



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION



LABNET

A Worldwide Laboratory Network





DEVELOPING SUSTAINABLE LABORATORY INFRASTRUCTURE

Successful and sustainable exports to the global marketplace are increasingly predicated by demonstrable compliance with international quality requirements for goods and services. The ability of developing countries and economies in transition to compete in global markets and participate in international value chains is often hampered by difficulties in proving compliance with technically sophisticated quality requirements.

Improving a country's Quality Infrastructure means making sure a country has the capacity to provide acceptable evidence that its products and services meet the defined quality requirements often demanded by national and international authorities or by the marketplace. In order to do that, the United Nations Industrial Development Organization (UNIDO) helps build conformity assessment capacities, ultimately contributing to boosting a country's competitiveness in view of sustainable industrial development.

With a proven track record in Quality Infrastructure development of over 40 years, UNIDO has helped more than 100 countries to develop their Quality Infrastructure systems and has supported more than 600 laboratories to achieve international accreditation.

A sustainable Laboratory Infrastructure can help build economic prosperity, improve the lives of people and protect our planet, thereby contributing to the achievement of the 17 Sustainable Development Goals (SDGs). For many developing countries, the 2030 Agenda for Sustainable Development sits at the heart of their development plans and implementation strategies. As such, laboratories will play a key role through the calibration and testing services they provide, as well as other conformity assessment activities they enable, such as inspection and certification.

A Laboratory Infrastructure provides the technical foundation required for the functioning of modern societies. It can support a range of objectives in areas that include:

- » Industrial development;
- » Technology and technological advancement;
- » Trade competitiveness in domestic and global markets;
- » Efficient use of natural and human resources;
- » Food-safety;
- » Health;
- » Environmental protection; and
- » Mitigation of, and adaptation to, climate change.



WHAT IS A CONFORMITY ASSESSMENT?

Quality Infrastructure is the combination of initiatives, institutions, organizations, activities and people that help ensure products and services meet the requirements of customers. Conformity Assessment Bodies (CABs) are at the heart of this important work, as the link between regulators, industry and markets.

An assessment of conformity (with a pre-defined set of requirements, such as international standards, private standards and technical regulations) involves a set of processes that demonstrate that your product, service or system meets the requirements. A conformity assessment is the conformity of a product, service or system that is assessed before it is placed on the market. It needs to show that all the legislative requirements have been met which includes testing, inspection and certification. The procedure for each product is specified in the applicable product legislation.

Manufacturers and service providers can ensure that their products and services meet the right specifications and requirements by undergoing conformity assessments. This in turn provides consumers and users a guarantee of the quality, ecology, safety, reliability and efficiency of the product or service provided. Bearing a mark or certificate of conformity allows the consumers to have more confidence in the suppliers and their products. For the suppliers and small and medium-sized enterprises (SMEs), in addition to providing a competitive edge, getting a conformity assessment allows the company to always be up to date with the latest market trends and avoid financial losses related to complaints from buyers or getting their products pulled out from the market.

Conformity assessments also ensure that health, quality, safety and/or environmental requirements have been met. Thus, providing society through government regulations a way to ensure that safeguards are put in place and products are not sold without going through the required safety and health checks. In addition, harmonizing conformity assessment processes and procedures works toward integrating international trade and improving the ease of exporting goods to other countries/markets. This allows companies to bypass the costs associated with multiple testing or certifying of products.





WHAT ARE CONFORMITY ASSESSMENT BODIES?

Conformity Assessment Bodies (CABs) range from multinational companies that assume all types of conformity assessment activities (e.g. testing, inspection and certification), to CABs offering national services within one specific country or in a specific sector and region. CABs provide conformity assessment activities. CABs can take on any organisational form and ownership schema as well as be commercial or not-for-profit entities. Government agencies, national standards bodies, trade associations, consumer organisations, or private or publicly owned companies can all be CABs.

What is covered by the term Conformity Assessment Bodies?

The term Conformity Assessment Bodies (CABs) includes and refers to:



TESTING LABORATORIES



INSPECTION BODIES



CERTIFICATION BODIES – for people, products, processes, services and management systems



VALIDATION AND VERIFICATION BODIES
– confirming accurate information



WHAT ARE THE BENEFITS OF CABs?

For businesses, CABs offer several benefits such as:

- » helping businesses of any size and sector reduce costs and increase productivity;
- » providing an added visibility on the market and an international recognition which allows companies to access new markets;
- » providing companies with a competitive edge;
- » building trust between consumers and suppliers and added confidence in the product sold; and
- » meeting regulation requirements at a lower cost.

CABs can also play a vital role in sustainable development. They can help in the move towards a more circular economy, by driving more sustainable production and responsible consumption. Ultimately, these are the kinds of new pathways required to achieve the SDGs, which sit at the heart of the 2030 Agenda for Sustainable Development.



WHAT IS ACCREDITATION?

Accreditation is defined as a “third-party attestation related to a conformity assessment body conveying formal demonstration of its competence to carry out specific conformity assessment tasks”. It is designed to ensure that CABs (such as laboratories, inspection, or certification bodies) have the technical capacity to perform their duties and are compliant with specified requirements for competence, independence, and impartiality. Accreditation thereby increases trust in conformity assessment bodies. Accreditation ensures that the technical skills of the staff working in CABs are verified and assessed, that CABs that grant certificates or issue test reports show independence from the organizations to which their services are provided and that CABs do not have conflict of interest with the clients to whom they provide services. To ensure continued compliance, CABs are regularly re-assessed.

For instance, the **ISO 17025 accreditation** is the most important standard for testing and/or calibration laboratories. It confirms that a laboratory can produce precise and accurate test results and calibration data. ISO 17025 accreditation acts as a third-party review process that assures that a laboratory’s quality management system is current and has adequate technical competence.

THE LABORATORY NETWORK (LABNET)



WHAT IS LABNET?

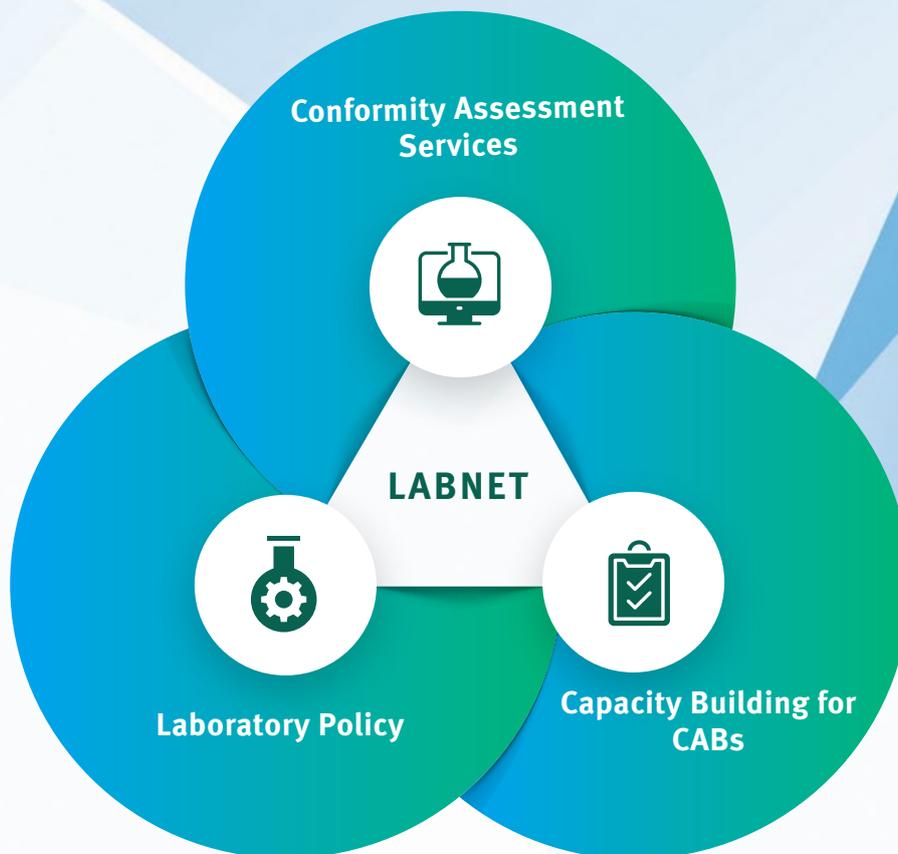
Producers, suppliers, exporters or regulators regularly face challenges in demonstrating that products and services conform to specified quality requirements, whether these are embodied within voluntary standards or mandatory technical regulations. In addition, CABs, if existing in a country, may lack the capacity to provide the required services to the private sector, especially in low-income developing countries. Therefore, the critical issue for export-related trade is finding CABs that have the capability and technical competence to provide needed attestation of conformity that is recognized both nationally and internationally.

While useful information on CABs, particularly laboratories, already exist within national or regional organizations, there is bound to be a wide disparity in the level of detail of such information. Hence, there is a need for one global database on CABs that is specifically designed to support quality in production.

The Laboratory Network (LabNet) is an innovative online tool, which provides information for producers seeking to prove compliance with market requirements, CABs aiming to enhance their services, and policymakers looking to develop a sustainable and fit-for-purpose Laboratory Infrastructure in support of sustainable industrial development.

As previously mentioned, conformity assessment services are diverse and CABs providing those services are scattered around the globe, each specializing in specific industries and providing specific services ranging from inspection to testing and calibration to certification. It can therefore be challenging for SMEs to find out information about the various local CABs.

To address this challenge, the LabNet platform was developed by UNIDO as a resource for:



- » **Conformity Assessment Services:** LabNet supports SMEs in their quest to identify the right provider of conformity assessment services by detailing information on all the available CABs within a specific country, around the world. The interactive web-based tool allows suppliers, exporters, and customers to easily locate the right service provider to meet their needs. For each CAB included in the database, information is provided on the services they offer and their accreditation status. LabNet allows CABs within developing countries to promote the services they offer, thus providing big and small enterprises alike an opportunity to reach a wider array of customers and to tap into the international market. This helps in matching the supply of conformity assessment services with the demand.
- » **Capacity Building for CABs:** LabNet provides guidance on how to strengthen the supply-side capacity of CABs, examples of which include how to comply with standards and how to follow safety regulations.
- » **Laboratory Policy:** An efficient, effective, and sustainable Laboratory Infrastructure is the basis for proving the compliance of products and services in local, regional, and global markets. UNIDO helps countries develop and implement their own laboratory policy, so they can establish a fit-for-purpose, efficient, and effective laboratory capability.



WHAT ARE THE OBJECTIVES OF LABNET?

The objectives of LabNet include:

- » Allowing producers to quickly **identify reliable and competent CABs** to verify the quality of products and services
- » Contributing to **improving the quality of goods offered** to consumers both in the local and international markets
- » **Offering business opportunities** for registered CABs not only within their country but also with customers abroad
- » Enhancing the capacity of CABs in view of **providing internationally recognized services**
- » Helping policymakers to develop a **sustainable and fit-for-purpose Laboratory Infrastructure** in support of sustainable industrial development
- » **Serving as a common platform** for sharing information through publications, technical reports, newsletters, seminars, working groups and other forums

By being able to quickly identify the CAB needed to assure the quality of their service or product, suppliers will be able to shorten the time it takes to bring a product/service to the market. This will generate economic gains and increase the likelihood of the product/service being exported. In addition, LabNet will encourage CABs to continue to develop new services and to consider getting accredited to demonstrate their conformity to international standards and to receive better recognition on an international stage.

How does LabNet work?

- » Users can access LabNet by visiting the [UNIDO Knowledge Hub](#).
- » Users can navigate the LabNet platform:
 - » for a global overview of all the registered CABs;
 - » to find out more about the services (i.e. testing laboratories, calibration laboratory, certification body, inspection body) that are available in each country; or
 - » to search for a specific CAB.
- » Any CAB can register on the LabNet platform. It is a free and easy process to complete. Periodically, the CABs should review and update any of the data provided to ensure that it remains current and accurate.
- » CABs, producers and policymakers can utilize any information provided on the LabNet freely.







WHAT IS THE IMPACT OF LABNET?

LabNet maps out in a database all CABs within (selected) developing countries. This database contains information on the conformity assessment services that particular CAB can offer so that producers, exporters, and other stakeholders may more easily identify service providers to address their specific needs in a timely manner. LabNet is a one-stop-shop for searching and identifying relevant CABs in any developing country as the project aims to identify each existing CAB database globally and link it to LabNet in a manner that provides synergy without duplication.

LabNet is not only a repository of information, but also a solution finder through the use of a guided process flow that serves as a coaching tool prompting users to better define and articulate their needs. While input information to LabNet is carried out at the national level, the output information is available for use by anyone searching the database from any part of the world.

Ultimately, LabNet ...

- » reduces the time required to identify the right service providers,
- » builds the capacity of CABs in view of providing internationally recognized services,
- » helps policymakers to develop sustainable and fit-for-purpose Laboratory Infrastructure,

... thereby ...

- » decreasing costs for producers and enabling fast and reliable access to international markets,
- » increasing the reliability of services and ensuring products are safe for consumption,
- » driving more sustainable production and responsible consumption.

It has been shown that establishing a Quality Infrastructure can substantially assist a nation in pursuing a development path aligned with the SDGs, and benefitting from the considerable opportunities generated through the achievement of the SDGs and the 2030 Agenda.







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