as chemistry or electronics) have not yet been developed as is the case with the application of standards or duly certified processes and products.
- Low level of coordination between the public and private sectors to accelerate the implementation of the National Policy for Quality in the country.

On the other hand, the strategic orientation of the country, through its policy instruments, establishes a series of conditions that the QI must provide:

- The National Plan for Productive Diversification , in its pillar of promotion of productive development, establishes as a key action “the generation of favorable conditions to increase productivity and competitiveness through the development of technical standards, laboratory accreditations and financing instruments for the certification of products under the leadership of INACAL”.
- The National Policy on Competitiveness and Productivity (NPCP), recognizes the importance of MSMEs in the Peruvian business scheme, and also identifies their low competitiveness and production to be a result of their low adoption of quality aspects, among other things. In this regard, the NPCP, under its priority objective 6 – to generate conditions for a productive business environment, established the objective of facilitating the application of quality standards and conformity assessment of the goods and services commercialized.
- The National Competitiveness and Productivity Plan contains a set of policy measures organized according to each primary objective and in line with policy guidelines. INACAL contributes to the

improvement of the country's competitiveness by participating directly with actions aimed at increasing the use of QI services in public procurement , improving the effectiveness of compliance with regulations through the use of IC services in the control and surveillance functions of regulatory and supervisory bodies , and strengthening capacities for the internationalization of companies through the use of IC services that allow them to meet the technical requirements of the countries of destination .

The compliance with mandates of policy guidelines (National Policy for Quality, the National Plan for Productive Diversification and the new National Policy on Competitiveness and Productivity), as well as the resolution of the problems identified, requires addressing the limitations of the supply and demand that hinder further development of the National Quality System. This revealed need is the justification for the implementation of interventions that contribute to achieving this objective. In this context, it is considered of vital importance to strengthen the Accreditation Directorate of INACAL and other NQS entities for the timely and efficient attention to the conformity assessment services required by regulatory and supervisory bodies.

### **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 review selected metrology systems with best practices in order to provide recommendations for the management, operability and provision of metrology services of Peru.

#### **What you'll do**

The consultant shall perform the following activities:

- Characterize and evaluate current metrology services of Peru.
- Establish criteria to select the countries to be analyzed in this study. The countries will be selected by INACAL.
- Propose a methodology to evaluate the selected metrology systems.
- Compare and analyze selected national metrology systems, differentiating the system's operating structure to support the productive sectors and to support control and surveillance tasks (emphasizing the service portfolio, service delivery processes, strategic partners and resources).
- Evaluate the possibility of applying successful experiences found in selected countries, considering the characteristics of the metrology services in Peru.
- Propose policy recommendations to improve the current metrology system of Peru.

### **Deliverables**

- Deliverable 1: Detailed Work Plan proposed activities, their sequence and timing (Gantt), the proposed technical team, and the methodology to be used, specifying people responsible for each step.
- Deliverable 2: Interim report including the diagnosis of the metrology services in Peru; criteria to select the international systems to study; methodology to evaluate the metrology systems selected; preliminary analysis of the best practices; comparison to the metrology system of Peru..

- Deliverable 3: Final report including a comparative study of the selected cases; recommendations and policy implications for enhancing the metrology service Peru

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 the Director of the Metrology Directorate of INACAL as a focal point. The focal point monitors the development of the consultancy, supporting the supervision work of the person in charge assigned by IDB. INACAL 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, INACAL 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 Consulting Firm 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:

- 30% after the contract signed and upon submission and approval of the work plan
- 30% upon the approval of the Deliverable 2
- 40% upon the approval of the Deliverable 3

### Qualifications

- **Education:** Bachelor's degree (preferably Master's or similar postgraduate degree) in economics, engineering and/or related sciences.
- **Experience:** Experience of at least 5 years in private and / or public evaluation of investment projects and knowledge of cost-benefit analysis methodology.
- **Languages:** Proficiency in written and spoken Spanish.
- **Core and Technical Competencies:** Excellent written and verbal communication skills with an extensive knowledge of the public investment system of Peru. Experience of working in similar projects is desirable.

### Characteristics of Consultancy

- Type of contract and modality: PEC, Lump Sum
- Length of contract: 3 months
- Starting date: July 2021
- Location: Lima, Peru
- Responsible person: Gustavo Crespi, Science and Technology Principal Specialist, IFD/CTI

**Payment and Conditions:** Compensation will be determined in accordance with Bank's policies and procedures. The Bank, pursuant to applicable policies, may contribute toward travel and moving expenses. In addition, candidates must be citizens of an IDB member country.

**Visa and Work Permit:** The Bank, pursuant to applicable policies, may submit a visa request to the applicable immigration authorities; however, the granting of the visa is at the discretion of the immigration authorities. Notwithstanding, it is the responsibility of the candidate to obtain the necessary visa or work permits required by the authorities of the country(ies) in which the services will be rendered to the Bank. If a candidate cannot obtain a visa or work permit to render services to the Bank the contractual offer will be rescinded

**Consanguinity:** Pursuant to applicable Bank policy, candidates with relatives (including the fourth degree of consanguinity and the second degree of affinity, including spouse) working for the Bank as staff members or Complementary Workforce contractual, will not be eligible to provide services for the Bank.

**Diversity:** The Bank is committed to diversity and inclusion and to providing equal opportunities to all candidates. We embrace diversity on the basis of gender, age, education, national origin, ethnic origin, race, disability, sexual orientation, religion, and HIV/AIDs status. We encourage women, Afro-descendants and persons of indigenous origins to apply.

## **TERMS OF REFERENCE**

### **Proposal for public investment project to enhance the operational capacity of INACAL's metrology services**

**Peru  
IFD/CTI**

**PE-T1417**

### **Strengthening of the National Quality and Standardization System**

#### **1. Background and Justification**

- 1.1 In the past few decades, Peru has shown an improvement in the reduction of the gross domestic product gap and average per capita income gap; however, no substantial progress has been made in reducing technological gaps and gaps in innovation processes. One of the greater challenges faced by the country is that of implementing and developing a Quality Infrastructure (QI) that can be used as a pivot point from which to reach an acceptable level of competitiveness and which allows for the creation of new sources of growth, generating jobs and reducing dependency on primary exports.
  
- 1.2 In order to increment the competitiveness of the country, the Peruvian Congress approved Law No. 30224, through which the National Quality System (NQS), as well as the National Quality Institute (INACAL, according to its initials in Spanish); were created as a functional system that integrates and articulates principles, norms, procedures, techniques, instruments and institutions, in order to promote and ensure compliance with the National Policy for Quality with the purpose of boosting development and increasing the competitiveness of economic activities, as well as consumer protection<sup>26</sup>. The NQS is composed of:
  - The National Quality Council (CONACAL, according to its initials in Spanish).
  - The National Quality Institute (INACAL) and its Permanent and Technical Committees.
  - Public and private entities forming part of the QI.
  
- 1.3 The National Quality Institute (INACAL) is a Public Specialized Technical Body attached to the Ministry of Production, with legal identity under public law, with national jurisdiction and administrative, functional, technical, economic and financial autonomy. It is the governing body and the maximum technical and regulatory authority of the NQS, being responsible for its operation. Its purpose is to contribute with the development and compliance of the National Policy for Quality with the purpose of boosting development and increasing the competitiveness of economic

---

<sup>26</sup> Article 3 of Law No. 30224



activities, as well as consumer protection. All matters of standardization, accreditation and metrology are the responsibility of INACAL.

- 1.4 Standardization contributes to the generation of economic and social benefits because the existence of internationally harmonized standards improves production efficiency and facilitates international trade, which helps expedite trade flows, reduce costs and achieve greater integration of production networks. These benefits may be obtained if the aforementioned standards guarantee the coherence of the essential characteristics of goods and services, such as quality, ecology, safety, economy, reliability, compatibility, interoperability, efficiency and effectiveness.
- 1.5 Through accreditation, the technical competence of Conformity Assessment Bodies (CAB) is formally recognized after each CAB has undergone an audit to demonstrate compliance with internationally recognized standards and guidelines. To allow for faster trade flows, reduced costs and greater integration of production networks, it is vital for the country to have an adequate accreditation capacity and a sufficient supply of Accredited Conformity Assessment Bodies which can serve the different productive sectors.
- 1.6 The use of metrology helps generate trust on the local markets and allows companies to ensure that their products meet international standards and specifications. For that reason, the international recognition of a country's measurement system and recognition of its measurement capacity are essential for access to the global market since precise and reliable measurements are vital for productivity, competitiveness and innovation.
- 1.7 With the objective of strengthening the capacities of the NQS, the QI and its pillars (standardization, accreditation and metrology), INACAL continuously develops strategic actions that allow for improvement opportunities; these strategic actions are carried out both with the support of the central government as with the support of international cooperation. The development of quality infrastructure in the country has been, for some time now, one of the areas prioritized by the IDB, being within its line of action related to competitiveness and innovation. In Peru, in 2011, the IDB in coordination with the Ministry of Economy and Finance, financed the project "Diagnosis of the Peruvian national quality system and plan of action for its strengthening" which was focused on improving competitiveness.
- 1.8 Although INACAL has made significant progress regarding the National Quality System, there are still pending matters to resolve which have been identified as a condition to INACAL's consolidation at the national level. These issues can be summarized as follows<sup>27</sup>:
  - Limited use of QI services by the private and public sector, which hinders the application of better control and surveillance practices in the country.

---

<sup>27</sup> Institutional Perception

- High concentration of QI services in Lima, and very limited offer of these services in other regions of the country.
- Product value chains are not applying quality standards.
- The criteria and concepts used by consumers are not enough to create a demand for public services which offer quality standards.
- Mismatch between demand and supply, since some areas of metrology (such as chemistry or electronics) have not yet been developed; as is the case with the application of standards or duly certified processes and products.
- Low level of coordination between the public and private sectors to accelerate the implementation of the National Policy for Quality in the country.

On the other hand, the strategic orientation of the country, through its policy instruments, establishes a series of conditions that the QI must provide:

- The National Plan for Productive Diversification<sup>28</sup>, in its pillar of promotion of productive development, establishes as a key action “the generation of favorable conditions to increase productivity and competitiveness through the development of technical standards, laboratory accreditations and financing instruments for the certification of products under the leadership of INACAL”.

1.9 The National Policy on Competitiveness and Productivity<sup>29</sup> (NPCP), recognizes the importance of MSMEs in the Peruvian business scheme, and also identifies their low competitiveness and production to be a result of their low adoption of quality aspects, among other things. In this regard, the NPCP, under its priority objective 6 – to generate conditions for a productive business environment, established the objective of facilitating the application of quality standards and conformity assessment of the goods and services commercialized. The National Competitiveness and Productivity Plan contains a set of policy measures organized according to each primary objective and in line with policy guidelines. INACAL contributes to the improvement of the country's competitiveness by participating directly with actions aimed at increasing the use of QI services in public procurement<sup>30</sup>, improving the effectiveness of compliance with regulations through the use of IC services in the control and surveillance functions of regulatory and supervisory bodies<sup>31</sup>, and strengthening capacities for the internationalization of companies through the use of IC services that allow them to meet the technical requirements of the countries of destination<sup>32</sup>.

1.10 The compliance with mandates of policy guidelines, including the National Policy for Quality, the National Plan for Productive Diversification and the new National Policy on Competitiveness and Productivity, as well as the resolution of the problems identified, requires addressing the limitations of the supply and demand that hinder further development of the National Quality System. This revealed need is the justification for the implementation of interventions that contribute to

---

<sup>28</sup> Supreme Decree No. 345-2018-EF

<sup>29</sup> Supreme Decree No. 237-2019-EF

<sup>30</sup> Policy Measure 6.7: “Quality standards and environmental sustainability in public procurement”

<sup>31</sup> Policy Measure 6.8: “Application of quality standards in regulatory and supervisory entities”

<sup>32</sup> Policy Measure 7.1: “Service platform for the development of the exportable offer and internationalization of companies”

achieving this objective. The need to provide INACAL with the conditions necessary to meet the requirements of the productive sectors and to fulfill the mandates established in line with national policies, requires the implementation of actions that lead to the improvement of the operational capabilities in Metrology.

- 1.11 The results of the recent National Quality Survey for MSMES in the Manufacturing Sector show that more than 50% of firms hire informal non-accredited technicians to calibrate their measuring equipment and 36% of them do so in their own workshops. The "Study of Industrial and Scientific Metrological Needs at National Level" of the Ministry of Economy and Finance, concluded that 20% of the metrological services are not provided nationwide, which demonstrates the need to develop new metrological laboratories with high accuracy measurements for a wide range of metrological magnitudes.
- 1.12 On the other hand, the productive development and technological advancement of products rely on the support of measurement and calibration of equipment with high levels of accuracy to provide traceability to the International System of Units (SI), for the equipment itself, for accredited calibration laboratories and for recognized metrological verification units that provide support to supervisory bodies in the field of legal metrology. Although there is some reference information regarding metrological needs in the country, it is pertinent to obtain complementary information that allows to establish an estimation of metrological service gaps, based on the modeling of national demand and the current capacity of INACAL to satisfy said demand, as well as the institutional prospective vision of INACAL.

## **2. Objectives of the consultancy**

- 2.1 The general objective of this consultancy is to prepare a public investment plan to address the demand gap with the metrological services identified through the consultancy of "Diagnosis of gaps in specialized metrology services in Peru". More specifically, the consultant will determine the level of attention capacity of INACAL to close the projected gap of metrology services and identify resources required in the area of infrastructure, equipment, human resources and any other intangible necessary to adequately provide the timely services as needed in a detailed investment plan.

## **3. Key activities**

- 3.1 Draft the work plan in coordination with the Metrology Directorate Technical team.
- 3.2 Review the secondary information provided by INACAL.
- 3.3 Propose the methodology for determining the level of institutional attention capacity, considering the projected gap in metrological services, which will be provided by INACAL.
- 3.4 Determine the level of maximum expected attention capacity that is intended to be achieved for the projection period in coordination with the Metrology Directorate of INACAL.
- 3.5 Analyze the best practices of metrology systems in other countries in order to determine application and replication opportunities to reduce the identified gap.

- 3.6 Propose actions and resources of the investment plan necessary to achieve the determined attention capacity.
- 3.7 To determine, as a reference, the incremental amounts and characteristics of resources (infrastructure, equipment, personnel, intangibles) necessary to breach the service gap established, in coordination with the Metrology Directorate.
- 3.8 Estimate a referential budget for the required actions and the total of the investment proposal, by component and activity.
- 3.9 Carry out a preliminary cost benefit analysis of the investment plan, estimating for this the operation and maintenance costs, as well as social benefits for the evaluation period and the normative evaluation parameters for public investment projects.
- 3.10 Propose the monitoring indicators of the investment plan, baseline and expected achievements.
- 3.11 Present the results to the authorities of INACAL and the IDB.

#### 4. Expected Outcome and Deliverables

The deliverables are as follows:

#	Deliverable	Expected result
1.	Work Plan	Detailed Work Plan including proposed activities, their sequence and timing, the proposed technical team, and the methodology to be used, specifying people responsible for each step.
2.	Report N° 1	Report containing at least: <ol style="list-style-type: none"> <li>1. Proposed methodology for determining the level of institutional attention capacity for the identified service gap, specifying the assumptions and corresponding supporting information.</li> <li>2. Validated determination of the level of institutional attention capacity for the identified service gap.</li> <li>3. Analysis of successful experiences of national metrology systems of other countries and proposal for replication in Peru.</li> </ol>
3.	Final Report with detailed investment plan	Integrated report containing, in addition to the aforementioned items: <ol style="list-style-type: none"> <li>1. Proposal of an investment plan, organized according to components, activities and according to the following items: <ul style="list-style-type: none"> <li>• Infrastructure: presenting the estimated area required by type of metrology laboratory, and by magnitude. Likewise, a strategic analysis of locations must be included according to availability, type of laboratory, logistic accessibility and referential plant design.</li> <li>• Equipment: List of equipment necessary for the determined attention capacity, considering the analysis of current characteristics of these, which will be provided in a timely manner by INACAL.</li> <li>• Human Resources: Establishing the basic referential characteristics of both the incremental referred personnel and their necessary capabilities, considering an analysis of current characteristics of the staff, which will be provided in a timely manner by INACAL.</li> </ul> </li> </ol>

		<ul style="list-style-type: none"> <li>• Intangibles: Specifying the characteristics of this type of resources required.</li> </ul> <ol style="list-style-type: none"> <li>2. Referential budgets</li> <li>3. Cost benefit analysis</li> <li>4. Matrix of indicators</li> </ol>
--	--	---

#### 4. **Acceptance Criteria**

- 4.1. 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.
- 4.2. Meetings with interested parties must be attended and coordinated by an INACAL official, specifically from the Metrology Directorate. Work meetings or similar processes must be evidenced with the corresponding minutes, which must be signed by the participants.

#### 5. **Qualifications**

- 5.1. General requirements: The team must have national and / or international experience of at least 10 years in the management, administration and operation of Metrological entities. The team should provide a list of relevant projects or consulting services provided in the last 10 years. The team must include at least one team leader that will be responsible for the overall coordination of the project activities and management of the team and will act as the primary contact for communications with the IDB and the INACAL.
- 5.2. Team Composition: The team must be comprised of a metrology specialist, engineer, and economist.
  - a) Metrology Specialist(s): Qualified professional with bachelor's degree or higher in engineering and/or related areas of sciences with solid experience of at least 5 years in the planning and management of meteorological services and in a specific magnitude or specialized services as required according to INACAL's portfolio of projected services; master's degree in related subjects desirable. With proven experience in at least 5 metrological service planning processes.
  - b) Engineer/architect: Qualified professional with bachelor's degree or higher in engineering and/or architectural studies with solid experience of at least 10 (ten) years in design of specialized laboratories infrastructure, productive spaces or similar, of large size.
  - c) Economist: Qualified professional with bachelor's degree or higher in economics and finances with verifiable experience of at least 5 years in private and / or public evaluation of investment projects and knowledge of cost-benefit methodology.

#### 6. **Characteristics of the Consultancy**

- Contract category and modality: Products and External Services Contractual, International, Firm, Lump Sum

- Workplace: Lima and regions in Peru. The regions shall be discussed and coordinated with Metrology Directorate of INACAL.
- Contract duration: 3 months

## 7. Schedule of Deliverables and Milestones

Deliverables	Deadline
Work Plan	15 days after signing the contract
Report 1	1.5 months
Final report with detailed investment plan	3 months

## 8. Supervision and Reporting

- 8.1 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 consulting firm's responsibility to ensure that all required meetings in the countries are conducted and reports are submitted to the Bank.
- 8.2 For technical coordination in the service development the supplier will have the Director of INACAL's Directorate of Metrology as a focal point. The focal point monitors the development of the consultancy, supporting the supervision work of the person in charge assigned by IDB. INACAL 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, INACAL may issue observations, comments or instructions for changes, or a favorable technical opinion.

## 9. Payment and Conditions

- 9.1 Payment for this lump-sum contract is up to \$35,000 and the payment terms will be based on project milestones or deliverables. The Bank wishes to receive the most competitive cost proposal for the services described herein. The official IDB exchange rate indicated in the RFP will be applied for the necessary conversions of payments in local currency. Payments are made pending the approval of the corresponding deliverables, according to the detailed schedule:

Payment Schedule	
Deliverable	%
10. Contract signed and upon submission and approval of the work plan	20%
11. Upon reception and approval of Deliverable 2	30%
12. Upon reception and approval of Deliverable 3	50%
Total	100%

## **Analysis of international strategies to strengthen the competitiveness and productivity of the MSMEs through Quality Infrastructure Services**

**Peru  
IFD/CTI**

**PE-T1417**

### **Strengthening Peru's National Quality System**

#### **TERMS OF REFERENCE**

##### **Background**

In the past few decades, Peru has shown an improvement in the reduction of the gross domestic product gap and average per capita income gap; however, no substantial progress has been made in reducing technological gaps and gaps in innovation processes. One of the greater challenges faced by the country is that of implementing and developing a Quality Infrastructure (QI) that can be used as a pivot point from which to reach an acceptable level of competitiveness and which allows for the creation of new sources of growth, generating jobs and reducing dependency on primary exports.

In order to increment the competitiveness of the country, the Peruvian Congress approved Law No. 30224, through which the National Quality System (NQS), as well as the National Quality Institute (INACAL, according to its initials in Spanish); were created as a functional system that integrates and articulates principles, norms, procedures, techniques, instruments and institutions, in order to promote and ensure compliance with the National Policy for Quality with the purpose of boosting development and increasing the competitiveness of economic activities, as well as consumer protection. The NQS is composed of:

- d) The National Quality Council (CONACAL, according to its initials in Spanish).
- e) The National Quality Institute (INACAL) and its Permanent and Technical Committees.
- f) Public and private entities forming part of the QI.

The National Quality Institute (INACAL) is a Public Specialized Technical Body attached to the Ministry of Production, with legal identity under public law, with national jurisdiction and administrative, functional, technical, economic and financial autonomy. It is the governing body and the maximum technical and regulatory authority of the NQS, being responsible for its operation. Its purpose is to contribute with the development and compliance of the National Policy for Quality with the purpose of boosting development and increasing the competitiveness of economic activities, as well as consumer protection. All matters of standardization, accreditation and metrology are the responsibility of INACAL.

Standardization contributes to the generation of economic and social benefits because the existence of internationally harmonized standards improves production efficiency and facilitates international trade, which helps expedite trade flows, reduce costs and achieve greater integration of production networks. These benefits may be obtained if the aforementioned standards guarantee the coherence of the essential characteristics of goods and services, such as quality, ecology, safety, economy, reliability, compatibility, interoperability, efficiency and effectiveness.

Through accreditation, the technical competence of Conformity Assessment Bodies (CAB) is formally recognized after each CAB has undergone an audit to demonstrate compliance with internationally recognized standards and guidelines. To allow for faster trade flows, reduced costs and greater integration of production networks, it is vital for the country to have an adequate accreditation capacity and a sufficient supply of Accredited Conformity Assessment Bodies which can serve the different productive sectors.

The use of metrology helps generate trust on the local markets and allows companies to ensure that their products meet international standards and specifications. For that reason the international recognition of a

country's measurement system and recognition of its measurement capacity are essential for access to the global market since precise and reliable measurements are vital for productivity, competitiveness and innovation.

With the objective of strengthening the capacities of the NQS, the QI and its pillars (standardization, accreditation and metrology), INACAL continuously develops strategic actions that allow for improvement opportunities; these strategic actions are carried out both with the support of the central government as with the support of international cooperation.

The development of quality infrastructure in the country has been, for some time now, one of the areas prioritized by the IDB, being within its line of action related to competitiveness and innovation. In Peru, in 2011, the IDB in coordination with the Ministry of Economy and Finance, financed the project "Diagnosis of the Peruvian national quality system and plan of action for its strengthening" which was focused on improving competitiveness.

On the other hand, Korea has also provided support for strengthening the QI . In September 2016, a Memorandum of Understanding was signed between INACAL and the Korean Agency for Technology and Standards (KATS), valid for 5 years; in this context, technical support has been received through the International Standards Infrastructure Cooperation Program (ISCP). In 2018, KATS conducted the National Standards Capability Assessment Framework (NSCAF) to diagnose the national standards system and analyze the level of national standards capabilities of Peru to identify possible areas of cooperation . In addition, efforts have been made to include INACAL in the Annual Plan for the ISCP and other Korean institutions such as the Korean Standards Association - KSA and Korea Testing & Research Institute - KTR.

Although INACAL has made significant progress regarding the National Quality System, there are still pending matters to resolve which have been identified as a condition to INACAL's consolidation at the national level. These issues can be summarized as follows :

- Limited use of QI services by the private and public sector, which hinders the application of better control and surveillance practices in the country.
- High concentration of QI services in Lima, and very limited offer of these services in other regions of the country.
- Product value chains are not applying quality standards.
- The criteria and concepts used by consumers are not enough to create a demand for public services which offer quality standards.
- Mismatch between demand and supply, since some areas of metrology (such as chemistry or electronics) have not yet been developed as is the case with the application of standards or duly certified processes and products.
- Low level of coordination between the public and private sectors to accelerate the implementation of the National Policy for Quality in the country.

On the other hand, the strategic orientation of the country, through its policy instruments, establishes a series of conditions that the QI must provide:

- The National Plan for Productive Diversification , in its pillar of promotion of productive development, establishes as a key action "the generation of favorable conditions to increase productivity and competitiveness through the development of technical standards, laboratory accreditations and financing instruments for the certification of products under the leadership of INACAL".
- The National Policy on Competitiveness and Productivity (NPCP), recognizes the importance of MSMEs in the Peruvian business scheme, and also identifies their low competitiveness and production to be a result of their low adoption of quality aspects, among other things. In this regard, the NPCP, under its priority objective 6 – to generate conditions for a productive business environment, established the objective of facilitating the application of quality standards and conformity assessment of the goods and services commercialized.



- The National Competitiveness and Productivity Plan contains a set of policy measures organized according to each primary objective and in line with policy guidelines. INACAL contributes to the improvement of the country's competitiveness by participating directly with actions aimed at increasing the use of QI services in public procurement , improving the effectiveness of compliance with regulations through the use of IC services in the control and surveillance functions of regulatory and supervisory bodies , and strengthening capacities for the internationalization of companies through the use of IC services that allow them to meet the technical requirements of the countries of destination .

The compliance with mandates of policy guidelines (National Policy for Quality, the National Plan for Productive Diversification and the new National Policy on Competitiveness and Productivity), as well as the resolution of the problems identified, requires addressing the limitations of the supply and demand that hinder further development of the National Quality System. This revealed need is the justification for the implementation of interventions that contribute to achieving this objective. In this context, it is considered of vital importance to strengthen the Accreditation Directorate of INACAL and other NQS entities for the timely and efficient attention to the conformity assessment services required by regulatory and supervisory bodies.

Within that framework and as part of the institutional efforts of INACAL, the availability of the Korean government and the IDB has been articulated, for the financing of a technical cooperation project called "Support for strengthening the National Quality System", which has as its objective "to strengthen the National Quality System of Peru through the support of its leading institution, the National Quality Institute (INACAL)".

### **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 analyze the strategies implemented by other countries to enhance knowledge, access, use and application of quality infrastructure services to improve the competitiveness and productivity of the MSMEs.

### **What you'll do**

The consultant shall perform the following activities:

- Review the characteristics and operations of country strategies for the development and strengthening of the MSMEs as well as the operation of quality infrastructure to promote such national strategies.
- Describe the level of use for quality infrastructure services by the MSMEs in the countries of benchmark in terms of accessibility, regulations, incentives, among others.
- Identify problems that affected the operation of the quality infrastructure system and of the institutions with detailed solutions of how the problems have been addressed.
- Analyze the strategies of connecting the users and clients to the quality infrastructure services.
- Identify projects that have had high impact with thorough analysis of its management, implementation, operability, and impact.

- Identify and describe the specific actions and projects that have promoted the use of quality infrastructure services by the MSMEs as well as the institutional settings, governance, and technical environment needed
- Evaluate the potential application and adaptation of strategies in Peruvian context
- Propose strategies, actions or projects to provide better services for the MSMEs with recommendations for technical, legal, institutional framework and governance needed.
- Present the results of the study to the authorities of the INACAL and the IDB.

### Deliverables

- Deliverable 1: Detailed Work Plan proposed activities, their sequence and timing (Gantt), the proposed technical team, and the methodology to be used, specifying people responsible for each step
- Deliverable 2: Preliminary report including the assessment of strategies to increase use of quality infrastructure by the MSMEs
- Deliverable 3: Final report with recommendations to increase the use of quality infrastructure by the MSMEs to strengthen competitiveness and productivity
- Deliverable 4: Final presentation

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 that all required meetings in the countries are conducted and reports are submitted to the Bank.

For technical coordination, the consultant will communicate with the Director of the Metrology Directorate of INACAL as a focal point. The focal point monitors the development of the consultancy, supporting the supervision work of the person in charge assigned by IDB. INACAL 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, INACAL 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 Consulting Firm 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:

- 20% after the contract signed and upon submission and approval of the work plan
- 30% upon the approval of the Deliverable 2
- 50% upon the approval of the Deliverable 3 & 4

### Qualifications

- **Education:** Bachelor's degree (preferably Master's or similar postgraduate degree) in sciences, economics, engineering and/or related sciences.
- **Experience:** Experience of at least 5 years in planning and management of the national quality system.
- **Languages:** Proficiency in written and spoken Spanish.
- **Core and Technical Competencies:** Excellent written and verbal communication skills with an extensive knowledge of the public investment system of Peru. Experience of working in similar projects is desirable.

**Characteristics of Consultancy**

- Type of contract and modality: PEC, Lump Sum
- Length of contract: 4 months
- Starting date: July 2021
- Location: Lima, Peru
- Responsible person: Gustavo Crespi, Science and Technology Principal Specialist, IFD/CTI

**Payment and Conditions:** Compensation will be determined in accordance with Bank's policies and procedures. The Bank, pursuant to applicable policies, may contribute toward travel and moving expenses. In addition, candidates must be citizens of an IDB member country.

**Visa and Work Permit:** The Bank, pursuant to applicable policies, may submit a visa request to the applicable immigration authorities; however, the granting of the visa is at the discretion of the immigration authorities. Notwithstanding, it is the responsibility of the candidate to obtain the necessary visa or work permits required by the authorities of the country(ies) in which the services will be rendered to the Bank. If a candidate cannot obtain a visa or work permit to render services to the Bank the contractual offer will be rescinded

**Consanguinity:** Pursuant to applicable Bank policy, candidates with relatives (including the fourth degree of consanguinity and the second degree of affinity, including spouse) working for the Bank as staff members or Complementary Workforce contractual, will not be eligible to provide services for the Bank.

**Diversity:** The Bank is committed to diversity and inclusion and to providing equal opportunities to all candidates. We embrace diversity on the basis of gender, age, education, national origin, ethnic origin, race, disability, sexual orientation, religion, and HIV/AIDs status. We encourage women, Afro-descendants and persons of indigenous origins to apply.

## **TERMS OF REFERENCE**

### **Proposal for public investment project to promote the use of quality infrastructure by MSMEs**

**Peru  
IFD/CTI**

**PE-T1417**

### **Strengthening of the National Quality and Standardization System**

#### **1. Background and Justification**

- 1.1 In the past few decades, Peru has shown an improvement in the reduction of the gross domestic product gap and average per capita income gap; however, no substantial progress has been made in reducing technological gaps and gaps in innovation processes. One of the greater challenges faced by the country is that of implementing and developing a Quality Infrastructure (QI) that can be used as a pivot point from which to reach an acceptable level of competitiveness and which allows for the creation of new sources of growth, generating jobs and reducing dependency on primary exports.
  
- 1.2 In order to increment the competitiveness of the country, the Peruvian Congress approved Law No. 30224, through which the National Quality System (NQS), as well as the National Quality Institute (INACAL, according to its initials in Spanish); were created as a functional system that integrates and articulates principles, norms, procedures, techniques, instruments and institutions, in order to promote and ensure compliance with the National Policy for Quality with the purpose of boosting development and increasing the competitiveness of economic activities, as well as consumer protection<sup>33</sup>. The NQS is composed of:
  - The National Quality Council (CONACAL, according to its initials in Spanish).
  - The National Quality Institute (INACAL) and its Permanent and Technical Committees.
  - Public and private entities forming part of the QI.
  
- 1.3 The National Quality Institute (INACAL) is a Public Specialized Technical Body attached to the Ministry of Production, with legal identity under public law, with national jurisdiction and administrative, functional, technical, economic and financial autonomy. It is the governing body and the maximum technical and regulatory authority of the NQS, being responsible for its operation. Its purpose is to contribute with the development and compliance of the National Policy for Quality with the purpose of boosting development and increasing the competitiveness of economic

---

<sup>33</sup> Article 3 of Law No. 30224

activities, as well as consumer protection. All matters of standardization, accreditation and metrology are the responsibility of INACAL.

- 1.4 Standardization contributes to the generation of economic and social benefits because the existence of internationally harmonized standards improves production efficiency and facilitates international trade, which helps expedite trade flows, reduce costs and achieve greater integration of production networks. These benefits may be obtained if the aforementioned standards guarantee the coherence of the essential characteristics of goods and services, such as quality, ecology, safety, economy, reliability, compatibility, interoperability, efficiency and effectiveness.
- 1.5 Through accreditation, the technical competence of Conformity Assessment Bodies (CAB) is formally recognized after each CAB has undergone an audit to demonstrate compliance with internationally recognized standards and guidelines. To allow for faster trade flows, reduced costs and greater integration of production networks, it is vital for the country to have an adequate accreditation capacity and a sufficient supply of Accredited Conformity Assessment Bodies which can serve the different productive sectors.
- 1.6 The use of metrology helps generate trust on the local markets and allows companies to ensure that their products meet international standards and specifications. For that reason, the international recognition of a country's measurement system and recognition of its measurement capacity are essential for access to the global market since precise and reliable measurements are vital for productivity, competitiveness and innovation.
- 1.7 With the objective of strengthening the capacities of the NQS, the QI and its pillars (standardization, accreditation and metrology), INACAL continuously develops strategic actions that allow for improvement opportunities; these strategic actions are carried out both with the support of the central government as with the support of international cooperation. The development of quality infrastructure in the country has been, for some time now, one of the areas prioritized by the IDB, being within its line of action related to competitiveness and innovation. In Peru, in 2011, the IDB in coordination with the Ministry of Economy and Finance, financed the project "Diagnosis of the Peruvian national quality system and plan of action for its strengthening" which was focused on improving competitiveness.
- 1.8 Although INACAL has made significant progress regarding the National Quality System, there are still pending matters to resolve which have been identified as a condition to INACAL's consolidation at the national level. These issues can be summarized as follows<sup>34</sup>:
  - Limited use of QI services by the private and public sector, which hinders the application of better control and surveillance practices in the country.

---

<sup>34</sup> Institutional Perception

- High concentration of QI services in Lima, and very limited offer of these services in other regions of the country.
- Product value chains are not applying quality standards.
- The criteria and concepts used by consumers are not enough to create a demand for public services which offer quality standards.
- Mismatch between demand and supply, since some areas of metrology (such as chemistry or electronics) have not yet been developed; as is the case with the application of standards or duly certified processes and products.
- Low level of coordination between the public and private sectors to accelerate the implementation of the National Policy for Quality in the country.

On the other hand, the strategic orientation of the country, through its policy instruments, establishes a series of conditions that the QI must provide:

- The National Plan for Productive Diversification<sup>35</sup>, in its pillar of promotion of productive development, establishes as a key action “the generation of favorable conditions to increase productivity and competitiveness through the development of technical standards, laboratory accreditations and financing instruments for the certification of products under the leadership of INACAL”.

1.9 The National Policy on Competitiveness and Productivity<sup>36</sup> (NPCP), recognizes the importance of MSMEs in the Peruvian business scheme, and also identifies their low competitiveness and production to be a result of their low adoption of quality aspects, among other things. In this regard, the NPCP, under its priority objective 6 – to generate conditions for a productive business environment, established the objective of facilitating the application of quality standards and conformity assessment of the goods and services commercialized. The National Competitiveness and Productivity Plan contains a set of policy measures organized according to each primary objective and in line with policy guidelines. INACAL contributes to the improvement of the country's competitiveness by participating directly with actions aimed at increasing the use of QI services in public procurement<sup>37</sup>, improving the effectiveness of compliance with regulations through the use of IC services in the control and surveillance functions of regulatory and supervisory bodies<sup>38</sup>, and strengthening capacities for the internationalization of companies through the use of IC services that allow them to meet the technical requirements of the countries of destination<sup>39</sup>.

1.10 The compliance with mandates of policy guidelines, including the National Policy for Quality, the National Plan for Productive Diversification and the new National Policy on Competitiveness and Productivity, as well as the resolution of the problems identified, requires addressing the limitations of the supply and demand that hinder further development of the National Quality System. This

---

<sup>35</sup> Supreme Decree No. 345-2018-EF

<sup>36</sup> Supreme Decree No. 237-2019-EF

<sup>37</sup> Policy Measure 6.7: “Quality standards and environmental sustainability in public procurement”

<sup>38</sup> Policy Measure 6.8: “Application of quality standards in regulatory and supervisory entities”

<sup>39</sup> Policy Measure 7.1: “Service platform for the development of the exportable offer and internationalization of companies”

revealed need is the justification for the implementation of interventions that contribute to achieving this objective.

- 1.11 In Peru, Micro, Small and Medium Enterprises (MSMEs) make up a sector of vital importance within the productive structure. They represent 99.5% of the total of formal companies in the Peruvian economy (96.2% are micro, 3.2% small and 0.1% medium-sized companies). In addition, MSMEs contribute 30.7% of the national added value; MSMEs encompass approximately 59.6% of the Economically Active Population (PEA, by its acronym in Spanish). Around 85% of MSMEs are dedicated to commerce and services activities, and the rest (14.4%) to productive activities (manufacturing, construction, agriculture, mining and fishing). Around 70.6% of exporting companies are MSMEs. 40.
- 1.12 In 2018, INACAL with conjunction with the National Institute of Statistics and Informatics (INEI, by its acronym in Spanish) developed the First National Quality Survey of manufacturing MSMEs in the country. Some of the relevant results are as follows:
  - Only 18% of MSMEs produce applying technical standards.
  - Only 26.9% of the MSMEs have calibrated their instruments and, of this percentage, only 15% calibrate in specialized or accredited entities.
  - Only 12.4% of the MSMEs surveyed have some type of process, management system or product certification and this occurs mainly due to a problem of lack of knowledge about the certifications available in the market. In fact, 63.1% of MSMEs managers adduced to lack of information and only 23.1% mentioned the elevated cost of certification, which provides an important space in the design of public policies to emphasize work in this sector which can be co-financed.

As a consequence of this, 22.8% of manufacturing MSMEs reported a rejection of their products due to measurement errors, which generates a high probability of failing to comply with export requirements, generating additional replacement costs for rejected products and deterioration of the image of the company in the market, putting its sustainability at risk.
- 1.13 From the results of the survey, several challenges arise for INACAL in terms of promoting an increase in the use of quality services. In this regard, it is important to develop an investment plan with policies and strategies that allows the increase and promotion in the use of QI services by the MSMEs to strengthen their competitiveness and productivity.

## **2. Objectives of the consultancy**

- 2.1 The general objective of this consultancy is to prepare an investment plan to boost the use of quality infrastructure services in MSMEs to improve their competitiveness and productivity. The specific objectives of this consultancy are:

---

<sup>40</sup> MSMEs in 2017 figures. MINISTRY OF PRODUCTION

- Establish as a reference framework, the status of MSMEs and the degree of knowledge, access, understanding and use of quality infrastructure services, especially in manufacturing MSMEs.
- Determine the inventory of interventions or strategies that are currently being developed and/or have recently been completed, related to improving the competitiveness and productivity of MSMEs, and related to strengthening the knowledge, access, understanding and use of quality infrastructure services.
- Identify intervention opportunities and propose an action plan that contains strategic activities aimed at increasing the use of quality infrastructure services in manufacturing MSMEs.

### **3. Key activities**

- 3.1 Draft the work plan in coordination with INACAL.
- 3.2 Review the secondary information available to establish the general characteristics of the Peruvian MSMEs, according to region, sector and other relevant data.
- 3.3 Gather information from the main representatives of the industry associations and sectoral guilds of MSMEs in Peru to identify problems and barriers related to the information, access, knowledge, and understanding and use of quality infrastructure services in the manufacturing sectors.
- 3.4 Identify the current regulatory framework for the promotion, development and strengthening of MSMEs, and establish requirements for QI services required for businesses.
- 3.5 Identify and characterize the government programs and policies aimed at strengthening MSMEs, especially PRODUCE, MINCETUR and MINAGRI.
- 3.6 Analyze and identify the opportunities for use and application of quality infrastructure services (Standardization, Accreditation, Conformity Assessment, Metrology and technical regulations) based on the identified government programs and policies to strengthen MSMEs.
- 3.7 Review international best practices that have allowed for the increase in use of QI services in the MSMEs and determine the potential of application in the Peruvian reality.
- 3.8 Estimate the current impact of QI services on the competitiveness and productivity of the MSMEs.
- 3.9 Propose actions, according to INACAL competences (standardization, accreditation, conformity assessment, technical regulations and metrology) for the elimination of the barriers previously identified. For this, the information regarding the analysis of successful experiences provided by INACAL should be considered.
- 3.10 Systematize the actions according to INACAL competences (standardization, accreditation and metrology) to take advantage of the opportunities identified to apply quality infrastructure services.
- 3.11 Establish the estimated reference budget, perform the corresponding cost benefit evaluation and propose a matrix of indicators for monitoring and evaluation.
- 3.12 Propose a governance and coordination model within INACAL, with the entities involved and with the entity in charge of MSMEs, which allows for the implementation of the Investment Plan.
- 3.13 Presentation of the results to INACAL.
- 3.14 Present the results to the authorities of INACAL and the IDB.

### **4. Expected Outcome and Deliverables**



The deliverables are as follows:

#	Deliverable	Expected result
1	Work Plan	Detailed Work Plan including proposed activities, their sequence and timing, the proposed technical team, and the methodology to be used, specifying people responsible for each step.
2	Diagnosis of the MSMEs	Report containing at least: <ol style="list-style-type: none"> <li>4. Characterization of the MSMEs based on region, productive sector and other relevant data.</li> <li>5. Systematization of information survey activities (interviews or workshops with stakeholders in each region - considering the selected unions/guilds and associations in coordination with INACAL).</li> <li>6. Analysis of the problems and identification of barriers related to knowledge, access, understanding and use of quality infrastructure services, especially in the manufacturing sector.</li> </ol>
3	Analysis Report of the Programs and Policies for MSMEs	<ol style="list-style-type: none"> <li>d) Description of the government programs and policies of various sectors across ministries aimed at strengthening MSMEs</li> <li>e) Analysis of the regulatory framework for the promotion and strengthening of MSMEs.</li> <li>f) Identification of opportunities for use and application of QI services related to said inventory.</li> <li>g) Analysis of successful experiences in the world to increase the use of IC in MSMEs.</li> <li>h) Analysis of the current impact of QI services on the competitiveness and productivity of MSMEs.</li> </ol>
4	Investment Plan	<ol style="list-style-type: none"> <li>1. Proposal of actions necessary to take advantage of opportunities for applying QI services and to reduce the identified gaps, according to INACAL's lines of action.</li> <li>2. Characterization and referential budget for each component and activity.</li> <li>3. Cost benefit analysis and proposal of indicators.</li> <li>4. Governance and coordination proposal for the implementation of the investment plan</li> </ol>
5	Final Report and Presentation	<ol style="list-style-type: none"> <li>1. Integrated report that includes the above reports</li> <li>2. Presentation to the authorities of the INACAL and IDB</li> </ol>

## 5. **Acceptance Criteria**

- 5.1. 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.

- 5.2. Meetings with interested parties must be attended and coordinated by an INACAL official, specifically from the Metrology Directorate. Work meetings or similar processes must be evidenced with the corresponding minutes, which must be signed by the participants.

## **6. Qualifications**

- 6.1. General requirements: The team must have at least 10 years of experience providing services to the business sector, specifically in the design, management, implementation, monitoring, or evaluation of actions, programs or projects related to the development, strengthening and / or advice of companies in the MSMEs sector. The team must include at least one team leader that will be responsible for the overall coordination of the project activities and management of the team and will act as the primary contact for communications with the IDB and the INACAL.
- 6.2. Team Composition: The team must be comprised of experts in MSMEs, quality infrastructure, and economics.
- a) MSMEs Sector Specialist
    - Qualified professional (Bachelor's degree or higher according to country of studies, in administration, engineering or related subjects; preferable with a master's degree in subjects related to the objectives of this service.
    - With creditable experience of at least 5 years in service management for MSMEs companies.
    - Knowledge and expertise in the area of government programs and policies to strengthen the competitiveness and productivity of MSMEs
  - b) Specialists in Quality Infrastructure Actions
    - Qualified professional (Bachelor's degree or higher according to country of studies in science, engineering or related subjects.
    - With creditable experience of at least 5 years in service management for MSMEs companies.
    - With knowledge of quality infrastructure (standardization, accreditation, metrology, conformity assessment, technical regulation).
  - c) Economist
    - Qualified professional with Bachelor's degree with a preference for a post graduate degree in economics, finances, business administration or related subjects.
    - With verifiable experience of at least 5 years in private and / or public evaluation of investment projects and expertise in cost-benefit analysis.

## **7. Characteristics of the Consultancy**

- Contract category and modality: Products and External Services Contractual, International, Firm, Lump Sum
- Workplace: Lima, Peru
- Contract duration: 5 months

## **8. Schedule of Deliverables and Milestones**

	Deliverables	Deadline
--	--------------	----------

1	Work Plan	15 days after signing the contract
2	Diagnosis of the MSMEs	1.5 months
3	Analysis Report of the Programs and Policies for MSMEs	3 months
4	Investment Plan	4.5 months
5	Final report and Presentation	5 months

## 9. Supervision and Reporting

- 9.1. 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 consulting firm's responsibility to ensure that all required meetings in the countries are conducted and reports are submitted to the Bank.
- 9.2. For technical coordination in the service development, the firm will communicate with the Director of the Strategic Development for Quality Directorate of INACAL as a focal point. The focal point monitors the development of the consultancy, supporting the supervision work of the person in charge assigned by IDB. INACAL 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, INACAL may issue observations, comments or instructions for changes, or a favorable technical opinion.

## 10. Payment and Conditions

- 10.1. Payment for this lump-sum contract is up to \$30,000 and the payment terms will be based on project milestones or deliverables. The Bank wishes to receive the most competitive cost proposal for the services described herein. The official IDB exchange rate indicated in the RFP will be applied for the necessary conversions of payments in local currency. Payments are made pending the approval of the corresponding deliverables, according to the detailed schedule:

Payment Schedule	
Deliverable	%
13. Contract signed and upon submission and approval of the work plan	10%
14. Upon reception and approval of Deliverable 2	20%
15. Upon reception and approval of Deliverable 3	30%
16. Upon reception and approval of Deliverable 4 & 5	40%
Total	100%

## **Benchmarking of international best practices regarding the design, management, operability and provision of National Quality System**

**Peru  
IFD/CTI**

**PE-T1417**

### **Strengthening Peru's National Quality System**

#### **TERMS OF REFERENCE**

##### **Background**

In the past few decades, Peru has shown an improvement in the reduction of the gross domestic product gap and average per capita income gap; however, no substantial progress has been made in reducing technological gaps and gaps in innovation processes. One of the greater challenges faced by the country is that of implementing and developing a Quality Infrastructure (QI) that can be used as a pivot point from which to reach an acceptable level of competitiveness and which allows for the creation of new sources of growth, generating jobs and reducing dependency on primary exports.

In order to increment the competitiveness of the country, the Peruvian Congress approved Law No. 30224, through which the National Quality System (NQS), as well as the National Quality Institute (INACAL, according to its initials in Spanish); were created as a functional system that integrates and articulates principles, norms, procedures, techniques, instruments and institutions, in order to promote and ensure compliance with the National Policy for Quality with the purpose of boosting development and increasing the competitiveness of economic activities, as well as consumer protection. The NQS is composed of:

- g) The National Quality Council (CONACAL, according to its initials in Spanish).
- h) The National Quality Institute (INACAL) and its Permanent and Technical Committees.
- i) Public and private entities forming part of the QI.

The National Quality Institute (INACAL) is a Public Specialized Technical Body attached to the Ministry of Production, with legal identity under public law, with national jurisdiction and administrative, functional, technical, economic and financial autonomy. It is the governing body and the maximum technical and regulatory authority of the NQS, being responsible for its operation. Its purpose is to contribute with the development and compliance of the National Policy for Quality with the purpose of boosting development and increasing the competitiveness of economic activities, as well as consumer protection. All matters of standardization, accreditation and metrology are the responsibility of INACAL.

Standardization contributes to the generation of economic and social benefits because the existence of internationally harmonized standards improves production efficiency and facilitates international trade, which helps expedite trade flows, reduce costs and achieve greater integration of production networks. These benefits may be obtained if the aforementioned standards guarantee the coherence of the essential characteristics of goods and services, such as quality, ecology, safety, economy, reliability, compatibility, interoperability, efficiency and effectiveness.

Through accreditation, the technical competence of Conformity Assessment Bodies (CAB) is formally recognized after each CAB has undergone an audit to demonstrate compliance with internationally recognized standards and guidelines. To allow for faster trade flows, reduced costs and greater integration of production networks, it is vital for the country to have an adequate accreditation capacity and a sufficient supply of Accredited Conformity Assessment Bodies which can serve the different productive sectors.

The use of metrology helps generate trust on the local markets and allows companies to ensure that their products meet international standards and specifications. For that reason the international recognition of a

country's measurement system and recognition of its measurement capacity are essential for access to the global market since precise and reliable measurements are vital for productivity, competitiveness and innovation.

With the objective of strengthening the capacities of the NQS, the QI and its pillars (standardization, accreditation and metrology), INACAL continuously develops strategic actions that allow for improvement opportunities; these strategic actions are carried out both with the support of the central government as with the support of international cooperation.

The development of quality infrastructure in the country has been, for some time now, one of the areas prioritized by the IDB, being within its line of action related to competitiveness and innovation. In Peru, in 2011, the IDB in coordination with the Ministry of Economy and Finance, financed the project "Diagnosis of the Peruvian national quality system and plan of action for its strengthening" which was focused on improving competitiveness.

On the other hand, Korea has also provided support for strengthening the QI . In September 2016, a Memorandum of Understanding was signed between INACAL and the Korean Agency for Technology and Standards (KATS), valid for 5 years; in this context, technical support has been received through the International Standards Infrastructure Cooperation Program (ISCP). In 2018, KATS conducted the National Standards Capability Assessment Framework (NSCAF) to diagnose the national standards system and analyze the level of national standards capabilities of Peru to identify possible areas of cooperation . In addition, efforts have been made to include INACAL in the Annual Plan for the ISCP and other Korean institutions such as the Korean Standards Association - KSA and Korea Testing & Research Institute - KTR.

Although INACAL has made significant progress regarding the National Quality System, there are still pending matters to resolve which have been identified as a condition to INACAL's consolidation at the national level. These issues can be summarized as follows :

- Limited use of QI services by the private and public sector, which hinders the application of better control and surveillance practices in the country.
- High concentration of QI services in Lima, and very limited offer of these services in other regions of the country.
- Product value chains are not applying quality standards.
- The criteria and concepts used by consumers are not enough to create a demand for public services which offer quality standards.
- Mismatch between demand and supply, since some areas of metrology (such as chemistry or electronics) have not yet been developed as is the case with the application of standards or duly certified processes and products.
- Low level of coordination between the public and private sectors to accelerate the implementation of the National Policy for Quality in the country.

On the other hand, the strategic orientation of the country, through its policy instruments, establishes a series of conditions that the QI must provide:

- The National Plan for Productive Diversification , in its pillar of promotion of productive development, establishes as a key action "the generation of favorable conditions to increase productivity and competitiveness through the development of technical standards, laboratory accreditations and financing instruments for the certification of products under the leadership of INACAL".
- The National Policy on Competitiveness and Productivity (NPCP), recognizes the importance of MSMEs in the Peruvian business scheme, and also identifies their low competitiveness and production to be a result of their low adoption of quality aspects, among other things. In this regard, the NPCP, under its priority objective 6 – to generate conditions for a productive business environment, established the objective of facilitating the application of quality standards and conformity assessment of the goods and services commercialized.

- The National Competitiveness and Productivity Plan contains a set of policy measures organized according to each primary objective and in line with policy guidelines. INACAL contributes to the improvement of the country's competitiveness by participating directly with actions aimed at increasing the use of QI services in public procurement , improving the effectiveness of compliance with regulations through the use of IC services in the control and surveillance functions of regulatory and supervisory bodies , and strengthening capacities for the internationalization of companies through the use of IC services that allow them to meet the technical requirements of the countries of destination .

The compliance with mandates of policy guidelines (National Policy for Quality, the National Plan for Productive Diversification and the new National Policy on Competitiveness and Productivity), as well as the resolution of the problems identified, requires addressing the limitations of the supply and demand that hinder further development of the National Quality System. This revealed need is the justification for the implementation of interventions that contribute to achieving this objective. In this context, it is considered of vital importance to strengthen the Accreditation Directorate of INACAL and other NQS entities for the timely and efficient attention to the conformity assessment services required by regulatory and supervisory bodies.

Within that framework and as part of the institutional efforts of INACAL, the availability of the Korean government and the IDB has been articulated, for the financing of a technical cooperation project called "Support for strengthening the National Quality System", which has as its objective "to strengthen the National Quality System of Peru through the support of its leading institution, the National Quality Institute (INACAL)".

### **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 prepare an action plan to strengthen the National Quality System in Peru, based on proposals for good operating practices identified in national quality systems of selected countries.

### **What you'll do**

The consultant shall perform the following activities:

- Evaluate the NQS of Peru regarding the implementation of the National Policy for Quality and the development of activities of Standardization, Accreditation, Metrology and Conformity Assessment.
- Identify the characteristics and functioning of the national quality systems of selected countries considering their model of articulation, application of policies, interaction and institutionalism, sustainability, as well as public and private dynamics, and leverage and interaction strategies.
- Provide the criteria for the INACAL authorities to select three national quality systems from Brazil, Argentina, Germany, South Korea, Colombia, and Mexico.
- Describe best practices that have strengthened the operation of national quality systems and the systems of Standardization, Accreditation, Conformity Assessment and Metrology, as well as their effects and impacts generated.
- Analyze the characteristics of articulation, institutions and governance, that serve as the basis for their operations, and relationship between the public and private sectors

- Identify and analyze the problems that have at some point affected the operation of the foreign entity and the way in which they were solved
- Identify projects carried out with high impact, analyzing the environment in which they were managed and implemented, as well as its operations and impact
- Evaluate the possibility of applying successful experiences found in selected countries, considering the characteristics of the NQS in Peru
- Prepare a proposal for an Action Plan to strengthen the NQS of Peru incorporating successful experiences and strategies, establishing the requirements, characteristics or necessary conditions in the national context
- Present the results of the study to the authorities of the INACAL and the IDB.

### Deliverables

- Deliverable 1: Detailed Work Plan proposed activities, their sequence and timing (Gantt), the proposed technical team, and the methodology to be used, specifying people responsible for each step
- Deliverable 2: Preliminary report of assessment of the structural components of national quality systems
- Deliverable 3: Benchmarking studies of characterization of national quality systems of the chosen countries, proposal of strategies and evaluation of applicability
- Deliverable 4: Final report that integrates the deliverables above
- Deliverable 5: Final presentation

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 that all required meetings in the countries are conducted and reports are submitted to the Bank.

For technical coordination, the consultant will communicate with the Director of the Metrology Directorate of INACAL as a focal point. The focal point monitors the development of the consultancy, supporting the supervision work of the person in charge assigned by IDB. INACAL 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, INACAL 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 Consulting Firm 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:

- 20% after the contract signed and upon submission and approval of the work plan
- 20% upon the approval of the Deliverable 2
- 30% upon the approval of the Deliverable 3
- 30% upon the approval of the Deliverable 4 & 5

### Qualifications

- **Education:** Bachelor's degree (preferably Master's or similar postgraduate degree) in sciences, economics, engineering and/or related sciences.

- **Experience:** Experience of at least 5 years in planning and management of the national quality system.
- **Languages:** Proficiency in written and spoken Spanish.
- **Core and Technical Competencies:** Excellent written and verbal communication skills with an extensive knowledge of the public investment system of Peru. Experience of working in similar projects is desirable.

### Characteristics of Consultancy

- Type of contract and modality: PEC, Lump Sum
- Length of contract: 4 months
- Starting date: July 2021
- Location: Lima, Peru
- Responsible person: Gustavo Crespi, Science and Technology Principal Specialist, IFD/CTI

**Payment and Conditions:** Compensation will be determined in accordance with Bank's policies and procedures. The Bank, pursuant to applicable policies, may contribute toward travel and moving expenses. In addition, candidates must be citizens of an IDB member country.

**Visa and Work Permit:** The Bank, pursuant to applicable policies, may submit a visa request to the applicable immigration authorities; however, the granting of the visa is at the discretion of the immigration authorities. Notwithstanding, it is the responsibility of the candidate to obtain the necessary visa or work permits required by the authorities of the country(ies) in which the services will be rendered to the Bank. If a candidate cannot obtain a visa or work permit to render services to the Bank the contractual offer will be rescinded

**Consanguinity:** Pursuant to applicable Bank policy, candidates with relatives (including the fourth degree of consanguinity and the second degree of affinity, including spouse) working for the Bank as staff members or Complementary Workforce contractual, will not be eligible to provide services for the Bank.

**Diversity:** The Bank is committed to diversity and inclusion and to providing equal opportunities to all candidates. We embrace diversity on the basis of gender, age, education, national origin, ethnic origin, race, disability, sexual orientation, religion, and HIV/AIDs status. We encourage women, Afro-descendants and persons of indigenous origins to apply.