



**MINISTRY OF BUSINESS,  
INNOVATION & EMPLOYMENT**  
HĪKINA WHAKATUTUKI

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# A Guide to New Zealand's Standards and Conformance System

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March 2018

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- Ministry for Primary Industries
- New Zealand Transport Agency
- Standards New Zealand
- Trading Standards
- WorkSafe New Zealand

Edited by Victoria Hodgson, Ministry of Business, Innovation and Employment



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# Foreword

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New Zealand's standards and conformance system plays an important role in the economy. Conformance to standards helps to minimise health, safety and environmental risks; allows consumers to make informed decisions about purchasing products and services in accordance with their preferences and values; ensures compatibility; and facilitates international trade.

Businesses use standards and conformance to provide assurance on product quality and compatibility. Governments use standards in regulation to protect the health and safety of consumers and protect the environment.

To be successful, it is vital for businesses to understand the standards and conformance system. Businesses must be able to meet regulations and obtain independent proof that they have done so. Standards and conformance can also help businesses grow. When consumers know a business supplies reliable and consistent products and services, they are more likely to purchase from it. Proving products meet quality and performance standards can add value by attracting premium prices.

Standards and conformance also play an important role in growing New Zealand's exports. When New Zealand businesses are equipped to fully engage in the global economy and leverage the benefits of international trade, all of New Zealand benefits. An effective and internationally coherent standards and conformance system helps businesses to export successfully by assuring the quality of New Zealand exports, minimising artificial trade barriers, and levelling the playing field.

The Ministry of Business, Innovation and Employment has prepared this guide to explain the context of standards and conformance, and identify the organisations that make up New Zealand's standards and conformance infrastructure.

It is essential that we maintain our strong, credible system to enhance our reputation for producing high quality products, and to keep consumers safe. I hope this guide is useful in explaining how New Zealand's standards and conformance system works, and what government, businesses and consumers can do to get the most out of it.



**Hon Kris Faafoi**  
Minister of Commerce  
and Consumer Affairs

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# Executive Summary

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## Purpose

All countries which hope to participate in increasingly globalised trade and supply chains need an effective and reliable standards and conformance infrastructure. It is important for New Zealanders' safety and prosperity that regulators and those who interact regularly with standards and conformance procedures, including businesses and consumers, have a tool to understand New Zealand's standards and conformance system.

*A Guide to New Zealand's Standards and Conformance System* provides a broad overview of the standards and conformance system in New Zealand, including the role of standards, conformance, accreditation, policy and regulations, and how they all fit together. It also provides examples of the various organisations involved in each of these processes, and links to their associated websites.

This guide builds on the work of an earlier publication, *New Zealand's Standards and Conformance System: A Guide for Business* (ISBN:0-478-23499-6) which was published by the Ministry of Economic Development in 2001. While the Ministry of Economic Development produced the previous booklet specifically for businesses, the Ministry of Business, Innovation and Employment (MBIE) has created *A Guide to New Zealand's Standards and Conformance System* for the use of anyone who engages with or has an interest in the standards and conformance system.

## Overview

This guide begins with a brief explanation of standards, conformance and accreditation. It outlines how the three work together to ensure product, system and service safety and quality, and provides a diagram indicating the lead organisations involved in each stage of New Zealand's standards and conformance infrastructure.

Section 2 introduces the role of policy and regulations in the standards and conformance system, and outlines the responsibilities of a selection of government agencies and government-funded organisations which provide policy advice and create regulations.

Section 3 describes how standards development and administration (including metrology standards), and the provision of assistance to businesses in meeting standards, creates the foundation of a robust standards and conformance system. It introduces a selection of New Zealand organisations involved in this work.

Section 4 explains how conformance bodies assess products, systems and services to ensure that they comply with the standards and regulations that they claim to meet, and explains the different types of conformity assessment and the types of bodies that can assess conformance. It also introduces New Zealand's mutual recognition arrangements, which allow some overseas conformity assessments to be accepted in New Zealand and vice versa.

Section 5 introduces accreditation, which is the process of ensuring that conformity assessment bodies are competent to assess conformance. It then introduces the two primary accreditation bodies active in New Zealand.

Finally, a glossary of terms is contained at the back of this guide.

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# 1. Outline of Standards, Conformance and Accreditation

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## Overview

This section provides a brief outline of standards, conformance and accreditation, and how they work together to ensure that the products, systems and services that New Zealand businesses provide are safe and high-quality. It goes on to provide a diagram of the lead organisations involved in each part of the system, and to outline how businesses can ensure compliance with standards for export and import.

## Standards

Standards are published documents setting out agreed technical specifications for products, systems or services. Some industries use standards to provide assurance on the quality, safety and performance of the products, systems or services they are providing.

### Voluntary Standards

Most standards are voluntary, and relate to maintaining product quality and consistency. Voluntary standards are encouraged by industry groups or consumer demand, and can be developed by international organisations, national standards bodies, governments, or industry associations. They can be developed in consultation with the relevant industry and other stakeholders such as consumers and regulators. Products claiming to meet a voluntary standard should be checked for compliance or they may breach the Fair Trading Act.

Although products, systems and services are not legally required to meet voluntary standards, customers may prefer that they do. Therefore, if a product, system or service does not meet certain voluntary standards it may not sell successfully. Voluntary standards can become mandatory when governments incorporate or cite them in regulations.

### Measurement Standards

National measurement standards are accurate measures of quantities such as length, weight, volume, temperature and time. They provide benchmarks to ensure that measuring devices such as scales, thermometers and clocks achieve accurate results.

Trade measurements help to ensure that traders who sell goods by a measure or number (such as a litre of petrol, or a kilogram of butter) are providing customers with fair and accurate quantities.

### Regulatory Technical Requirements

To minimise risks or promote the public interest, governments can regulate particular products, systems and services. Technical requirements are specific rules covering areas such as product safety, operator/user safety, environmental effects, quarantine requirements, consumer protections, packaging and labelling, or product characteristics. If a product, system or service does not comply, it will be illegal to offer it for sale. A technical requirement may include technical specifications, or it may specify use of a voluntary standard already in existence. Standards may be referenced in regulatory technical requirements. Often, complying with the standard is a way of demonstrating compliance with the regulatory requirement. In a few cases, compliance with the standard is mandatory. Regulators may take enforcement action to ensure compliance with the relevant technical requirement.

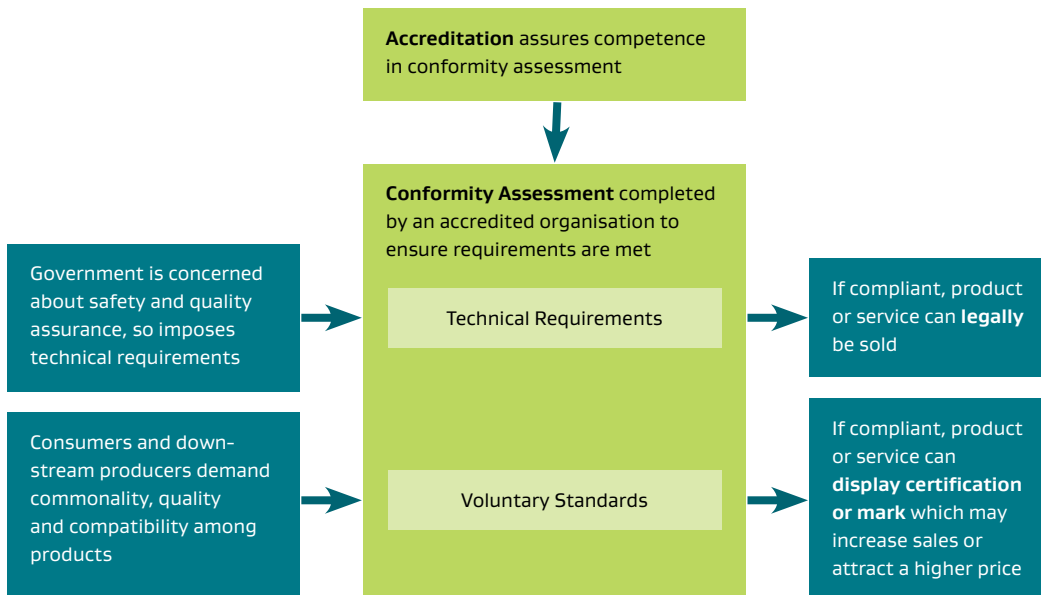
### Conformance

Conformance is the process of judging whether a particular product, system or service meets a standard or complies with a regulation. Conformity assessment is undertaken by technical experts in laboratories, inspection bodies and certification bodies, who refer to standards when testing samples, inspecting safety equipment, calibrating measurements, or auditing quality systems. Decisions are based on the results of these measurements, tests, inspections or audits. Conformity assessment bodies issue reports and certificates of compliance.

### Accreditation

Accreditation bodies use standards and technical experts to check and formally recognise that a conformity assessment organisation such as a laboratory or certification body is competent to assess conformance. Governments establish or endorse accreditation bodies.

Figure 1: Standards and Conformance Framework



## Standards and Conformance Infrastructure

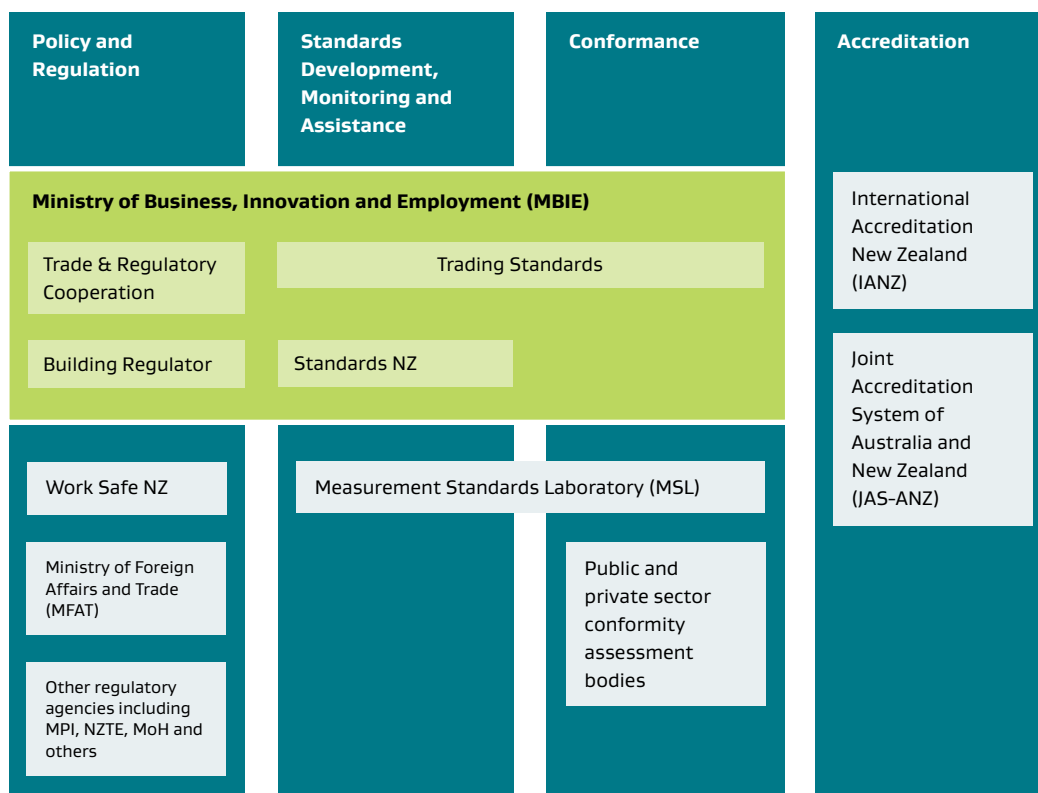
The organisations below collaborate to create New Zealand’s standards and conformance infrastructure. This network includes government agencies, Crown entities, international organisations, and conformity assessment bodies in the public and private sectors.

The following sections of this booklet explain the different organisations involved in these four functions:

- › policy and regulation
- › standards development, monitoring and assistance
- › conformance
- › accreditation.

The Ministry of Business, Innovation and Employment is the lead policy department for the standards and conformance system.

**Figure 2: Examples of organisations in New Zealand's standards and conformance infrastructure**





## Standards and Regulations for Exporting Overseas

Countries have their own technical requirements and standards, including different systems of measurement. When exporting, businesses must comply with the requirements of the destination country. Goods for export should comply with local regulations or they may be unable to enter the market. It is often beneficial for goods to meet local voluntary standards too, to be more appealing to consumers and demonstrate the quality or safety of products, systems or services.

Conformity assessment processes can also differ between countries. Products that have already been tested in the country of export may also need to be re-tested or re-inspected in the country of import, which can add significant delays and costs. It is usually expected that the exporter or importer will pay for this. New Zealand has a number of agreements with key export markets, such as China, Singapore, Taiwan and the European Union which allow conformity assessment procedures undertaken in New Zealand to be recognised by the country of import for selected products. More information is available on page 20 and 21 of this guide (Mutual Recognition).

### New Zealand Trade and Enterprise

New Zealand Trade and Enterprise provides support to businesses when exporting.

#### Box 1: More information on New Zealand Trade and Enterprise

**Tel:** 0800 555 888

Local offices are in Auckland, Christchurch, Dunedin, Hamilton, Napier, Nelson, New Plymouth, Palmerston North, Tauranga and Wellington.

For specific contact details see: [www.nzte.govt.nz/contact/new-zealand-offices](http://www.nzte.govt.nz/contact/new-zealand-offices)

**Web:** [www.nzte.govt.nz](http://www.nzte.govt.nz)

For NZTE information on understanding export regulations, see: [www.nzte.govt.nz/export-assistance/export-essentials-guides/understanding-your-international-compliance-require](http://www.nzte.govt.nz/export-assistance/export-essentials-guides/understanding-your-international-compliance-require)

## Standards and Regulations for Importing to New Zealand

New Zealand companies intending to import products to sell in New Zealand should also ensure compliance or they may be held liable. To ensure understanding of regulations and standards that apply to a specific product, system or service, importers should check with the relevant regulator, for example:

- › Food safety and biosecurity: [www.mpi.govt.nz](http://www.mpi.govt.nz)
- › Health and medicinal safety : [www.health.govt.nz](http://www.health.govt.nz)
- › Electrical and gas safety: [www.energysafety.govt.nz](http://www.energysafety.govt.nz)
- › Motor vehicle safety: [www.nzta.govt.nz](http://www.nzta.govt.nz)
- › Consumer product safety and information: [www.mbie.govt.nz/info-services/trading-standards/consumer-product-safety](http://www.mbie.govt.nz/info-services/trading-standards/consumer-product-safety)
- › Building safety: [www.building.govt.nz](http://www.building.govt.nz)

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## 2. Policy & Regulations

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### Overview

New Zealand has relatively few regulations for traded products, systems and services. Manufacturers and traders generally take responsibility for the safety of their products through self-regulation, which is reinforced by consumer protection legislation. However, some products pose greater risks, so the Government imposes technical requirements that must be met for businesses to sell these products. These regulations are administered and enforced by the government agency with expert knowledge of the product, system or service.

This section begins by outlining the international obligations that New Zealand must meet when designing regulations, to ensure that they are not unnecessarily obstructive to trade. The role of MBIE as the lead policy agency for the standards and conformance system is introduced, followed by some examples of New Zealand regulators. Note that there are many others not mentioned which regulate specific categories of products, systems and services.

### Technical Barriers to Trade (TBT) and Sanitary and Phytosanitary (SPS) Measures

Sometimes, technical regulations can cause unnecessary barriers to international trade by, for example, requiring businesses to undergo multiple conformity assessment procedures for different regulations which may not be necessary to protect consumers. Growth in complexity of world trade has encouraged governments to find ways of reducing these barriers to trade so that goods can cross borders without unnecessary delays or added costs.

New Zealand and most of its trading partners are members of the World Trade Organisation (WTO). WTO members have agreed to make international trade more efficient by lowering tariffs, phasing out subsidies and quotas, and reducing structural barriers to trade, such as TBTs and SPS measures. The WTO administers two Agreements covering rules for technical regulations, standards and conformity procedures: the Agreement on Technical Barriers to Trade (the TBT Agreement) and the Agreement on Sanitary and Phytosanitary Measures (the SPS Agreement). The SPS Agreement covers regulations for human, animal and plant health, including food safety and quarantine.

The TBT and SPS Agreements require that technical regulations and conformity assessment procedures affecting trade be:

|   |  |
|---|--|
| <b>Transparent</b>                      | Technical requirements must be published and available to all other Members. Each WTO Member must have national TBT and SPS Enquiry Points to provide information on TBT measures proposed or adopted in that country. New Zealand's TBT Enquiry Point is Standards New Zealand, and its SPS Enquiry Point is the Ministry for Primary Industries. |
| <b>Justifiable</b>                      | There must be good scientific evidence or justifiable reasons for all TBT and SPS measures.  |
| <b>Non-discriminatory</b>               | Products from all WTO members must be treated the same. Technical regulations must apply the same rules for imported goods as for goods produced locally.  |
| <b>Based on international standards</b> | Where possible, all regulations should be based on international standards and guidelines. Processes for checking conformance, including test methods, should also be internationally recognised.  |

## Standards and Conformance Policy

### Trade and Regulatory Cooperation Team

The Trade and Regulatory Cooperation Team within MBIE is responsible for overseeing New Zealand's standards and conformance infrastructure. It advises the Government on standards and conformance policy, seeking to reduce compliance costs to business while maintaining a robust standards and conformance system.

The Trade and Regulatory Cooperation team also plays a key role in supporting New Zealand exporters and importers through internationally promoting the reduction of technical barriers to trade, and collaborating with the Ministry of Foreign Affairs and Trade to negotiate TBT chapters within trade agreements. These approaches are consistent with the World Trade Organisation's (WTO) TBT Agreement.

#### Box 2: More information on the Ministry of Business, Innovation and Employment

**Tel:** +64 4 901 1499  
**Email:** [info@mbie.govt.nz](mailto:info@mbie.govt.nz)

**Web:** [www.mbie.govt.nz/info-services/business/standards-conformance](http://www.mbie.govt.nz/info-services/business/standards-conformance)

## Regulation

### Building Regulator and Building Code

The Building System Performance team within MBIE is the lead body in New Zealand's building regulatory system. It is responsible for advice on legislation and regulations, including the Building Code. The stewardship role requires the Building Regulator to look across the system as a whole and provide advice on how to ensure the building regulatory system is high performing. The Building Regulator is responsible for:

- › reviewing the Building Code
- › producing documents showing how to comply with the Building Code
- › monitoring the performance of district and city councils in the building regulatory system
- › investigating complaints
- › making determinations about disputes on certain building matters
- › occupational licencing of some professions.

The Building Regulator works alongside building practitioners, government agencies, other regulators and the construction industry to understand what matters to the sector and to improve the regulatory system.

### Ministry for Primary Industries

The Ministry for Primary Industries (MPI) leads the New Zealand Government's interaction with primary industries including agriculture, forestry and fisheries. Part of this role includes managing risk to the New Zealand public and certain industries from plant and animal sources. This is achieved through implementing regulations on:

- › production, processing and export of food and other animal products
- › registration and use of agricultural compounds, including veterinary medicines
- › biosecurity risks to animal and plant life, both introduced and local species
- › animal welfare.

MPI advises the Government on all animal and plant health matters and liaises with other agencies on all developments affecting trade in primary products. When trading partners require assurances that New Zealand produce complies with regulations or standards, MPI issues Export Certificates which give an official assurance to other governments that the product was produced under MPI's regulatory control, and that the attestations made on the certificate are true and supported by evidence. These certificates are based on ongoing checks that standards are being properly followed at all stages of production.

MPI is also New Zealand's Enquiry Point for the WTO agreement on Sanitary and Phytosanitary measures.

#### Box 3: More information on the Ministry for Primary Industries

Tel: +64 4 894 0100  
Email: [info@mpi.govt.nz](mailto:info@mpi.govt.nz)

Web: <https://www.mpi.govt.nz/>

## Ministry of Health

The Ministry of Health certifies health care services (such as hospitals and rest homes) and health practitioners, and oversees the distribution chain of medicines, controlled drugs and therapeutic products. The New Zealand Medicines and Medical Devices Safety Authority (Medsafe) is within the Ministry of Health and is responsible for regulation of medicines and medical devices in New Zealand and the safe use of medicines.

### Box 4: More information on Medical Safety at the Ministry of Health

#### Ministry of Health

**Tel:** 0800 855 066

**Email:** [info@health.govt.nz](mailto:info@health.govt.nz)

**Web:** [www.health.govt.nz/our-work/regulation-health-and-disability-system](http://www.health.govt.nz/our-work/regulation-health-and-disability-system)

#### Medsafe

**Tel:** 04 819 6800

**Email:** [askmedsafe@moh.govt.nz](mailto:askmedsafe@moh.govt.nz)

**Web:** [www.medsafe.govt.nz](http://www.medsafe.govt.nz)

## New Zealand Transport Agency

The New Zealand Transport Agency is responsible for regulating the safety and environmental performance of vehicles operating on New Zealand roads, along with safety-related vehicle components and equipment. Entry into the New Zealand vehicle fleet is controlled through the application of vehicle standards from four main source markets: Europe, Australia, Japan and the United States. These standards are complemented by specialist certification and in-service inspection systems to ensure continued roadworthiness throughout the life of the vehicle.

### Box 5: More information on the New Zealand Transport Agency

**Tel:** 0800 108 809

**Email:** [info@nzta.govt.nz](mailto:info@nzta.govt.nz)

**Web:** [www.nzta.govt.nz](http://www.nzta.govt.nz)

## Commerce Commission

The Commerce Commission enforces the Fair Trading Act 1986 which covers product safety standards for baby walkers, children's toys, children's nightwear, cigarette lighters, household cots and pedal bicycles. It also enforces consumer information standards which include country of origin labelling for clothing and footwear; care and fibre content labelling for certain goods; water efficiency labelling for appliances using water; and used motor vehicles.

### Box 6: More information on the Commerce Commission

**Tel:** 04 924 3600

**Email:** [contact@comcom.govt.nz](mailto:contact@comcom.govt.nz)

**Web:** [www.comcom.govt.nz](http://www.comcom.govt.nz)

## Energy Safety

Energy Safety, part of WorkSafe New Zealand, is responsible for safeguarding people and property from the dangers of gas and electricity. This includes responsibility for the safety of electrical and gas appliances and installations, and the safety of electrical supply and generation systems. Energy Safety monitors, encourages and enforces compliance with laws related to electricity and gas supply.

### Box 7: More information on Energy Safety

**Tel:** +64 3 962 6248

**Web:** <http://www.energysafety.govt.nz/>

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## 3. Standards Development, Administration and Assistance

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### Overview

Standards set acceptable levels of quality and performance, usually at a minimum level or a good practice benchmark. Most standards are voluntary, and are developed by industry groups. Sometimes Government incorporates standards in regulations, making them mandatory. For businesses, standards can:

- › define specifications that ensure product, system or service quality within their business, industry or community
- › reduce costs and risks by providing a solution that key stakeholders agree is the best method, or specify the characteristics of a product
- › meet international requirements and reduce barriers between exporters and their international markets
- › be used as a marketing tool
- › provide a means of compliance with legislation
- › achieve national and international recognition for best practice.

Businesses must ensure that the weight, length or volume of the goods that they are selling is sufficiently accurate. For example, if a business is selling 1kg blocks of cheese, it must ensure that the blocks of cheese weigh 1kg. Measurement standards are a type of standard, and the study and management of these standards is called metrology. International measurement standards ensure that components from one country will fit machines from another; that aircraft can safely use navigation systems in different countries; and that a litre bottle from Invercargill will hold the same amount as a litre bottle from Shanghai.

This section introduces five New Zealand organisations involved in standards development, monitoring and assistance:

- › the Standards Approval Board
- › the New Zealand Standards Executive
- › Standards New Zealand
- › Trading Standards
- › Measurement Standards Laboratory of New Zealand.

The section then briefly outlines two international and regional standards organisations and three international and regional metrology organisations.

## Standards Development

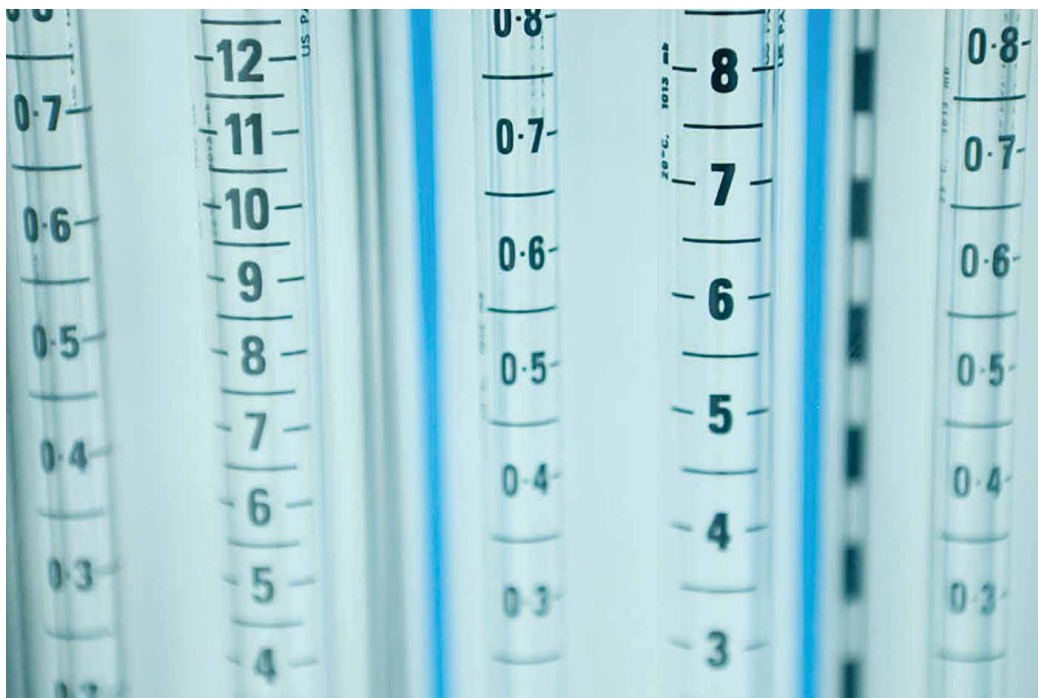
### Standards Approval Board

The development and management of standards is governed by the *Standards and Accreditation Act 2015*, which establishes the Standards Approval Board. The Standards Approval Board is responsible for approving New Zealand Standards, approving chairs and members of standards development committees, and providing advice to the Minister of Commerce and Consumer Affairs on New Zealand Standards. The Minister appoints the Standards Approval Board of five to seven members including a Chair. Members are required to have skills, knowledge and experience of sectors that use standards.

### New Zealand Standards Executive

The *Standards and Accreditation Act 2015* also establishes the New Zealand Standards Executive. The New Zealand Standards Executive is responsible for:

- › the operations of Standards New Zealand
- › copyright for New Zealand Standards and enforcement of copyright on behalf of international standards bodies
- › providing access to standards for standards users
- › New Zealand's WTO Technical Barriers to Trade enquiry point
- › New Zealand's membership of international standards organisations, including the International Organisation for Standardisation (ISO) and the International Electrotechnical Commission (IEC).



**Standards New Zealand**

Standards New Zealand is a business unit within MBIE responsible for managing the development of and providing access to standards in New Zealand, and is the operational arm of the New Zealand Standards Executive. Development of standards is based on an internationally recognised process of consultation and consensus, with all interested parties invited to participate. Standards New Zealand is not directly funded by Government. Revenue comes from contracts with industry and Government for the adoption, development and support of standards, and from sales of standards publications.

**Operations**

Standards New Zealand manages the development of standards (see Fig.3) and enables access to them. It develops New Zealand standards and Joint Australian/New Zealand standards for use in both countries, by adopting international standards as a first option wherever possible. Standards New Zealand provides access to local and international standards and related documents through sales of individual copies, in both printed and electronic formats, and through subscription services. It encourages bodies who commission standards to also sponsor their access, so that New Zealand businesses and the public can access them easily. It monitors copyright breaches and enables legitimate use of standards content through copyright licenses.

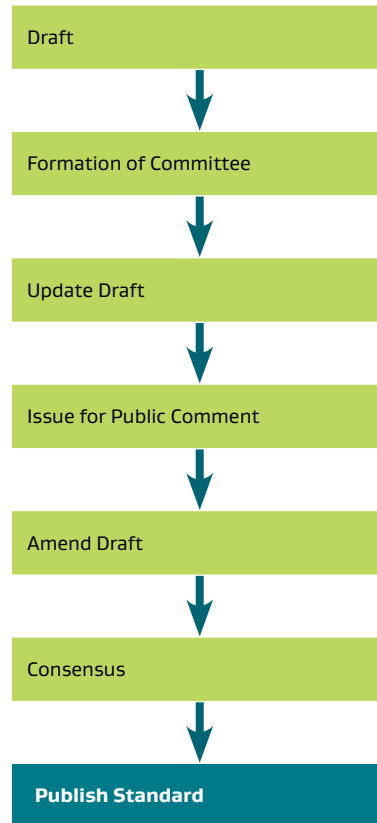
**International Role**

Standards New Zealand represents New Zealand in the ISO and IEC, which ensures New Zealand's interests are considered in the development of international standards developments. Standards New Zealand acts as the enquiry point on behalf of the Ministry of Foreign Affairs and Trade for technical barriers to trade (TBT) under the WTO TBT Agreement. The Enquiry Point notifies the WTO of any new standards or regulations in New Zealand that may significantly affect trade and monitors the notifications of other countries. It also responds to enquiries on any regulations or requirements that must be met before specific products can be imported into New Zealand.

**Regional Cooperation**

Standards New Zealand maintains strong links with Standards Australia. Both are party to a formal agreement for preparing and publishing joint Australian/New Zealand Standards where appropriate. Standards New Zealand is a founding member of the Pacific Area Standards Congress (PASC), and also participates in standards activities within Asia-Pacific Economic Cooperation (APEC).

**Figure 3: Process for Development of Standards**



| Box 8: More information on Standards New Zealand |  |   |
|--|--|---|
| Tel:   | +64 3 943 4259   | Web: <a href="http://www.standards.govt.nz">www.standards.govt.nz</a> |
| Email:   | <a href="mailto:enquiries@standards.govt.nz">enquiries@standards.govt.nz</a> |   |



## Standards Administration and Metrology

### Trading Standards

Trading Standards is responsible for consumer product safety, the administration and enforcement of the Weights and Measures Act 1987, and fuel quality monitoring. Trading Standards is an operational unit within MBIE and reports to the Minister of Commerce and Consumer Affairs on operational issues.

### *Consumer Product Safety*

Trading Standards oversees consumer product safety in New Zealand. Trading Standards investigates national and international emerging product safety issues, and reduces significant risks and hazards that products may pose to New Zealand consumers. The Minister of Commerce and Consumer Affairs can implement mandatory recalls, ban products with Unsafe Goods Notices, and set Product Safety Standards. These measures are enforceable by the Commerce Commission and New Zealand Customs.

### *Trade Measurement*

Trading Standards administers and enforces New Zealand's system of trade measurement (known as legal metrology), ensuring that weighing and measuring equipment and the quantity in packaged goods is accurate. The Weights and Measures Act provides for the system of weights and measurements to be used in trade. The Act sets down a number of fundamental rights for consumers and those involved in trading goods by weight, measurement or number.

### *Fuel Quality Monitoring*

Trading Standards monitors the quality of retail fuel in New Zealand and ensures it complies with specifications set out in the Engine Fuel Specifications Regulations. Trading Standards uses statistical sampling to detect non-compliance. The Regulations specify limits on a number of critical properties for premium and regular petrol grades, diesel, and biofuels such as biodiesel and ethanol.

#### Box 9: More information on Trading Standards

Contact: [info@mbie.govt.nz](mailto:info@mbie.govt.nz)  
Web: [www.mbie.govt.nz/info-services/  
trading-standards](http://www.mbie.govt.nz/info-services/trading-standards)

Trading Standards Brochure: [www.mbie.govt.  
nz/info-services/trading-standards/portlets-  
content/Trading-Standards-Brochure-v5-  
optimised.pdf](http://www.mbie.govt.nz/info-services/trading-standards/portlets-content/Trading-Standards-Brochure-v5-optimised.pdf)

## Measurement Standards Laboratory of New Zealand

Confidence in measurement is important for the enforcement of local and central government regulations and codes and for consumer protection. Up-to-date measurement capabilities underpin New Zealand's competitive advantage, especially in advanced technology product development. Internationally, confidence in New Zealand's standards of measurement is essential for access to the global market-place and to meet international standards and conformance requirements.

The Measurement Standards Laboratory of New Zealand (MSL) ensures that New Zealand has the scientific and technical expertise for a system that delivers accurate and reliable measurements. Government, businesses and consumers rely on the values provided by the measuring instruments MSL calibrates for a wide range of purposes including enforcement, health, trade, safety, food production, environmental monitoring, transport and manufacturing.

Measurements can only be relied on if they are traceable. Traceability is an unbroken chain of comparisons back to the International System of Units (SI) definition in the form of a national measurement standard. Each comparison in the chain has known accuracy and is undertaken by people who are technically competent.

### Operations

MSL is part of Callaghan Innovation, a crown entity. MSL reports to the Minister of Science and Innovation and advises the Government on national and international measurement issues.

MSL's key functions are to:

- › ensure that suppliers and consumers, both within New Zealand and internationally, have confidence in New Zealand's standards of measurement
- › ensure New Zealand's measurement system is traceable to the SI by providing calibration services in length, mass, volume, density, pressure, time intervals, frequency, time of day, electricity, temperature, humidity, photometry, radiometry and spectrophotometry
- › provide advice on the acceptability of calibration, test or measurement information
- › provide measurement experts (for example, for technical assessment of laboratories)
- › provide workshops and training to build technical competence in testing and calibration
- › provide measurement-related consultancy services based on specialist technical expertise
- › introduce new measurement standards and extend existing measurement standards in range and accuracy
- › monitor international developments in their specialist areas and report on and respond to changes, such as new definitions for SI units
- › build the metrology capabilities of other countries in the Asia-Pacific region
- › participate in inter-governmental forums and ensure that New Zealand meets its obligations under the Mutual Recognition Arrangement for international equivalence of measurements administered by the International Committee for Weights and Measures, including participation in regular international measurement comparisons.

#### Box 10: More information on the Measurement Standards Laboratory

Contact: [info@measurement.govt.nz](mailto:info@measurement.govt.nz)

Web: [www.measurement.govt.nz](http://www.measurement.govt.nz)

## International and Regional Standards Organisations

### International Organisation for Standardisation (ISO)

The ISO is the world's largest developer of internationally harmonised standards. It is a network of national standards institutes (including the New Zealand Standards Executive) and is a private non-governmental body whose members do not directly represent the governments of their countries of origin. It develops voluntary standards that tend to cover a broad range of subjects and markets, and owns over 19,500 International Standards. More information is available at [www.iso.org](http://www.iso.org).

### International Electrotechnical Commission (IEC)

The IEC produces International Standards for all electrical, electronic and related technologies. Like the ISO, it is a private, non-governmental network of national standards institutes. The IEC oversees 175 technical committees and subcommittees involved in setting standards and owns over 6300 published standards and standards-type documents. More information is available at [www.iec.ch](http://www.iec.ch).

## International and Regional Metrology Organisations

### International Organisation of Legal Metrology

The Organisation International de Métrologie Légale (OIML) facilitates international harmonisation of legal metrology. Sixty countries are full members of OIML and a further 68 countries are corresponding members. New Zealand is a full member.

### Asia Pacific Legal Metrology Forum

New Zealand is a member of the Asia Pacific Legal Metrology Forum (APLMF), a specialist regional body recognised by APEC. APLMF aims to promote integrity and harmony in legal metrology activities and services; and to build mutual confidence in trade measurement within the Asia-Pacific region. New Zealand chairs the APLMF working group on goods packed by measure.

### Trade Measurement Advisory Committee

The Trade Measurement Advisory Committee consists of the trade measurement authorities from New Zealand and from the Commonwealth, States and Territories of Australia. The Committee focuses on trade measurement issues within and between Australia and New Zealand, and provides policy advice on trade measurement issues.

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## 4. Conformance

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### Overview

Conformity assessment is the process of deciding whether or not a product, system or service conforms to a standard or complies with a regulation. There are four main types of conformity assessment: **testing, calibration, inspection** and **certification**. Conformity assessment is generally undertaken by private organisations on a commercial basis. Specialist laboratories carry out tests or check measurements and issue reports. Inspection bodies undertake various types of professional inspections and issue inspection reports. Certification bodies license products, audit quality or environmental management systems, and issue certificates of conformity. This section outlines the four types of conformity assessment procedures listed above, then introduces New Zealand's mutual recognition arrangements, which provide for some types of conformity assessment done in New Zealand to be recognised overseas, and vice versa.



## Testing

Testing is the process of determining the characteristics of an item or material using recognised scientific methods.

Tests are carried out in laboratories and reports relate only to the sample tested. Most tests are conducted using standard test methods that specify the equipment, environment and processes required to achieve a reliable result. Microbiological testing, for example, requires a sterile environment, with staff wearing protective clothing. When non-standard test methods are used, the scientists must be able to prove that the test method is valid.

## Calibration

Calibration is the process of ensuring that measuring instruments are giving accurate results, and is a type of testing.

Measuring instruments are calibrated in private calibration laboratories against reference standards that have been calibrated by MSL or another laboratory whose measurements are traceable to the appropriate national measurement standard. This ensures that any measurements performed with the calibrated instruments will be traceable back to the SI. Calibration laboratories can be accredited to calibrate a wide range of measuring instruments, including speed cameras, analytical balances, measuring tapes, pressure gauges and electrical power meters. Calibration reports may only carry the accreditation logo if the laboratory is accredited for those calibrations.

## Inspection

Inspection is the use of skill and professional judgement to determine whether technical and safety requirements are being met. The international standard for professional inspection bodies (ISO/IEC 17020) covers designs, products, services, processes and plants. Specialist inspectors examine the technical aspects of such things as pipelines, crane designs, boilers, buildings, machinery, quarantine services or food premises. Many inspections require the use of internationally recognised standard inspection methods to ensure that all safety aspects are checked.

## Certification

Certification bodies are accredited to specific international standards, depending on the type of certification they are competent to undertake. Certification bodies issue certificates of compliance to suppliers of products, systems or services. This can include Quality Management Systems (QMS) certification, Environmental Management Systems certification, personnel certification or product certification.

## Mutual Recognition

Governments may enter into conformity assessment mutual recognition agreements and arrangements (MRAs). MRAs are designed to help exporters and importers by reducing the time and costs associated with obtaining approval for their products to be sold in a particular country. These MRAs traditionally involve recognition of the technical competence of conformity assessment bodies in the exporting country to perform conformity assessment to the rules and procedures of the importing country.

### Asia Pacific Economic Cooperation (APEC)

APEC includes 21 economies in the Asia-Pacific region. MBIE represents New Zealand on the APEC Sub-committee on Standards and Conformance, which aims to reduce negative effects of differing standards and conformance arrangements on trade and investment in the Asia-Pacific. APEC has established regional MRAs covering electrical and electronic equipment, telecommunications and food products. Each APEC member that participates in the MRA retains its own regulations but accepts assessments undertaken in the exporting economy.

### International Committee for Weights and Measures Mutual Recognition Arrangement (CIPM MRA)

New Zealand is a signatory to this arrangement for the international mutual recognition of calibration certificates issued by national metrology institutes (including the Measurement Standards Laboratory of New Zealand).

### Bilateral Mutual Recognition Arrangements and Agreements

New Zealand also has four bilateral MRAs covering certain products:

| Economy        | Goods covered  | More information   |
|----------------|--|--|
| European Union | Electromagnetic compatibility, low voltage equipment, machinery, medical devices, medicines pressure equipment and telecommunications terminal equipment | <a href="http://mbie.govt.nz/info-services/business/trade-tariffs/trade-environment/trade-agreements-and-partnerships/eu-and-nz-mutual-recognition-arrangement">mbie.govt.nz/info-services/business/trade-tariffs/trade-environment/trade-agreements-and-partnerships/eu-and-nz-mutual-recognition-arrangement</a>   |
| China          | Electrical and electronic equipment  | <a href="http://mbie.govt.nz/info-services/business/trade-tariffs/trade-environment/trade-agreements-and-partnerships/trade-agreement-with-china-on-electrical-and-electronic-equipment">mbie.govt.nz/info-services/business/trade-tariffs/trade-environment/trade-agreements-and-partnerships/trade-agreement-with-china-on-electrical-and-electronic-equipment</a>                         |
| Taiwan         | Electrical and electronic products   | <a href="http://mbie.govt.nz/info-services/business/trade-tariffs/trade-environment/trade-agreements-and-partnerships/trade-agreement-with-taiwan-on-electrical-and-electronic-products">mbie.govt.nz/info-services/business/trade-tariffs/trade-environment/trade-agreements-and-partnerships/trade-agreement-with-taiwan-on-electrical-and-electronic-products</a>                         |
| Singapore      | Electrical and electronic equipment  | <a href="http://energysafety.govt.nz/appliances-fittings/electrical-appliances-fittings/core-requirements/international-cooperation-recognition/current-mras/singapore-2013-new-zealand-cep-eee-mra">energysafety.govt.nz/appliances-fittings/electrical-appliances-fittings/core-requirements/international-cooperation-recognition/current-mras/singapore-2013-new-zealand-cep-eee-mra</a> |

### **Private Mutual Recognition Arrangements**

Some members of regional and international accreditation bodies (such as International Laboratory Accreditation Cooperation (ILAC) and Asia-Pacific Laboratory Accreditation Cooperation) have developed private MRAs. Businesses can find these private MRAs effective, and in some cases, more trade occurs under private MRAs than under government-to-government MRAs.

### **Unilateral Recognition**

New Zealand unilaterally recognises overseas certification of some products from certain markets. For example, New Zealand unilaterally recognises certification of gas appliances issued by certain European, North American and Australian certification bodies.

### **Trans-Tasman Mutual Recognition Arrangement (TTMRA)**

The TTMRA is an arrangement between Australia and New Zealand that provides that in general, goods that may be sold in one country may legally be sold in the other, regardless of differences in standards or other sale-related regulatory requirements. Additionally, registered professionals in one country can legally work in the other, regardless of differences in occupational regulatory requirements. The TTMRA recognises the special relationship between New Zealand and Australia and provides for the most advanced level of integration between the two countries. The TTMRA is not a conformity assessment MRA, because it does not just require the importing country to accept the exporting country's conformity assessment to the importing country's own standards, but instead requires the importing country to accept conformity assessment to the exporting country's standards. It supports the free movement of goods and of people in registered occupations in both countries by treating the outcomes of each system as equivalent.

## 5. Accreditation

### Overview

Accreditation ensures that the Government, consumers and the public have confidence in the quality and competence of New Zealand's testing, inspection and certification services. Reliable technical services contribute directly to improved business efficiency and the international competitiveness of New Zealand's industries.

This section explains the role accreditation plays in the standards and conformance system, and introduces the two accreditation bodies active in New Zealand.

### Role of Accreditation

Accreditation bodies check that those testing, inspecting, calibrating and certifying are competent and reliable. Governments establish or endorse technical accreditation bodies. Accreditation assessments of inspection bodies include detailed on-site observation as well as checking of procedures, records and reports. This enables technical assessors to be confident that approved inspection bodies have the necessary skills, experience and systems to support their results. Inspection reports can only carry the accreditation logo if the inspection body is accredited for those inspections.

Although most conformance bodies are not legally required to be accredited, regulators and other government authorities increasingly expect formal accreditation to international standards as a reliable measure of competence to undertake government-funded conformity services.

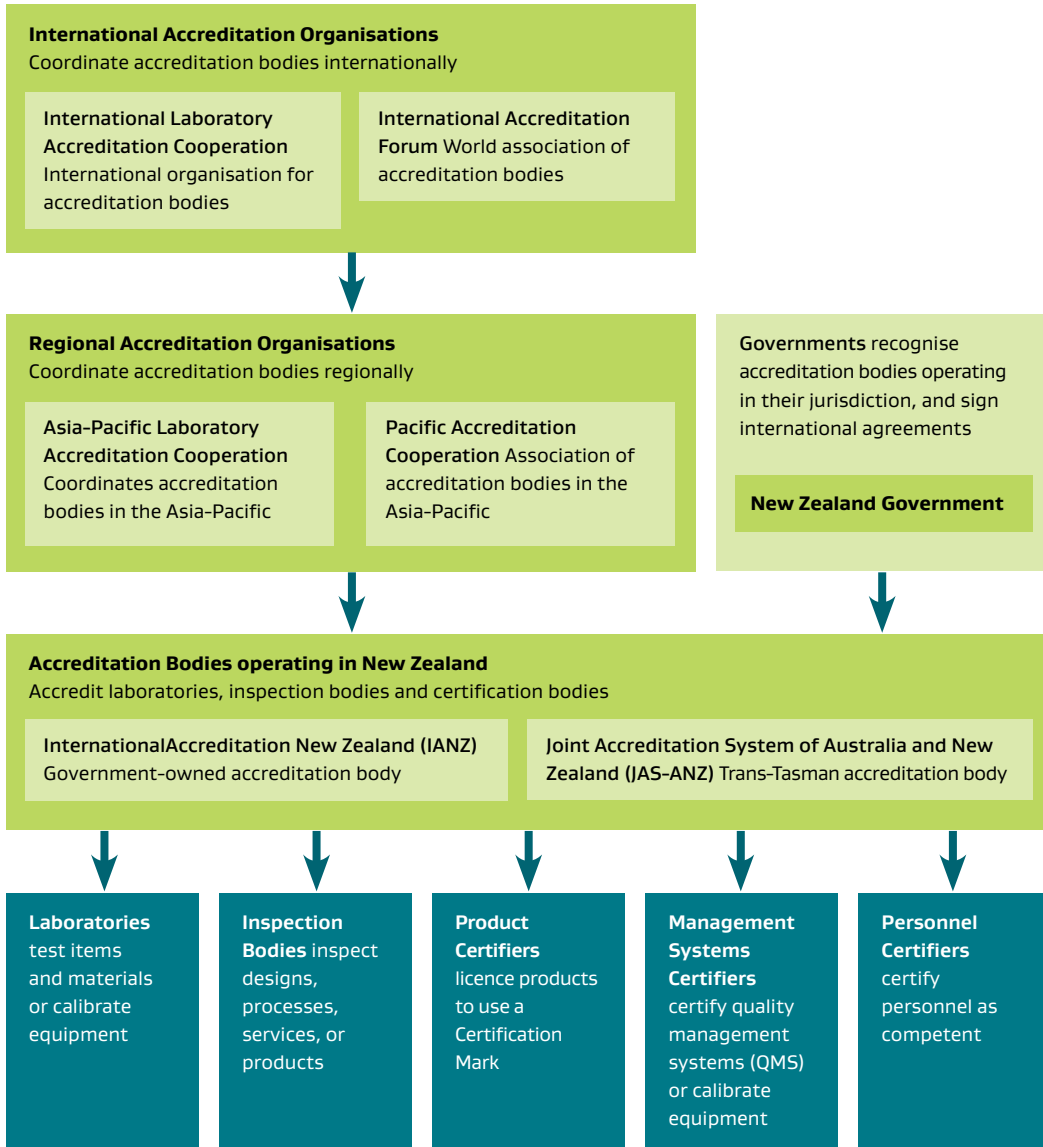
In New Zealand, the Government has established International Accreditation New Zealand (IANZ) and endorses the Joint Accreditation System of Australia and New Zealand (JAS-ANZ), which together offer accreditation across the economy.

Conformity assessment bodies are accredited to particular ISO and IEC standards. Some of the key accreditation standards are outlined in the table below:

| Type of Conformity Assessment Body      | ISO/IEC Standard |
|---|------------------|
| Testing and calibration laboratories    | ISO/IEC 17025    |
| Inspection bodies                       | ISO/IEC 17020    |
| Product certification bodies            | ISO/IEC 17065    |
| Management systems certification bodies | ISO/IEC 17021    |
| Personnel certification bodies          | ISO/IEC 17024    |



Figure 4: New Zealand's Accreditation System



## International Accreditation New Zealand

International Accreditation New Zealand (IANZ) is the national authority for accrediting technical professional services, including laboratories, inspection bodies, and other technical professional services such as Building Consent Authorities. It also accredits specific professional activities, including radiology services, proficiency testing providers and reference material producers. Although accreditation is voluntary, some health funders (such as some District Health Boards) require laboratories seeking government medical testing contracts to have current IANZ accreditation. IANZ advises Government on conformance issues and technical barriers to trade, and participates in standards and conformance aspects of international trade negotiations.

### IANZ Operations

Having IANZ accreditation means conformance organisations are accredited to test, inspect or certify certain products, systems or services. Accreditation ensures the integrity and reliability of laboratory results, inspection reports and other professional services. For customers, it provides instant reassurance. Because IANZ-accredited organisations are able to demonstrate their competency and reliability anywhere in the world, this gives them a strong competitive advantage and access to new market opportunities.

### International Role

IANZ is a member of the International Laboratory Accreditation Cooperation (ILAC), an international body for accreditation bodies. IANZ is subject to regular peer evaluations by counterpart accreditation authorities from Europe, the Americas and the Asia-Pacific region. This ensures that its competence and procedures remain consistent with international practice. IANZ participates in similar peer evaluations of its overseas counterparts.



## Joint Accreditation System of Australia and New Zealand

The Joint Accreditation System of Australia and New Zealand (JAS-ANZ) accredits conformity assessment bodies to both national and international certification and inspection standards. JAS-ANZ is an international organisation established by a formal treaty between the governments of Australia and New Zealand in 1991. The organisation operates on a self-funding, non-profit basis.

### JAS-ANZ Operations

JAS-ANZ accredits five kinds of conformity assessment: management systems certification, product certification, personnel certification, inspection, and greenhouse gas validation and verification. Under these five programmes, JAS-ANZ recognises over 120 public and proprietary schemes that have been developed by or in conjunction with public authorities and industry groups. The schemes provide a level of confidence to support exchange of products, systems and services across a wide range of industry sectors.

JAS-ANZ is responsible for:

- › obtaining and maintaining overseas acceptance of product certificates and management systems certificates issued in New Zealand and Australia
- › providing advice to both Governments on conformance issues and standards and conformance aspects of trade negotiations, and
- › maintaining a Register of Accredited and Certified Organisations, in association with Standards Australia International.

#### Box 11: More information on Accreditation in New Zealand

##### IANZ

**Web:** [www.ianz.govt.nz/](http://www.ianz.govt.nz/)

**Tel:** +64 9 525 66554

**Email:** [info@ianz.govt.nz](mailto:info@ianz.govt.nz)

##### JAS-ANZ

**Web:** [www.jas-anz.org](http://www.jas-anz.org)

**Tel:** +64 4 473 4426

**Email:** [contact@jas-anz.org](mailto:contact@jas-anz.org)

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## Glossary of Acronyms

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|                      |   |
|----------------------|---|
| <b>APEC</b>          | Asia-Pacific Economic Cooperation   |
| <b>APLAC</b>         | Asia-Pacific Laboratory Accreditation Cooperation                             |
| <b>APLMF</b>         | Asia-Pacific Legal Metrology Forum  |
| <b>CIPM</b>          | International Committee on Weights and Measures                               |
| <b>IAF</b>           | International Accreditation Forum   |
| <b>IANZ</b>          | International Accreditation New Zealand                                       |
| <b>IEC</b>           | International Electrotechnical Commission                                     |
| <b>ILAC</b>          | International Laboratory Accreditation Cooperation                            |
| <b>ISO</b>           | International Standards Organisation  |
| <b>JAS-ANZ</b>       | Joint Accreditation System of Australia and New Zealand                       |
| <b>MBIE</b>          | Ministry of Business, Innovation and Employment                               |
| <b>MFAT</b>          | Ministry of Foreign Affairs and Trade   |
| <b>MPI</b>           | Ministry for Primary Industries   |
| <b>MRA</b>           | Mutual Recognition Arrangement  |
| <b>MSL</b>           | Measurement Standards Laboratory of New Zealand                               |
| <b>OIML</b>          | Organisation Internationale de Métrologie Légale                              |
| <b>PAC</b>           | Pacific Accreditation Cooperation   |
| <b>PASC</b>          | Pacific Area Standards Congress   |
| <b>SI</b>            | International System of Units   |
| <b>SPS</b>           | Sanitary and Phytosanitary Measures   |
| <b>SPS Agreement</b> | the World Trade Organisation Agreement on Sanitary and Phytosanitary Measures |
| <b>TBT</b>           | Technical Barriers to Trade   |
| <b>TBT Agreement</b> | the World Trade Organisation Agreement on Technical Barriers to Trade         |
| <b>TTMRA</b>         | Trans-Tasman Mutual Recognition Arrangement                                   |
| <b>WTO</b>           | World Trade Organisation  |







