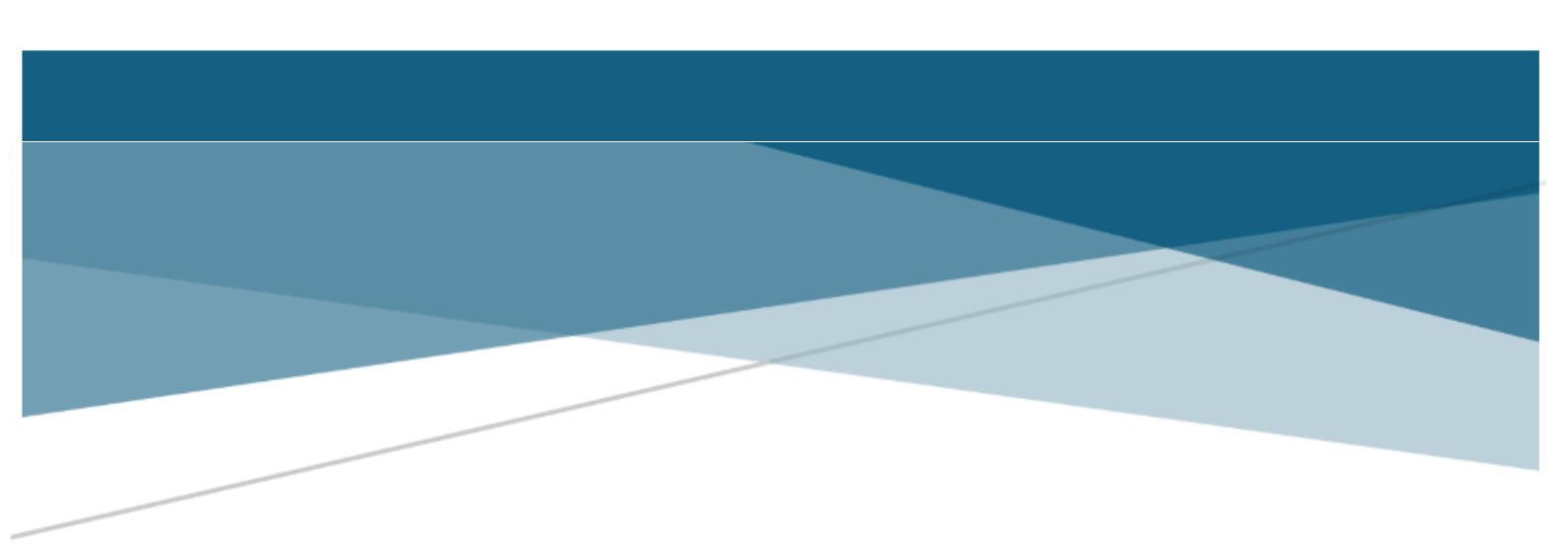




INDUSTRY TRENDS

2024/25 Survey Findings



Australian Digital & Telecommunications
Industry Association Inc.

Abstract

In conjunction with TITAB Australia, Cabler Registry Services:
Preparing Industry for Future Technological, Environmental and Social Changes.

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2024/2025 Telecommunications and Cabling Industry Survey



About **ADTIA**

Australian Digital and Telecommunications Industry Association Inc

ADTIA was established in 2010 for the Digital and Telecommunication industry as a member based industry association to promote best practice in the industry through technical standards, workforce development, skills training and quality assurance processes.

ADTIA works closely with its organisational members, networks, technical committees, Governments and other stakeholders to implement strategies within the ICT industry. ADTIA emphasises' is on **Knowledge, Opportunity and Growth** for the Industry and its workers.

- ✓ ADTIA has a creditable Industry Board and an Executive Group that have extensive experience across the Digital and Telecommunications Industry.
- ✓ The foundation structure has been implemented to establish the association and adopt ongoing governance to ensure industry best practice is maintained.

Workplace health and safety aspect of the work being done and the quality of installations within the premises are important areas not just by the worker but also for the customer. ADTIA members and industry are supportive of making the industry safer for all workers and customers, and ADTIA and its industry members are willing to assist in whatever capacity to achieve this outcome.

ADTIA is a key player in the Telecommunications infrastructure rollout program including the National Broadband Network (NBN), IP networks and the convergence of these technologies in Customer Premises, mobile telephony, wireless and complex building cabling. ADTIA was the industry association engaged by the Digital Switchover Taskforce to assist with the rollout of the analogue to digital national project.

The proposed Multi Technologies Mix to be used for the Broadband Network into homes and businesses will provide a broad based model to support a Digital Economy in which technology devices will continue to evolve and require technicians to support installations and upgrades.

The digital revolution that is occurring will include the concept of smart cities that are more sustainable, efficient and supportive of citizens. With the expansion of the digital age through Governments, industries, internet services and knowledge flow, there will be a greater requirement for technicians to be trained and provided with workforce development as our technology changes.



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Background

As part of the ongoing Telecommunications Industry workplace observations and environmental assessments, in late 2024 TITAB Australia Cabler Registry Services and ADTIA Inc. members, provided feedback on an industry survey. The responses on their experiences and thoughts were greatly appreciated and will be a valuable input to shaping future experiences of workers in the Telecommunications Industry.

This type of targeted and focussed feedback enables ADTIA and TITAB to represent the opinions and interests of workers and cablers to stakeholders and government bodies on the issues, concerns and potential opportunities for this important industry.

ADTIA and TITAB have put into place processes and committees to consider and act on some of the issues raised, however without the support from the Government, NBN Co., Retail Service Providers (RSPs) and enterprises the industry will continue to experience the worker issues stated.

ADTIA, TITAB and its industry partners will continue to encourage Telecommunications workers to provide information that will enhance their capabilities, and will provide improved productivity and better customer experiences.

Opinions were canvassed on a range of subjects and this provided excellent feedback which showed that respondents have certainly given some thought to current and future aspects of the digital and telecommunications industry.

Enclosed are the detailed survey questions and a summary of the respondents' comments in providing a range of opinions and suggestions to improve the industry skills and workforce capabilities expected by the industry, consumers and the community.

Findings and Action

The key messages being presented by respondents to the survey are listed below:

- Current training methodologies are deemed to be applicable in the future with some desire to adopt a more formal "trade style" approach for cabling skills.
- A need for increased emphasis on knowledge of standards and compliance in courses.
- Greater auditing of application of standards and compliance in the workplace.
- A need to address training availability in country and remote areas.
- A somewhat DIY approach to installation work assisted by plug and play style product development may result in increases in non-compliance to industry standards in future.
- The impact of changing technologies on the horizon are expected to have a positive impact on business growth in the Telecommunications Industry.

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Summary of Survey Statistics and Findings

Section 1. Survey Respondent Demographics

From the target group of respondents, 80% have worked in the industry for 10+ years hence their comments and contributions to the survey are based on experience over significant time. There was a cross section of workplace roles namely employees, self-employed / contractors, and business owners / managers. Of the business owners / managers cohort the majority were from micro businesses (1-4 employees).

The information with respect to “type of work activities undertaken” demonstrated that the industry continues to require a wide range of skills with respondents covering multiple specialist activities. The breadth of skills and knowledge within the industry is ever expanding and often requires multi-skilled expertise. This would be particularly relevant to small businesses or individuals seeking work across a broad customer base or a range of equipment / applications.

Section 2. Training and Technology Change Responses

These were multi choice options. 80% of respondents (business owners / employers) preferred to source employees via “Formal Training Qualifications with TAFE and / or Private RTO” however, significant numbers (42.8%) also supported “Cadetship, Traineeship, and Apprenticeship models”. Self-Paced Learning and On-line / Web-based methods were also supported but most likely for technology refresh, knowledge updates etc.

Only 12.5% of respondents thought that future technological changes currently on the horizon were likely to have a negative impact. Whilst we did not get any specific inputs on why this was their position we may be able to explore a little further down the track whether this was mainly focussed on business impacts such as uncertainty about being able to source the necessary skilled workers, cost of upgrading existing skills and equipment, or required upgrade to existing telecommunications services (impacting the economy more generally). 62.5% of respondents felt it was likely to be a positive impact whilst 25% were unsure.

With respect to “The Preferred Methods of Upskilling for the Future Working Environment”, all methods offered such as: Industry based skilling, personal development training, vendor product training, workshops / seminars were generally well supported. In addition specific suggestions were made around improving the understanding and knowledge of compliance standards and requirements, and training generally to be based on a trade style methodology.

Comments relating more generally to issues relating to “Emerging New Technologies” centred on the relationship between cabler and electrician qualifications, recruitment of qualified employees that had a life-long learning mindset, the need for more rigorous application and monitoring of standards, the need for more training availability in remote areas, and the cost of test equipment.

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Section 3. Use and Knowledge of Australian Standards

The standards laid out in **AS/CA S009:2020 Installation requirements for Customer Cabling (Wiring Rules)** support the requirements of the Legislative Instrument titled **Telecommunications (Cabling Provider) Rules 2025**. As part of achieving a qualification as a cabler it is necessary to be aware and understand the importance of the application of the principles in S009 in the workplace. There are a number of additional technical standards that support the legislative instrument however S009 encompasses the overall “compliance” aspects and application of those standards.

The survey sought input on two major questions namely “How Often” S009 is used or referenced, and the method of “accessing” the information.

The vast majority of cablers, obviously being aware of the existence of S009, utilised them on a needs basis. However a total of 25% of respondents either “never” or “rarely” referred to the wiring rules. The 25% group is a significant cohort that rely only on the coverage of the rules in their initial training and any random mention of specific sections within the document such as in newsletters etc.

The wiring rules cover an extensive range of work place practices and standards relating to a broad spectrum of products and services, created by the Industry for the Industry. Comments in the next section below also relate to the impact of the limited use of such important information while in the workplace.

Additionally, the respondents indicated that the means of accessing the information in S009 is spread quite widely across 4 main methods, stored on a device, directly online, hard copy, and utilising a search engine. Even though the current version of the document is quite large 41% of cablers / employers carry a hard copy with them whilst a further 41% have a soft copy on a storage device. 11% utilise an online link to the document on the Communications Alliance Ltd website located at <https://www.commsalliance.com.au/Documents/all/Standards/s009> whilst the final 7% use a search engine to find the information they require.

Each method has its benefits and drawbacks:

Hard Copy can sometimes lead to difficulty in finding the information being sought. This depends on the abilities and patience of the reader in searching through the contents pages to identify relevant headings or having a strong knowledge of the content of the document overall.

Soft Copy allows for the use of additional search functionality on key words.

Link to Website provides similar search functionality to soft copy as well as ensuring the latest version of the document is being viewed but does rely on internet connectivity which is most usually available.

Search Engine approach may lead to information being provided that is not an Australian Standard unless reference to S009 specifically is accessed. Searching for keywords alone could take you anywhere.

Note: As a primary tool for use in the workplace, and as a basis for ensuring “compliance” with standards, the S009 document layout / structure and search capability is of significant importance. Cablers will use tools that are easy to access and easy to find the answers they are seeking. At TITAB there are sometimes enquiries (not a significant number) regarding matters that are clearly covered in S009, but people need to be directed to the specific section of the document.

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Section 4. Observations in the Work Environment

Quality of onsite works:

Of the three categories of onsite work experiences, respondents anecdotally indicated that on average the previous work sighted was of a very high quality, meeting all standards, about 25% of the time. 42% of the time it was of a High Quality but not meeting all standards and 33% of the time it was “Low Quality” and not meeting. This means that in aggregate approximately 75% of the time, standards are not being fully met.

Note: The 42% figure for the second category, has not been analysed to determine the degree to which lower than optimal workplace standards are occurring as this level of detail would require some sort of sample audit process by technical experts. It would be worth completing such an exercise with ACMA and Telecommunications Industry backing. The 33% figure for low quality work and perhaps some of the 42% observations, should be addressed to determine if this is due to one of many possible reasons such as:

- ***Lack of knowledge of standards, cabling rules, and / or consequences***
- ***Unlicensed operators***
- ***Time and cost pressures***
- ***Don't care attitude***

New Safety Risks in Customer Premises:

Responses on this topic related to advances in technology that may impact workers from a personal safety perspective whilst other related to risks of increased non-compliance with standards.

The move towards simplification of installations such as plug and play lends itself to DIY approaches that often ignore standards, utilise sub-standards products, and impact other services. Examples of this are:

- Poor fire protection practices
- Installation of cables without appropriate protection or separation
- Sharing of cable runs
- Connection of non-compliant equipment to carrier networks
- More common steel roof and walls affecting transmission, restricted workspaces in ceilings
- Broadening of qualification knowledge base, - jack of all, master of none
- Data centre activity becoming noisier

General Comments to Industry Stakeholders:

There were a broad spectrum of comments from respondents on this topic. Some of the key themes were:

- More regulation and auditing of cabler licensing and workplace standards needed
- Need more relevant and stringent training for competency and particularly on assessment.
- Common standardised national curriculum needed especially for core competencies
- Security, medical alarms systems etc, reliant on essential telecommunications services are treated same as basic service requirements.
- More reporting of non-compliant works needed (TCA2 forms not used).
- Again a call for a communications qualification standard equivalent to trade status

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Appendix: Detailed Survey Responses

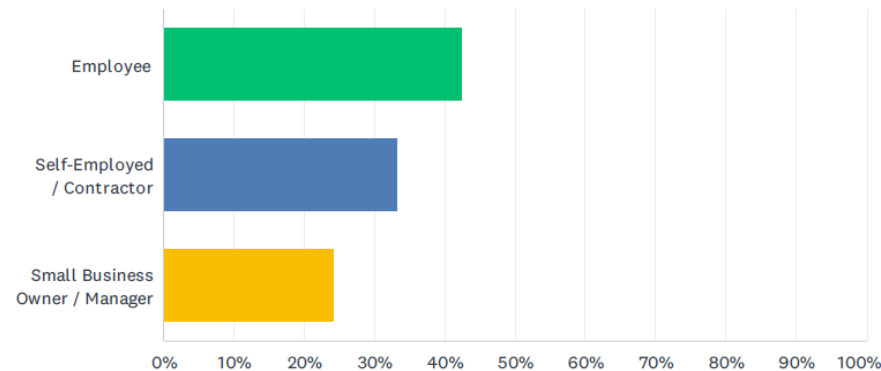
Section 1. Survey Respondent Demographics

1. Work Experience

More than 80% of Respondents have worked in the industry for 10+ years

2. Current Roles:

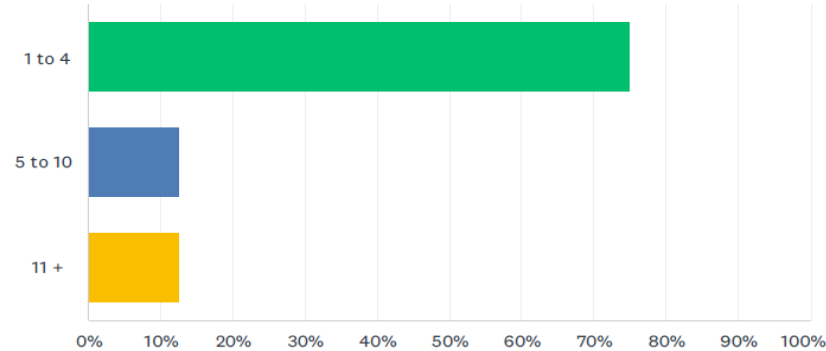
There was a good spread of roles across the respondent group.



ANSWER CHOICES	RESPONSES
Employee	42.42%
Self-Employed / Contractor	33.33%
Small Business Owner / Manager	24.24%

3. Number of Employees:

Most of the “business manager” respondents were from micro businesses

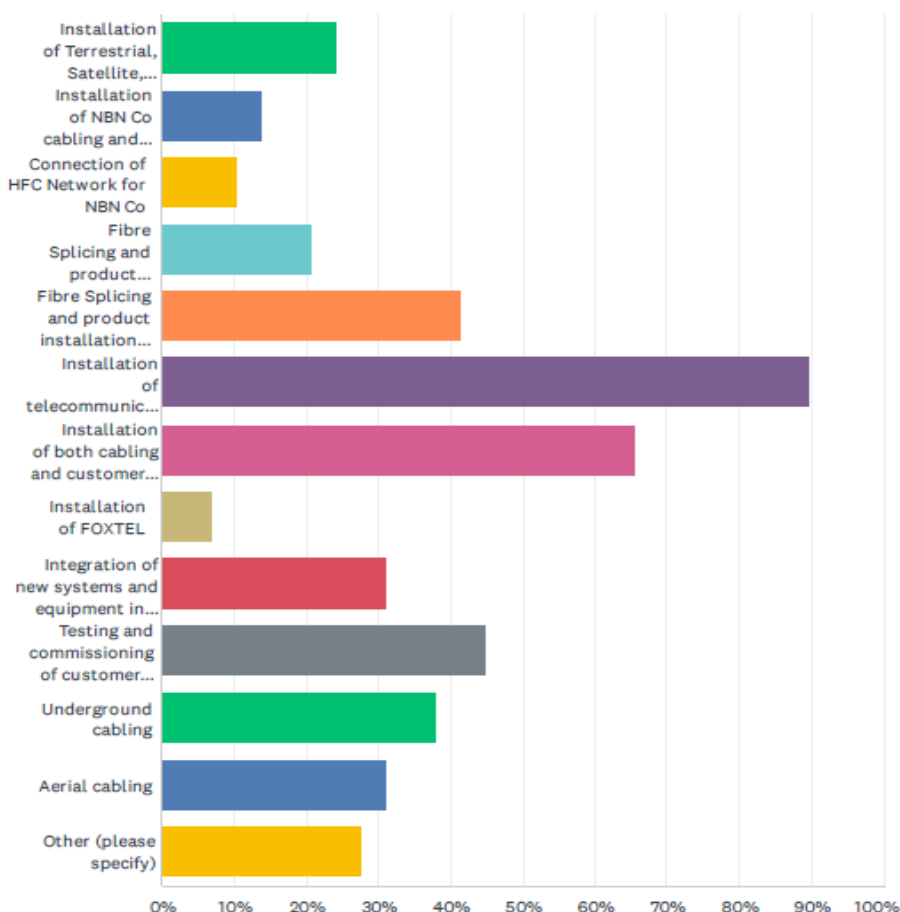


ANSWER CHOICES	RESPONSES
1 to 4	75.00%
5 to 10	12.50%
11 +	12.50%

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4. The Main Activities of Work:

This was a multiple choice question across all respondent types.



ANSWER CHOICES	RESPONSES
Installation of Terrestrial, Satellite, Mobile Towers and Wireless (Mobile)	24.14%
Installation of NBN Co cabling and NTDs /PCD's (Network side only)	13.79%
Connection of HFC Network for NBN Co	10.34%
Fibre Splicing and product installations on the carrier network	20.69%
Fibre Splicing and product installations in Customer Premises	41.38%
Installation of telecommunications and data cabling	89.66%
Installation of both cabling and customer premises equipment. (Domestic/Small Business/ Large Organisations)	65.52%
Installation of FOXTTEL	6.90%
Integration of new systems and equipment into the network	31.03%
Testing and commissioning of customer cabling installations	44.83%
Underground cabling	37.93%
Aerial cabling	31.03%
Other (please specify)	27.59%

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Respondent Comments under category of "Other":

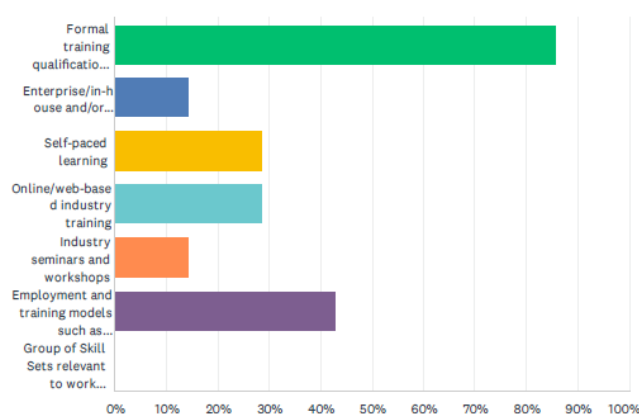
- Coaxial Broadcast
- Radio communications UHF, VHF and WiFi
- Technology integration
- First and second in maintenance of Radio and Telecommunications systems and equipment repair where economically viable. Radio and Telecommunications systems
- CCTV and security system installations
- NBN HFC/FTTN/FTTC/FTTP equipment and cabling relocations
- Security cameras will be in every house and business and connects to the carrier POE

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Section 2. Training and Technology Change Responses

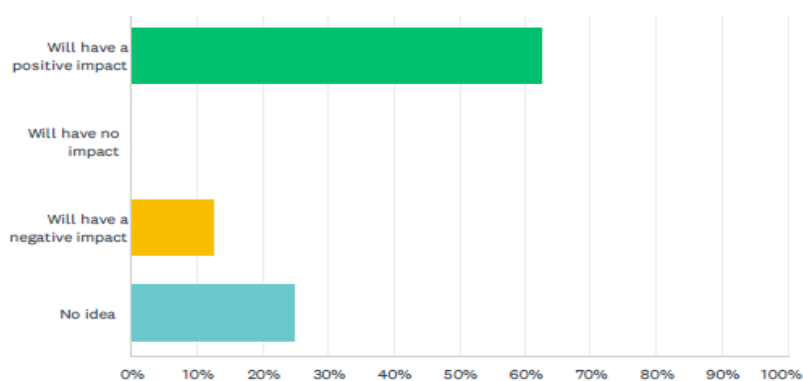
5. Business Owners “Preferred” Training for New Employees:

These were multiple choice answers.



ANSWER CHOICES	RESPONSES
Formal training qualifications with TAFE and/or private RTO	85.71%
Enterprise/in-house and/or vendor-based face to face training to update current staff	14.29%
Self-paced learning	28.57%
Online/web-based industry training	28.57%
Industry seminars and workshops	14.29%
Employment and training models such as Cadetships, Traineeships and Apprenticeships for new entrants with both on and off the job releases	42.86%
Group of Skill Sets relevant to work outcomes	0.00%

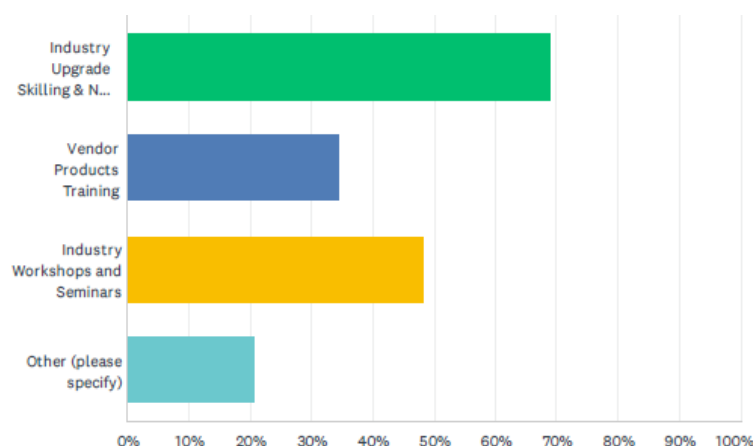
6. Business Owners Expectation of the Impact of Technological Changes in the Industry (e.g. Power over Ethernet, 5G, IOT & AI)



ANSWER CHOICES	RESPONSES
Will have a positive impact	62.50%
Will have no impact	0.00%
Will have a negative impact	12.50%
No idea	25.00%

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7. The Preferred Areas of Skills Development to Support Respondents in the Future Working Environment?



ANSWER CHOICES	RESPONSES
Industry Upgrade Skilling & New Technologies Training Programs relating to personal development	68.97%
Vendor Products Training	34.48%
Industry Workshops and Seminars	48.28%
Other (please specify)	20.69%

Additional Comments from Respondents:

- Need for improvement in technical understanding and compliance with S009 including auditing.
- Stop unlicensed installers from operating in the system
- Personal and business information seminars I.e. new tax laws, retaining customers, new future proof opportunities
- I think the Telco and Cabling training should be conducted like trades
- Support Training with RTOs including mentoring students

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8. *What Respondents See as Significant Issues in Relation to Emerging New Technologies?*

- As licenced cablers know the segregation requirements and Communication Technicians are familiar with working with voltages above ELV, there should be dispensation for a Tech with a cabling licence to install ES3 cabling without being a licenced Electrician. Personally I have been working with 100 volt line PA systems since 1971 as part of a family business and do not have the time to undertake an Electrical Apprenticeship to enable me to do what I have always done. The voltage levels chosen to determine ELV, LV etc were obviously done so to accommodate the Telecommunication Industry while completely overlooking the Radio Communications sector.

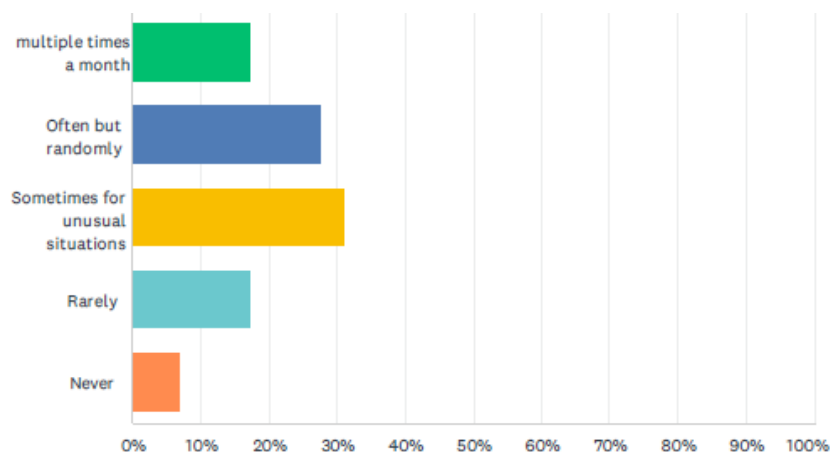
Perhaps a restricted licence as part of the cabling accreditation?

- Procuring talent/staff to be able to embrace new and emerging technologies
- Most certainly seeing challenges ahead with skill levels. I am calling for a separate trade qualification in communications There is a trade for a baker a painter but why not communications
- People in our Industry with no Qualifications or Skills
- availability of training for remote regions
- Cost of test equipment

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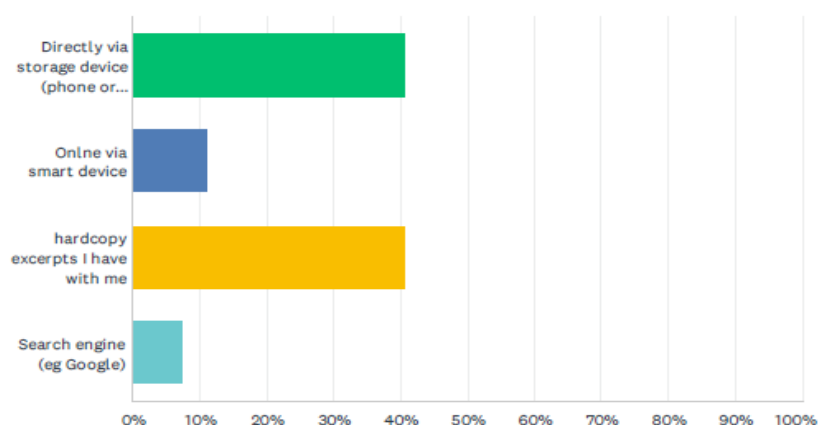
Section 3. Use and Knowledge of Australian Standards

9. How often are Wiring Rules (S009) Referred to in Carrying Out Work:



ANSWER CHOICES	RESPONSES
multiple times a month	17.24%
Often but randomly	27.59%
Sometimes for unusual situations	31.03%
Rarely	17.24%
Never	6.90%

10. How is the Wiring Rules (S009) Information Accessed:



ANSWER CHOICES	RESPONSES
Directly via storage device (phone or tablet)	40.74%
Online via smart device	11.11%
hardcopy excerpts I have with me	40.74%
Search engine (eg Google)	7.41%

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Additional Comments from Respondents:

- I haven't had much to do with reading the actual wiring rules other than completing my data elective as a part of my cert 3 Electrotechnology. I would use SAI global as my company has a subscription if needed though.
- I sign off every job and refer to most work I see, not to any standard

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Section 4. Observations in the Work Environment

11. Respondents Observation of the Quality of Previously Completed Onsite Works:

Responses covered 3 categories

A: Very high quality and usually meeting standards.

Average response was 25%

B: High quality but not necessarily meeting all standards.

Average response was 42%

C: Low Quality

Average response was 33%

12. New Safety Risks in Customer Premises (as written by respondents):

- Untrained workers
- Separation of power to telecommunication wiring as stated previously
- Lack of knowledge required to obtain license
- As products develop and become more accessible and controlled from the internet, many issues arise, including safety from cyber security threats.
- DIY is becoming a huge issue with the installation of security equipment, where there is no segregation, and accessing confined spaces with little or no knowledge, making improper joints in cables (twisting bare wires together)
- Segregation between LV and telecommunications cabling is never adhered to in domestic dwellings * Mechanical protection and support of telecommunications cabling is ignored. Often found thrown through the roof space, unsupported and unsecured, easily liable to damage from work in the roof by any number of contractors. ES3 circuits will only increase this risk beyond the PoE systems we have today * Dangerously, LV and telecommunications cables share penetrations through noggings within 50mm of the finished surface, where a cable could inject LV into the telecommunications system.
- Unlicensed installers. eg IT Personal completing illegal installations.
- Poor Separation of Electrical and communications cabling causing increase in Electrical Shock Risk to communications circuits General Poor Installation practices
- EVs
- Unregistered unregulated unlicensed work done by people who have got an online certification with no industry experience or training and doing as cheap as possible work with no regard to follow up rectification and having work with possible death or serious injury implications
- Unqualified tradesmen installing telecommunications cabling, no inspections of work carried out

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- Non-compliant equipment being connected to carrier network, risks of electric shock associated with illegal work above 50 VAC, asbestos.
- Mainly around solar power and the ability to make safe when working on systems
- POE, Poor fire protection practices
- Seriously you can write all the rules you like but with no inspections your wasting your time and Australia's money. Do you all honestly think there is anyone meeting the cabling rules 35 years ex Telstra seriously imagine if the police never checked the speed of cars or have road side cameras what do you reckon.
- Noise. Server and data centres are getting noisier. Manufactures do nothing to mitigate the noise coming from cooling fans. Designers are also doing nothing to acknowledge the hazard and have no smart design to reduce the noise hazard.
- Non-compliant electrical works
- BlueScope steel frame roof and walls are going to be a big problem
- POE mix in with structured cabling and proliferation of IOT devices congesting existing wiring cabinets
- Restricted space due to aircon ducting and building designs
- Home batteries and isolation switch boards
- Segregation of wiring of all kind, photovoltaic installations interfere with alarm and CCTV because different services have to share same cable-paths
- Unlicensed / unqualified people doing communications / data work is rife. If it's underground or in roof / ceiling space, it's usually poorly installed with zero to low regard for standards or quality. Record keeping, jumper's, patching etc is basically non-existent. Telstra / NBN providers are the worst, closely followed by security and unlicensed installers.
- Previous works by DIY builders and owners

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13. General Comments to Industry Stakeholders:

- Substandard telecommunications work carried out by some installers.
- Pre-existing wiring rules.
- Lack of knowledge and experience before obtaining license
- As a senior trainer with 50 years' experience in this industry, we find the current training program to be seriously lacking in producing competent employees. We are finding that the only way we can produce work ready staff is to train them through our in house training systems, the RTO's are focused on how much money they can make and not on outcomes. We have attempted to employ new staff over the past four years and could not find any appropriately skilled personnel, so we now train from scratch. The training packages are supposed to be competency based and at this time we are not see that.
- Our part of the industry is Security Licenced leaving a lot of data cablers/ electricians installing Security Equipment unlicensed open for a \$300K plus fine
- Regulation of cabling is non-existent, and industry knows it. This results in some licensed electricians not bothering to become registered cablers, because in effect there is no regulatory threat to do so. I have never seen one job on which the site did not deserve a TCA2 form for one or another non-compliance. Considering the importance of correctly-functioning alarm systems, CCTV systems, medical alarms reliant on the integrity of telecommunications cabling throughout the premises, it is astounding that a greater regulatory approach has not yet been enacted. We need a regulator with teeth, and an effective cabling certification system that goes to ACMA as well as the customer, so that there is oversight of cabling jobs being performed which can then be subject to random audit (similar to the ESV certificate of electrical safety system).
- Pay us more
- Licensing..... Fines for unlicensed installers..... Inspection of installations to ensure standards are met.
- We need more ACMA audits!! What is the use of having standards if they are not policed.
- If you are a licensed experienced installer you can be given higher degree of certification and ability to assess and remove non-compliant work and repair at the cost of previous installation company or person. With reporting to a central licensing agency that can remove non-compliant organisations or personnel.
- Work should be inspected periodically to ensure standards are met.
- Greater regulation of telecommunications work and recognition of it across government and industry as an essential service.
- When it comes to certification of cabling, this is most times based on number of outlets installed. As a security technician we often don't install enough to get certification. Help in the certification process in this area is required, especially when customers like Education Queensland require it.
- If you can bake bread , paint , plaster walls and get a trade it's obvious communications should be a trade Forget RTOs , get it into TAFE and get them doing a 4 year

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apprenticeship in communications and then you may see cabling rules and a world standard in communications. Cameras are going to be everywhere and Starlink is taking over the bush. It's out of control and you need to pull it back in with a trade. Forget electricians they have enough to do. Everyone can't be an expert. Not many bother with being registered cabler. It's free for all and it's costing Australia billions in lost productivity.

- More time spent at TAFE teaching skills and knowledge need to wire neatly in domestic and industrial settings. I.e. how to put wall plates into dry wall. When to conduit cables and when not to. What is cable tray?
- Yes we need Inspectors on site, never seen any in all my years in this business.
- Align industry training across carriers and RTO's to make job ready.
- Segregation of cable installations, reason, interference, cross-talk, high DC voltages especially from photovoltaic installations.
- I think the industry should be regulated stronger. Contractors who install communications, data and security cabling should have Contractors cabling license (just like an Electrical Contractors license). And the contractor responsible / accountable for their employees or licensed cablers, workers and apprentices work.
- Electricians without cabler license doing Telecoms work.
- Before adding more training requirements ensure all areas of Australia have access to RTO, open up online learning for more fields.