

Annual report

JULY 2022



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New Zealand Standards Executive's foreword

Standards supporting a better New Zealand

Behind Standards New Zealand's work lies a system that adds considerable value to our economy and way of life, helps industries and markets thrive, and provides market access and interoperability as well as assurance and trust to consumers across the whole value chain. Standards, shaped by the industries that use them, provide clarity and compliance expectations across our regulatory framework and support efficient trade practice and consumer protection in multiple sectors.

The work of all those who make up our national and international standardisation system goes much deeper than any individual standard. Together, our committee members, commissioners and sponsors, the team at Standards New Zealand, and the Standards Approval Board contribute the standards, compliance tools and good practice that make businesses, services and products safe, reliable, innovative and robust.

This report offers context and insight into the important work – both under way and completed in 2022 – of your national standards body. It is work that contributes towards our economic growth and prosperity for a better New Zealand.



Sanjai Raj

New Zealand Standards Executive

General Manager Market Integrity, Ministry of Business, Innovation and Employment

National Manager's foreword

Building on the pillars of change and good practice

Tēnā koutou,

I'm pleased to present our 2021/2022 annual report to shine a light on the role played by Standards New Zealand in helping grow New Zealand for all.

This year has seen strides made in projects that have the potential to bring positive impacts and change to our national energy provision and adoption of renewable energies and built environment. When looking at individual standards that are technically complex or of relevance to niche trades and skill sets, it's easy to forget that they play a much greater role beyond their specialist content.

Impact on a macro and micro scale

Standards are not developed in isolation; rather, they are the solution to a need. As consensus-agreed 'good practice' developed by committees of subject matter experts with decades of knowledge, they shape how we do things and are tools used for bigger national or international change initiatives happening right now. These initiatives include ongoing digitisation and climate change response.

Ongoing digitisation: Standards support our busy lifestyles and interconnectedness in helping us access information anywhere, anytime, safely, securely, and with confidence. They underpin the global digital infrastructure so that we can bank, connect socially, email, work, collect data, and present online.

Climate change response: Standards revised across the building sector have incorporated considerations to encourage innovation in renewable material use and make buildings more durable and fit for purpose. We are also helping to set the pathway for renewable energy use and decarbonisation through biofuel, EV and hydrogen adoption. Publicly available specifications for electric vehicle (EV) chargers in both homes and workplaces have been developed to help expand and standardise infrastructure as use grows. This year also saw the commissioning of smart home guidelines that can help manage energy efficiency to improve grid stability during peak demand. In line with government needs and international trends, creating standards that respond to our shifting environment remains a priority for the coming years.

Diverse standards touching every aspect of life

Along with developing standards that help address issues of national and international significance, we've contributed to 83 International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC) standards and 217 joint Australian/New Zealand standards. These underpin the safety, efficiency, interoperability, and operation of a diverse range of aspects, from expert medical equipment that saves lives to the plumbing throughout your home, and even to guidance on flushables to protect human health, water infrastructure, and the environment.

For all New Zealanders

Several New Zealand standards and publicly available specifications were published during the reporting period, leading good practice in agriculture, construction, safe transportation, gas and liquid fuel, and fire safety.

We've worked with committee representatives from large industry organisations, ministries and government departments, regulators, and small to medium enterprises – and to each of those experts giving their time to standards I remain in awe and give thanks. We've also highlighted the role played by our many women subject matter experts to encourage others in building greater diversity under our gender balance and diversity charter.

The development of NZS 8134 *Ngā paerewa Health and disability services standard*, which came into effect on February 28, utilised our partnership development model, which helps organisations contribute towards project development while saving money and benefitting from our trusted process, project management oversight, and kaitiakitanga of the document.

Sponsorship making access easy

Finally, I must acknowledge the sponsorship of 131 standards throughout the year by Ministry of Business, Innovation and Employment Building Performance, the building regulator, to help those in the construction sector do the right thing and meet compliance under acceptable solutions in the New Zealand Building Code. I also acknowledge the Energy Efficiency and Conservation Authority (EECA) for its sponsorship of publicly available specifications to help consumers make choices that can reduce energy use and adopt new technology.

Our biannual customer survey results showed overall satisfaction with the way we work (79 per cent) and our products and services (90 per cent). We'll keep working hard to improve what we do so that New Zealanders can feel proud of their national standards body.

Our work (with commissioners, nominating organisations, international committee observer representatives and participants, and customers) shapes and adds value to every aspect of our lives. On the global stage, our representatives make sure New Zealand has a voice that counts as much as any other country's in shaping good practice. With standards, we're leading the way for safety, quality, innovation, market access, and interoperability across thriving industries that ultimately grow our economy. We're improving standards for a better New Zealand.



Malcolm MacMillan

National Manager, Standards New Zealand

About Standards New Zealand

Standards New Zealand (SNZ) is a business unit within the Market Integrity branch¹ of the Ministry of Business, Innovation and Employment/Hīkina Whakatutuki (MBIE). SNZ manages the development, publication and sales of standards and standards-related solutions.

Standards are agreed specifications for products, processes, services and performance. They are generally voluntary but can be mandatory when cited in Acts, regulations, or other legislative instruments. They provide solutions to issues, help resolve problems, are a means of compliance with legislation and regulations, and create commercial benefits such as trust and confidence in a sector, profession, service, or product – all of which supports both domestic and international market access and trade opportunities.

SNZ's ambition is to be recognised as a leading and innovative national standards body that safeguards market fairness and integrity, contributes to New Zealand's economic prosperity, supports quality assurance, defines and encourages consistent good industry practice, helps protect people and the environment, and improves the safety and well-being of all New Zealanders.

¹ The purpose of MBIE's Market Integrity branch is to deliver world-leading regulation to protect the fairness and integrity of markets in New Zealand, in line with the Ministry's purpose of 'Grow New Zealand for All' and towards Te Whakatairanga Service Delivery's unique contribution to the goal of 'Fair Markets that Thrive'. For more information, go to <https://www.mbie.govt.nz/about/who-we-are/our-structure/#TWSD>

Standards NZ

Value proposition



Executive summary

Growing value for New Zealand

Working with priority sectors and building strategic relationships

- SNZ continues to build and maintain networks and working relationships within its priority sectors. In the past year, SNZ has successfully entered into, or was finalising at the time of this report, medium-term strategic contracts with WorkSafe – Energy Safety and the Energy Efficiency and Conservation Authority (EECA). It is also managing the revision of some key standards for the building regulator, Building System Performance (BSP), within MBIE.
- SNZ has actively engaged in significant areas of government priority and areas of common interest between sectors where standards can add value. Examples include climate change, energy conservation, environment, and health reforms.

Digitisation

Enabling easier access to standards in a digital world

- SNZ’s goal is to produce digital editions in multiple formats for all standards content, and to provide seamless access to this information from its website.
- Most standards bodies now offer digitised standards products (for example, products that can be accessed in web browsers and apps and by vision-impaired readers).
- A digital reader pilot was conducted from March to September 2021. Five New Zealand standards, from several sectors, were published in a digital format (for example, as ‘browser readable’). Designers and specifiers, especially those who use digital products in their design work (for example, engineers and architects who use computer-aided design [CAD] and building information modelling [BIM]), see value in having access to digital standards.
- SNZ is now scoping the size, time, resources, and costs associated with digitising a number of its most used and valuable standards and will be exploring new and alternative funding options to undertake this work in the future.

Access to standards

An inclusive approach

Enabling easier access to standards remains one of SNZ’s top priorities. As such, we sell standards and related products and services in various formats – for example, hard (paper) copies, PDFs and an Online Library subscription service. Our approach to access is inclusive: we want everyone to be able to use standards, even if they are not digitally skilled. We therefore operate a completely self-serve e-commerce model (users who are savvy with technology can complete their purchases online), as well as a conventional service, where users their place order over the phone and get a paper copy delivered to their door.

Sponsorship of standards

A continuing success story

In July 2019, we partnered with the building regulator, Building System Performance, to sponsor public access to more than 120 building and construction New Zealand standards. This past year, the number has grown to 131 pre-funded standards.

We have also partnered with:

- the Ministry of Health/Manatū Hauora to sponsor six standards, which have been downloaded 33,351 times since June 2017
- EECA, to sponsor five standards, which have been downloaded 3136 times since February 2021.

Sponsorship is the most-effective strategy in reducing the cost barrier, as is evident from the uptake by and positive feedback from our users. We continue in our efforts to work with a range of regulators to encourage sponsorship.

What our customers say

Feedback to help us improve our service

The findings of our 2022 Stakeholder Satisfaction Survey tell us that 79 per cent of our stakeholders are satisfied with SNZ's overall performance.

Stakeholders in the healthcare and community services sector gave SNZ the highest rating for overall performance, with 92 per cent of respondents 'somewhat satisfied' or 'very satisfied'. The stakeholders who work for a government agency that cites standards also gave SNZ a high rating for overall performance, with 81 per cent 'somewhat satisfied' or 'very satisfied'.

The following were either 'somewhat satisfied' or 'very satisfied' with SNZ's overall performance:

- 78 per cent of respondents who purchased or accessed sponsored standards
- 74 per cent of those who participated in a New Zealand or international development committee.

In terms of the top two *benefits* to using standards, our stakeholders said standards:

1. help them comply with regulations and achieve compliance
2. make it easier for them to do their job.

In terms of the two most significant *barriers* to using standards, our stakeholders said standards:

1. cost too much
2. don't exist or are out of date.

We are optimising benefits and reducing barriers by partnering with international standards bodies, regulators, and sector representatives to:

- obtain increased sponsorship (pre-funded access) to more standards
- develop new standards and update or withdraw old, outdated standards
- ensure our standards meet sector needs and are fit for citation in New Zealand legislation and regulation.

Collaboration at the heart

SNZ and the Ministry of Health/Manatū Hauora together developed NZS 8134 *Ngā paerewa Health and disability services standard*, which came into effect on 28 February.

Ngā paerewa consolidates four individual standards from across fertility services, abortion services, home and community services, and health and disability services to provide greater consistency across these areas. It also focuses strongly on person- and whānau-centred services and will support more than 650 providers in meeting their Te Tiriti o Waitangi obligations. Providers of fertility services, primary maternity centres, hospices, overnight hospital inpatient services (public and private), age-related residential care, residential addiction, mental health, and disability services will be required to comply with it, benefitting New Zealanders who might be at a critical or vulnerable point in their life.

The standard was developed under our partnered development model, which provides flexible, affordable ‘partnering’ options. By allowing contributing organisations to share project management tasks with us, development costs can be substantially reduced. The model has proven very popular with organisations looking to work with SNZ. Furthermore, *Ngā paerewa* received a massive 1400 comments when it went out for public consultation, so it really is the result of a true collaboration with the sector.

SNZ is proud of its role in providing independent oversight and project management to establish a consensus-built standard that will help bring efficiencies and cultural responsiveness to the health sector.



From a qualitative aspect, several key themes emerged.

- A demand for much more regulator-sponsored (pre-funded) standards is still the main theme.
- A demand for more affordable standards – especially those that are needed for compliance with regulations – is another overwhelming theme. This ‘cost barrier to compliance’ theme has been fairly consistent for many years as it is seen as the biggest obstacle to standards use.
- The new website (launched in March 2021) has been well received. Along with positive feedback regarding its improved functionality and access to information, there were suggestions for improving the search and other functionality further.
- There is a demand for updating obsolete standards and developing new standards where there is a lack.
- ‘De-jointing’ is at times an issue. When a joint standard is revised and updated, but there is no New Zealand funder (for example, a regulator or industry body), it can risk becoming somewhat Australia-centric and losing its joint Australia–New Zealand (AS/NZS) status. In the past year, 17 AS/NZS joint standards became AS-only standards. In 2020/21, 25 joint standards became AS-only, and in 2019/20, the number was 58. SNZ continues to work hard to find funding commissioners and committee members to support the revision of joint standards to help maintain their NZS status, relevance, and value.

Educating and informing

Raising awareness through marketing and communications

- SNZ launched its new website with an e-commerce web shop and Online Library subscription service in March 2021. Over the past year, SNZ has further improved it by creating a more engaging browser experience with more regularly updated content that includes information to further enhance customer knowledge of SNZ’s work and its value.
- Ongoing marketing and communications activities have helped to educate users in the areas of standards use, adoption, commissioning, and participation in their development.
- To further increase brand awareness and perceptions of the value of its services and products, SNZ will participate in industry events during the 2022/23 financial year. SNZ prioritises sectors and associated events which are likely to present the best opportunity to secure new business.

International participation

Understanding and influencing international standards

- SNZ participates in and supports the global standards and conformance system and is a country member of the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC).
- SNZ targets those ISO international committee participations on priority sectors and topics important to NZ Inc.
- Internationally, we are seeing use of national standards bodies to help support climate change action. Consistent themes from our ISO international forums and meetings include standards development work in areas similar to SNZ’s. These include renewable energies, carbon emissions reduction, energy efficiency, digital economy, transport, health and safety and building and construction.

Worldwide, protecting your data

By facilitating New Zealand's representation in international standards development and contributing to the major rewrite of ISO 27002 *Code of practice for information security controls*, SNZ has helped set the bar for cybersecurity around the world.

Millions of digitally connected New Zealanders – who expect their privacy and personal information to be protected from growing worldwide threats – might be unaware that standardised specifications in cybersecurity, data, and identification management underpin every app, piece of software and technology, and cloud-based service.

So, the recent update of ISO 27002 – the first in almost a decade – will be useful for, among others, financial institutions and those in international distribution and food exports, by helping them provide a competitive edge and demonstrate compliance for certification.

Standards New Zealand continues to provide a gateway for participation in international standards development.



A snapshot of the year in review

SNZ's aim is to be recognised as a world-leading and innovative national standards body that safeguards market fairness and integrity, contributes to New Zealand's economic prosperity, and helps protect people and the environment.

Growing value for New Zealand

Building & construction



Developed and published several new and revised and updated standards widely used in the building and construction sector. See Appendix B for more detail.

Energy



Reviewed international standards related to energy efficiency and energy safety. Developed and published standards and guidelines in the areas of energy demand flexibility, electric vehicle charging, and decarbonisation.

Health



NZS 8134 *Ngā paerewa Health and disability services standard* came into effect on February 28.

Primary industries



In partnership with DairyNZ, initiated the revision of NZS 8100 *Dairy herd testing*. Published NZS 8409 *Management of agrichemicals* and AS/NZS 4708 *Sustainable forest management*, as well as other AS/NZS standards relating to farm equipment.

Transport



Published NZS 5433 *Transport of dangerous goods on land* and AS/NZS 2658 *LP Gas – Portable and mobile appliances*. Accepted a commission to develop a publicly available specification (voluntary guidelines) to support the uptake of electric vehicles and future-proof the charging network. Also accepted Waka Kotahi NZTA's commission to initiate the revision of NZS 5446 *Heavy vehicle towing connections – Drawbeams and drawbars*, which is expected to take up to 12 months and be published mid-2023.

Digital & data



The digital reader pilot saw five New Zealand standards, from several sectors, published in digital format. 1000 people accessed these digital editions during the pilot, with 80% of participants keen to see more standards in this format. SNZ's goal is to produce and publish digital editions in multiple formats for all standards content, and to provide seamless access from its website.

Education & information



Produced five sector-specific newsletters, six *Touchstone* newsletters and 104 'Keep me up to date' notifications. Led three forums, co-facilitated three forums with the Department of Internal Affairs/Te Tari Taiwhenua, and attended two priority-sector conference exhibitions. Collaborated with the Government Regulatory Practice Initiative (G-Reg) team on conversations between regulators for local and central government video.

International



Facilitated participation in and observation of the work of 212 International Organization for Standardization (ISO) and 124 International Electrotechnical Commission (IEC) committees. Saw 39 new ISO and IEC committee members approved by the Standards Approval Board.

This work is important because it enables New Zealand to understand and influence the development of relevant international standards that affect New Zealand's interests (for example, international trade and market access).

Supporting the response to a shifting environment

SNZ is contributing to the Building for Climate Change (BfCC) programme by developing standards that place greater emphasis on the shifting environment, weather changes, natural hazard mitigation and use of new technologies and materials.

A recent revision, *NZS 4431 Engineered fill construction for lightweight structures*, incorporates 30 years of lessons alongside considerations for an increased risks of slips, subsidence, creep and erosion.

NZS 3404 Steel structures standard, meanwhile, is currently being revised and will integrate 25 years' worth of potentially life-saving learnings in seismic engineering to inform the construction of high-rise buildings and bridges nationwide.

The building and construction industry is a critical part of the economy and society, and climate change and the environment are major priorities for Government and all New Zealanders, so this area of standards development work will remain a key focus for SNZ.



Achievements and opportunities

Growing value for New Zealand

In order to deliver on its strategy and vision to grow value for New Zealand, SNZ continues to expand its networks within these priority sectors:



Collaboration with these sectors has been prioritised so as to help SNZ achieve mutually agreed outcomes across one or more of its key levers: standards development; refreshing the aged catalogue of standards; participation in the development of international standards; pre-funded access to standards and SNZ's value-add programme.

Achievements

In the past year, SNZ has continued to engage with selected priority sectors, including the building and construction, energy, health, and digital economy sectors.

- SNZ has successfully entered, or was finalising at the time of this report, medium-term strategic contracts with WorkSafe – Energy Safety and the Energy Efficiency and Conservation Authority (EECA) and is managing the revision of some key standards for the building regulator within the Ministry of Business, Innovation and Employment (MBIE).
- SNZ continues to engage with government agencies on key reforms and priorities, including health reforms, climate change and environmental reform issues, water quality, the digital economy, and housing.
- Relationships with several priority sectors are strengthening. There's a growing awareness of SNZ's brand and its work thanks to our engagement with them on 'communities of practice' and consultative working groups regarding proposed legislative reforms (particularly in the digital and environment sectors). As a result, industry bodies and regulators, including the New Zealand Infrastructure Commission/Te Waihangā, the External Reporting Board Te Kāwai Ārahi Pūrongo Mōwaho (XRB), Te Whatu Ora Health New Zealand, Agritech Industry Transformation Plan (ITP) agencies, Te Kōtuiti Whitiwhiti – Digital Public Service, Stats NZ Tatauranga Aotearoa, and Waka Kotahi NZ Transport Agency, approached us with enquiries, some of which included initiative exploration.

- During 2021/22, SNZ facilitated the following for its priority sectors and areas:²
 - the development and publication of standards and guidelines used widely in the **building and construction** sector
 - the review of six international standards relating to the **energy efficiency and energy safety** sectors
 - the development of standards and guidelines in collaboration with EECA and the **energy efficiency** sector
 - the development of guidelines in the **energy demand flexibility and decarbonisation** areas
 - the initiation of a revision of NZS 8100 *Dairy herd testing* standard in collaboration with **DairyNZ**
 - the completion of two new standards, NZS 8409 *Management of agrichemicals* and AS/NZS 4798 *Sustainable forest management*, in the **primary industries** sector.
- SNZ also continues to strengthen its relationships with its priority sectors. Key examples include:³
 - **Health:** There is ongoing discussion with the Ministry of Health/Manatū Hauora concerning the establishment of Te Whatu Ora Health New Zealand and Te Aka Whai Ora/Māori Health Authority. SNZ sees significant opportunity to advance its standards work in this sector to support these structural reform successes, with the coming together of multiple agencies and more than 80,000 employees into one national health system requiring standardisation of process, systems, and health practices.
 - **Primary industries:** SNZ continues to engage with industry bodies and the Ministry for Primary Industries/Manatū Ahu Matua. Supporting the sector’s goal of reducing barriers to trade is the main opportunity. SNZ continues to encourage the sector to participate in ISO committees and ensure that their standards are up to date and fit for purpose.
 - **Local government:** Members of this disparate group tend to use rather than develop standards (this use is directed by way of legislation and the mandates they are responsible for). Local governments understand the importance of standards to the systems, process, and compliance mechanisms that they govern. As such, there is opportunity for SNZ to explore developing publicly accessible specifications (PAS, or voluntary guidelines) for local government on how to use the standards that apply to them.
 - **Environment:** SNZ engages with several government agencies working on environmental policy based on New Zealand’s obligations under, inter alia, the Paris Agreement and treaties with international bodies such as the World Trade Organization (WTO), the World Health Organization (WHO) and the United Nations (UN). In particular, SNZ has helped the Ministry for the Environment/Manatū Mō Te Taiao, XRB, and the New Zealand Infrastructure Commission/Te Waihanga access relevant ISO standards and promoted the opportunity for them to be more directly involved in international committees.
 - **Digital and data:** This year, SNZ’s Sector Engagement Lead began chairing the Digital and Data Standards Community of Practice. This has enabled SNZ to share the standards value story, giving the group a better understanding of SNZ’s role within the conformity system and how this system can support joint work. The community has a wide reach across the digital and data sector, particularly in the public sector.
 - **Data interoperability:** This trend between government agencies represents an opportunity for SNZ to work across government and embed standards in legislation.

2 We are also working with Waka Kotahi NZTA on a revision of NZS 5446 *Heavy vehicle towing connections – Drawbeams and drawbars*. This project is expected to take up to 12 months and be published in mid-2023.

3 In the transport area, Waka Kotahi has been identified as a regulator that could benefit from a strategic partnership with SNZ. Discussions on the benefits of working more collaboratively and strategically under a joint agreement are continuing. See ‘Priority sector engagement’ for further detail.

Reviewing standards for hydrogen integration

With hydrogen set to change the way the world manufactures and uses energy, it's important to ensure safety in this emerging field.

WorkSafe – Energy Safety therefore commissioned SNZ to explore the standards framework for integrating hydrogen to support a low-carbon economy and as an alternative to fossil fuels and industrial feedstock. SNZ identified 10 key areas which were then checked against regulation: safety, inspection, validation, metering, fuel station equipment, fuel station design, network distribution, production, purification, and mobility.

Following a sector-wide scoping workshop, a plan for an in-depth standards review was presented to the regulator. By adapting international standards that take New Zealand's unique infrastructural, regulatory, and geographical needs into account, government and industry can avoid reinventing the wheel. Nevertheless, as hydrogen is progressively integrated into New Zealand's energy landscape, SNZ will be seeking further advice on whether these standards remain fit for purpose.



Digitisation of standards

SNZ's goal is to produce and publish digital editions in multiple formats for all standards content and to provide seamless access from its website. Digitisation will:

- better meet users' changing needs (for example, being able to use a mobile device, web browser, or apps and software packages such as CAD or building information modelling [BIM] to easily use a standard)
- represent a potentially important new income stream for SNZ
- align SNZ with other comparable standards bodies, including Standards Australia, which have already digitised their standards catalogue to meet market expectations and needs.

Beyond the benefits to its customers of digitising these documents (such as improving ease of access and utility), achieving this goal will also help SNZ maintain credibility as a professional publisher and standards body by keeping pace of modern practices and market expectations.

Achievements

- During 2021, SNZ produced five digitised standards in alternative formats as a pilot. One thousand people accessed these digital editions, and when surveyed, more than 80 per cent of those that responded were keen to see all standards in a browser-based format. The plan is to deliver digital editions on a larger scale in the future.
- SNZ issued its first commercial digital products licence. The recipient business, which sells a self-assessment compliance tool for information security systems, licensed three ISO/IEC standards.
- A trial of the first component of digital publishing transformation commenced. The tool, eXtyles, turns standards to XML format for future digitised publication.
- A business case is being developed to determine what is involved and how much funding would be required to digitise a large part of our standards catalogue.
- SNZ will progress its digitisation programme and other information and communication technology (ICT) ambitions as funding enables. These ambitions include:
 - *formats tailored for mobile devices, web browsers and apps.* Many standards users would like standards to be available in mobile-accessible formats. This would help improve ease of access and use and perhaps also result in better compliance
 - *website enhancements.* Along with improving web functionality such as the search engine and standards development consultation features, the enhancements could provide ready access and sale of digital editions.

Education and information

Achievements

- SNZ has improved its website over the past 12 months by creating a more engaging browser experience. Content is regularly updated, and information is designed to enhance the customer's understanding of SNZ's work and value.
- In addition to the regular *Touchstone* newsletter, SNZ has introduced a suite of sector-specific newsletters, which have been well received by stakeholders.
- Marketing and communications activities have helped to educate and guide users in using, adopting and commissioning standards and participating in their development.
- SNZ and the Department of the Prime Minister and Cabinet (DPMC) are discussing standards for the Internet of Things. SNZ is advising and providing feedback through the interagency working group.

International participation

SNZ participates in and supports the global standards and conformance system. It is also a country member of both the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC).

Achievements

- SNZ facilitated participation in and observation of 212 ISO and 124 IEC committees in the past year (see Table 1). This work is important because it enables New Zealand to understand and influence the development of international standards that will have an impact on New Zealand's interests (for example, international trade).
- We are obligated to respond to all ballots released by ISO and IEC where we are participating (P) members of these international standards committees. For the year to 30 June 2022, our voting record was 100 per cent submitted by the due date.
- In the past 12 months, the Standards Approval Board approved 39 new ISO and IEC committee members. To facilitate the development of expertise, SNZ actively reviews the composition of New Zealand's ISO and IEC committees, especially those that sit within identified priority sectors.
- Other international activities in 2021/22 included:
 - forming one new technical committee (participation membership)
 - establishing New Zealand membership of ISO's strategic advisory group (SAG) on smart farming
 - facilitating two IEC National Committee of New Zealand (NCNZ) meetings
 - being actively involved and representing New Zealand at:
 - 2 ISO Asia-Pacific updates and the ISO Asia-Pacific bilateral meeting
 - 6 IEC National Committee secretaries' meetings
 - 2 IEC Asia-Pacific new revenue group meetings
 - IEC's general meeting and the Asia Pacific Cooperation Forum (APCF).⁴

The IEC NCNZ meetings took place in-person, whereas the others were held online.

Table 1 – New Zealand involvement in ISO and IEC committees July 2021 to June 2022

	Committee type	Total ISO and IEC committees	New Zealand membership of ISO and IEC committees	
			Participant role	Observer role
ISO	Technical committees	264	27	72
	Subcommittees	523	43	67
	Policy development committees	3	1	2
	Total	790	212	
IEC	Technical and Systems committees	110	7	60
	Subcommittees	103	7	50
	Total	213	124	

⁴ The APCF is an IEC subgroup. It consists of the presidents and secretaries from each of the National Committees in the Asia Pacific region.

New participation memberships established since June 2021

ISO TC 274 Light and lighting

New observer memberships established since June 2021

ISO TC 34 SC 20 Food loss and waste

ISO/TC 44 SC 05 Testing and inspection of welds

IEC TC 129 Robotics for electricity generation, transmission, and distribution systems

ISO/TC 135 SC 02 Surface methods

ISO/TC 135 SC 03 Ultrasonic testing

ISO/TC 135 SC 04 Eddy current testing

ISO/TC 135 SC 05 Radiographic testing

ISO TC 336 Laboratory design

ISO PC 337 Guidelines for the promotion and implementation of gender equality

ISO TC 339 Small hydropower plants

Standards development work programme

We maintain a programme for the development and review of Australian/New Zealand (joint) standards and New Zealand-only standards. This also involves adopting ISO and IEC international standards. The programme focuses mainly on building and construction and electrical and gas safety. We also develop and maintain standards in the energy efficiency and product safety areas. A large proportion of the programme consists of joint standards where Standards Australia holds the secretariat. We currently hold the secretariat for two joint committees in the energy safety sector.

The next 12 months

Standards work scheduled at time of publication

- **Building and construction – 8** confirmed
- SNZ is developing standards in areas such as timber-framed buildings, fire-fighting equipment and engineering design.
- **Energy safety and efficiency – 16** confirmed
- Standards and publicly available specifications will cover topics such as hydrogen energy, and fuel-cell and electric-vehicle technologies.
- **Primary sector – 1** confirmed
- Work on a long-anticipated revision of the dairy herd testing standard will continue.
- **Transport and logistics sector – 1** confirmed
- A ‘heavy vehicle towing connections’ standard is being developed.
- **Safety of household and similar electrical appliances sector** – an estimated **35 to 50** to be published
- SNZ is also developing a series of joint Australian/New Zealand standards for the safety of electrical equipment, appliances, and small power transformers with respect to persons, livestock and surroundings.

Priority sector engagement

Building and construction sector

- SNZ continues to seek out strategic partnership agreements with key stakeholders to develop medium-term standards development programmes.
- SNZ is in the process of finalising a strategic partnership agreement with BSP, the building regulator. This will afford SNZ a medium-term planned approach to its work with BSP, with a five-year work plan and shared objectives to ensure each party’s goals are supported.

Energy efficiency and energy safety sectors

- SNZ is reviewing and updating its three-year contracts with both EECA and WorkSafe – Energy Safety and will align these to the strategic partnership agreements. The agreements are positioned to take our relationship with these organisations from transactional contract relationships to truly transformational partnerships where we are aware of each other’s needs and objectives on a long-term basis.

Health sector

- Following the success of the complex revision of NZS 8134 in the previous reporting year, SNZ is exploring and growing relationships within the health sector.
- SNZ is also reviewing aged medical equipment standards. We have established a programme of work with a directive to ensure that we keep the sector up to date with any changes or reviews of our joint and aged standards programmes of work so that we can leverage opportunities.

Primary industries sector

- SNZ continues to engage with the Ministry for Primary Industries/Manatū Ahu Matua and industry bodies, such as DairyNZ. The use of standards in this sector is complicated. Specifically, the regulator has a history of working with other standards bodies⁵ or developing their own standards specific to New Zealand requirements and the regulatory framework within which they work.
- For SNZ, the opportunity here is to support the sector in its commitment to reducing barriers to trade. SNZ continues to encourage the sector to participate in ISO international committees.
- SNZ also continues to engage with the primary industries sector through its aged standards work to ensure that any standards being used are up to date and fit for purpose.



Agrichemicals in the mix

Herbicides, insecticides, fungicides and the like are critical elements for the multi-billion-dollar primary sector. But such substances need to be managed safely, responsibly and effectively under the law, which is where *NZS 8409 Management of agrichemicals* comes in.

The recent revision (the first in 20 years) covers environmental needs as well as the use, transport, storage, handling, labelling and disposal of agrichemicals. It also reflects regulatory changes from 2017 and allows for the use of new technologies.

Keeping the standard updated ensures exporters can comply with quality assurance programmes such as New Zealand Good Agricultural Practice (NZGAP) in order to sell produce abroad.

Local government

- SNZ engages with central government regulators that impact local government work and areas of reform that central government is currently progressing. Key examples include the Ministry for the Environment/Manatū Mō Te Taiao, Waka Kotahi NZTA, Te Waihanga/New Zealand Infrastructure Commission, Taumata Arowai and the Three Waters Reform programme. SNZ will continue to encourage local government representation on standards development committees.
- Another area we are exploring is the development of publicly accessible specifications (PAS, or voluntary guidelines).

Environment

- SNZ engages with several government agencies working on environmental policy based on New Zealand's obligations and treaties. As such, there is an increased focus on international standards to ensure consistency in New Zealand and to meet the expectations of international partners.

⁵ For example, Food Standards Australia New Zealand.

- As well as adopting international standards, international standards can sometimes be modified to include a New Zealand perspective. SNZ encourages regulators to consider modifications that could incorporate the principles of tikanga and Te Ao Māori to support New Zealand's commitment to Te Tiriti o Waitangi in the areas of conservation and climate change resilience.
- SNZ will continue to contribute to the Ministry for the Environment's draft national adaptation plan.⁶ SNZ is also committed to working with standards development committees to ensure that they consider adaptation and climate mitigation in the development of relevant standards.

Digital and data

- Chairing the Digital and Data Standards Community of Practice enables SNZ to share the standards value story.
- SNZ continues to be involved in the Mandated Standards work led by Stats NZ. Although SNZ has not yet contributed to the development of these standards, we have advised on some aspects.
- Although the digital sector generally uses international standards, SNZ still has a role to play. SNZ's engagement strategy is focused on increasing the level of involvement of the New Zealand digital sector in international standards development committees.
- SNZ is in discussions with the Department of the Prime Minister and Cabinet regarding standards for the Internet of Things and continues to advise and provide feedback through the interagency working group.
- MBIE's work on the Industry Transformation Plan (ITP) has a strong focus on digital and data capabilities. SNZ has refreshed its relationship with the relevant policy teams in MBIE and the Ministry for Primary Industries/Manatū Ahu Matua. These agencies support SNZ's involvement as the ITP projects mature, particularly in the digital technologies and data interoperability for farm programmes.

Transport

- Waka Kotahi NZTA has been identified as a regulator that could benefit from a strategic partnership agreement. SNZ is engaging with Waka Kotahi regarding the benefits of working more collaboratively and strategically.



⁶ The intent of the national adaptation plan is to help sectors and communities prepare for and build resilience in the face of climate change.

Commercial and sectors

Marketing and communications

- We will continue to tell SNZ's 'value proposition' story, as well as profile committee members, staff, commissioning bodies and their work, through web and social media content.
- Regular newsletters are providing an effective way to reach stakeholders.
- We have an ongoing schedule for auditing and refreshing our website content.
- We intend to promote and celebrate our work and key events and develop promotional material to help tell our story.

Access to standards solutions

- SNZ is updating international reseller strategy and agreements, with a focus on meaningful partnerships and gaining good revenue.
- SNZ will create bespoke Online Library catalogues for peak member bodies to provide easier access to relevant standards for users and allow standards to be used in more meaningful ways.
- We continue to approach regulatory bodies that cite standards in their regulations to ensure they have access to relevant standards.
- We continue to partner with regulatory bodies for sponsorship opportunities for their cited standards, so as to promote compliance and good practice and reduce cost as a barrier to using standards.

Sector engagement

- Actively engaging the health sector is a key focus for 2022/23.
- We intend to attend key priority sector conferences and events to raise awareness of our services and products, as well as facilitate focus groups for all priority sectors to gain more insight about what is important to them and how SNZ can support their sector.
- Along with meeting commissioners (past, current, and potential) face to face every month, we will regularly engage with our Top 20 stakeholders⁷ to maintain and grow relationships and secure new strategic partnership agreements.
- 'Community of practice' participation will help us build stronger connections with central agencies and regulators.
- We can also use the aged standards catalogue to increase interest, engagement and involvement of stakeholders in standards reviews.

⁷ Our Top 20 stakeholders include WorkSafe – Energy Safety, Waka Kotahi NZTA, MBIE BSP, EECA, Ministry for the Environment (MfE), and BRANZ (Building Research Association of New Zealand).

ICT roadmap implementation

The ICT roadmap project was implemented in March 2021 with the launch of an improved SNZ website that includes e-commerce and Online Library subscription service portals. It was the final deliverable of the ICT roadmap project that was initiated in May 2018 to refresh all our technology platforms and applications.

We are continuing to improve the website. The intent is to improve user experience by making it easier to navigate the website and find information, optimising the web shop and Online Library subscription service, and ensuring that the website complies with the All of Government web and accessibility standards.

The number of visitors to the web shop has remained consistent since the new website was launched. In 2021 720,971 people visited our website, but the number of page views has dropped significantly given the improvements we have made to help people to navigate the site more easily. Overall, user feedback about the new website has been positive.

Benefits realisation

Some of the early benefits of the new website include:

- a better user experience and more self-serve functionality to help users complete end-to-end purchase processes seamlessly
- sponsored standards being integrated with the shop, which helps prevent accidental purchases
- an enhanced Online Library capability that allows self-management of the subscription service
- an easier, streamlined sign-up process for the Online Library and Asset Plus services
- better management of customer debt, which now totals less than \$10,000 – a significant reduction from about \$150,000 previously. This is also supported by an improved operational process of following up on debt in combination with improved technology that prevents it from accumulating in the first place
- scalability (the ability to expand the products and services on offer, such as network PDFs)
- a flexible pricing model that makes it easier to vary prices
- a reduction of the risk from legacy systems that were running out of support.

Future work

SNZ will:

- continue the programme of website and web shop improvements based on the feedback from customers and evolving business needs (for example, with better search engine functionality) as funding allows
- introduce new products and services (for example, new digital formats and multi-user PDFs)
- enhance the Online Library service to allow subscriptions to ISO and IEC international standards
- migrate the website to Amazon Web Services (AWS)
- explore options for improving the digital rights management (DRM) functionality.

Blazing a trail in fire safety systems

When a fire is raging and lives are on the line, fire-fighters want to know what to expect inside the building and whether they'll be able to apply or adapt modern standard operating procedures. As such, fire-fighting practicalities need to be considered while a building is being designed, rather than after the fact, and it is here that building regulation standards can help.

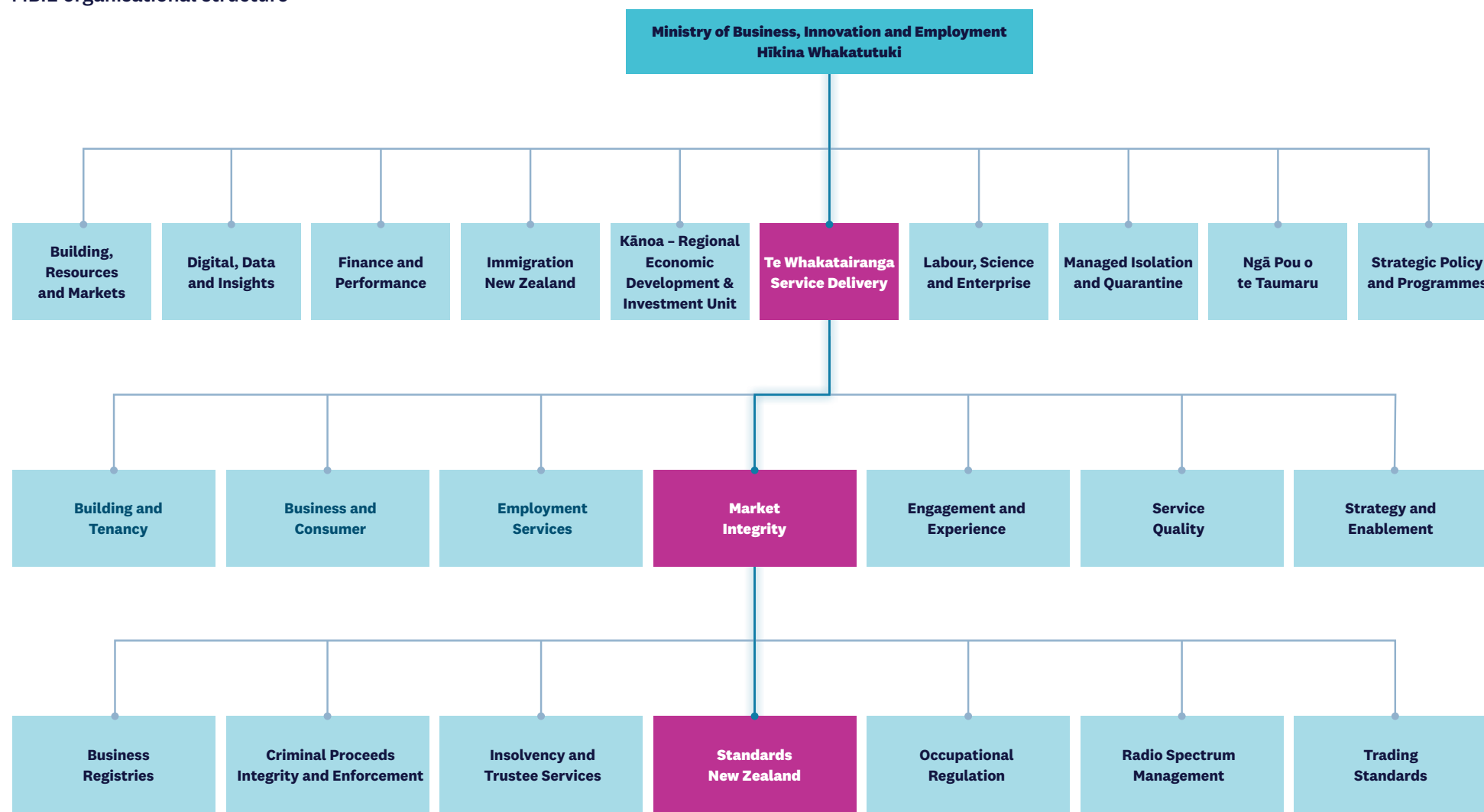
Two rounds of public consultation provided around 600 comments that helped shape the recent revision of NZS 4510 *Fire hydrant systems*, which considers the roles of building designers, regulators and first responders.



Appendix A – SNZ organisational structure

Standards New Zealand is a business unit within the Market Integrity branch of the Ministry of Business, Innovation and Employment (MBIE).

MBIE organisational structure



Standards New Zealand organisational structure



Appendix B – FY 2021/22 development work

Building and construction sector

During the 2021/22 financial year, SNZ continued to work closely with building regulator and the building and construction sectors. Over the past 12 months SNZ successfully facilitated the development and publication of the following widely used New Zealand standards:

- NZS 4431 – *Engineered fill construction for lightweight structures*
- NZS 4510 – *Fire hydrant systems*

Energy efficiency and energy safety sectors

SNZ has an established programme in the energy sector and works closely with the electricity and gas safety regulator Energy Safety (within WorkSafe New Zealand) and the Energy Efficiency and Conservation Authority (EECA). Strategic contracts for a wide range of standards-related services have been agreed on with both regulators, ensuring that priority areas and key policy deliverables relevant to standards and standardisation will be delivered in a planned, robust, and transparent way.

Under the established strategic agreement for services with Energy Safety, SNZ continued to lead the development of a standards framework to promote and advance the implementation of hydrogen as an alternative source of fuel. Key achievements of this work during the 2021/22 financial year included reviewing international standards relating to:

- fuel cell technologies: stationary fuel cell power systems performance test methods and installation
- transportable gas cylinders and transportable gas storage devices
- liquid and gaseous hydrogen land vehicle fuel tanks and systems interface
- materials selection and performance criteria for hydrogen pipeline transmission
- properties of pipeline steels in high-pressure hydrogen
- testing methods for the investigation of hydrogen gas embrittlement of metallic materials.

This work will ensure that standards used in New Zealand reflect the need for safe production, distribution, and transportation and encourage the future development of regional hydrogen bulk-storage hubs, which in turn support supply chains for hydrogen, further related equipment investment (such as refueling stations) and hydrogen-derived fuels.

Under our current strategic agreement for services with EECA, SNZ is developing several documents relevant to energy demand flexibility and decarbonisation.

Health sector

SNZ, in partnership with the Ministry of Health/Manatū Hauora, developed and published a highly complex revision of NZS 8134 *Ngā paerewa Health and disability services standard*, which came into effect on 28 February 2022. It consolidates four standards from across fertility services, abortion services, home and community services, and health and disability services.

The new standard puts a stronger focus on equity, covers a wide range of service providers, and supports health service providers in meeting Te Tiriti o Waitangi obligations. It was developed to ensure that safe, high-quality health and disability services can be provided. It is the result of many voices coming together and represents an example of our strengthening collaboration with the health sector.

Primary industries sector

During the 2021/22 financial year, SNZ in partnership with DairyNZ, initiated a long-anticipated revision of NZS 8100 *Dairy herd testing*. This standard provides information on procedures and practices adopted by certified herd testers and their farmer customers, as well as guidance on procedures and practices that should be followed to meet industry goals resulting from herd testing. This standard is highly regarded in the sector and the process will be informed by a wide range of industry and regulatory stakeholders.

Transport and logistics

We successfully published an important transport-related standard, NZS 5433 *Transport of dangerous goods*, strengthening our relationships with Waka Kotahi NZTA and the transport and logistics sector.

Appendix C – SNZ catalogue

Figure 1 – Total current standards in our catalogue
n = 2,802 (56% cited in legislation)

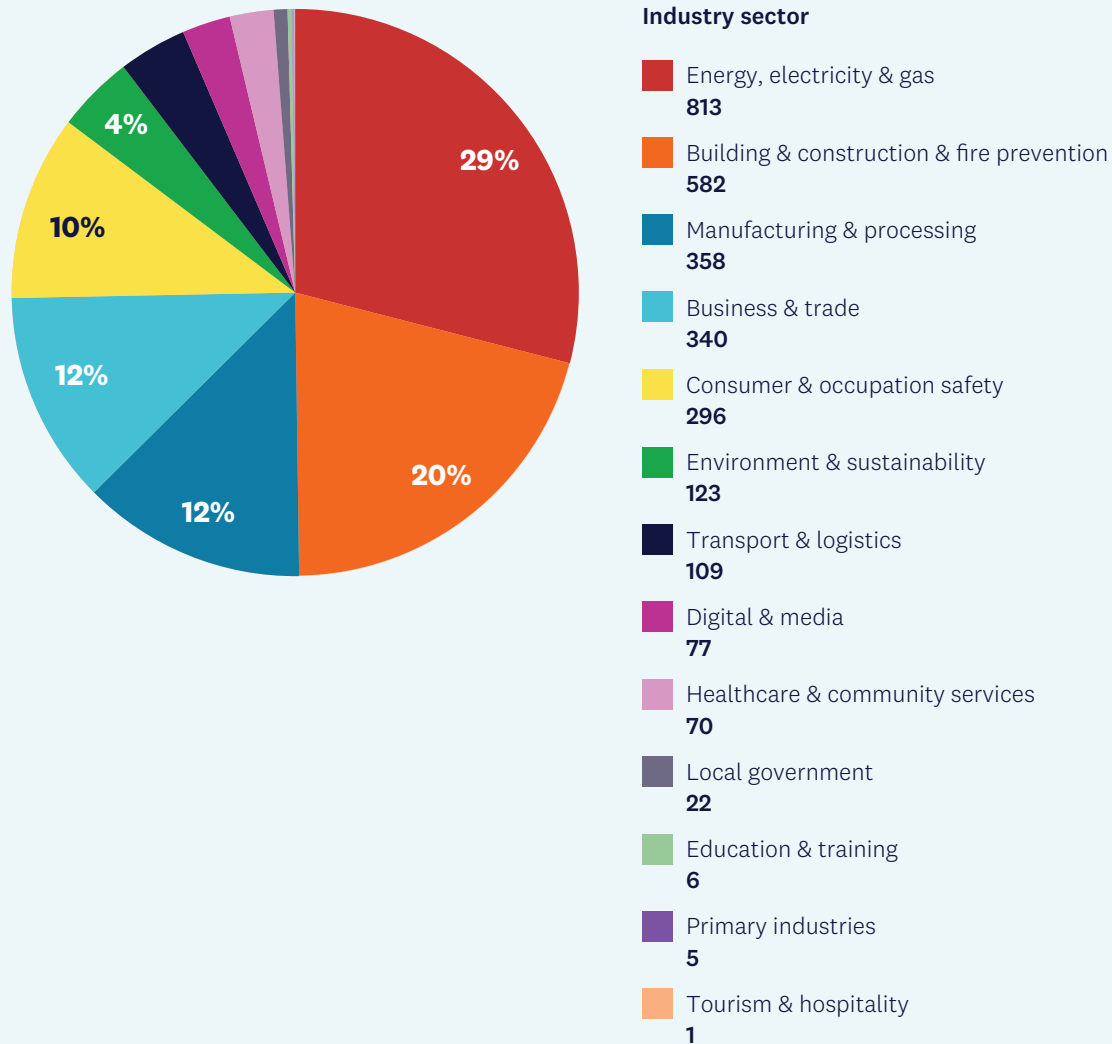


Figure 2 – Standards published in FY 2021/22
(n = 225)

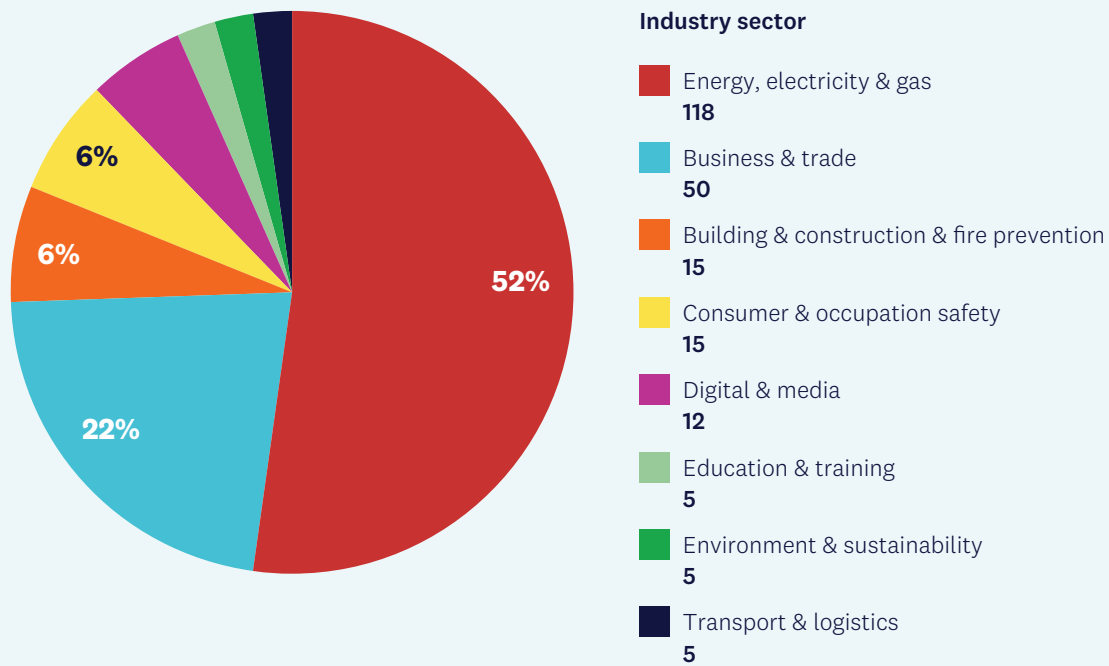


Figure 3 – Number of publications accessed

Standards, publicly available specifications, technical specifications and handbooks were accessed through the following means:

- Online Library subscription
- Sponsorship
- Individual PDFs and hard copies

