

Exploring residential energy technology with plumbers and electricians

October 2024

EECA
TE TARI TIAKI PŪNGAO
ENERGY EFFICIENCY & CONSERVATION AUTHORITY

 **MASTER
ELECTRICIANS**
Electrical Contractors Association of NZ



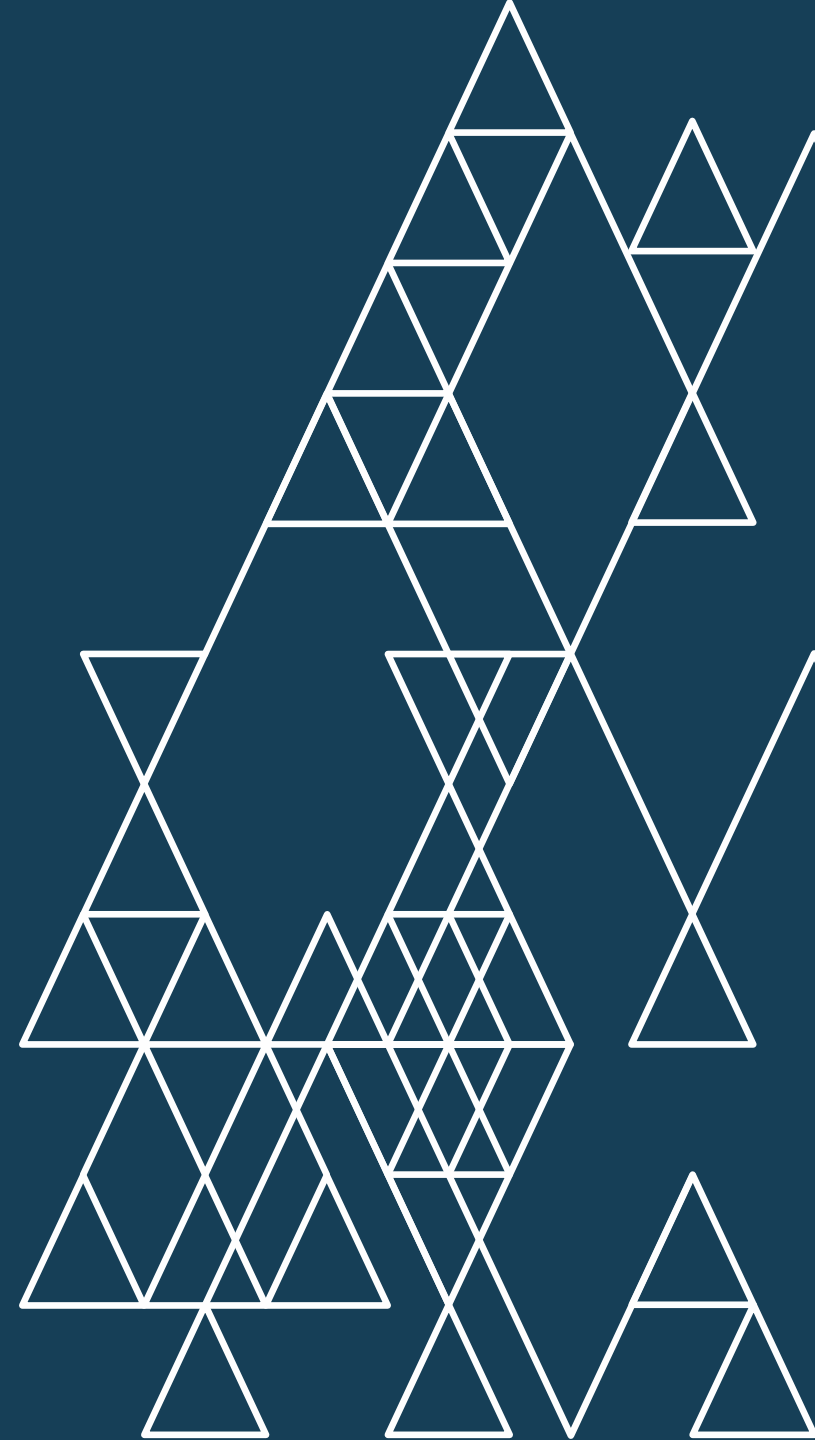
Background

EECA and Master Electricians have created a partnership to ensure that together they can support the industry as new, smart, energy efficient technologies emerge and make their way into the residential market.

Research plays a key role in understanding how **EECA and Master Electricians** can provide meaningful and practical support. This starts with understanding the current perspectives of tradespeople: their influence on consumer choice and the triggers, motivations and barriers towards specific appliances and home technologies.

This joint piece of research is the first output in what both organisations believe will be a key partnership over the coming years.

Hundreds of plumbers and electricians in the wider sector gave their time, thoughts and views on their work, industry, customers and market. What comes through clearly is the strength of the relationship between the trades and their customers and the drive they have to deliver the best solutions for the homeowner.



Overall approach:

This was a two-stage project involving an initial qualitative exploratory stage, followed by quantitative measurement. This report focuses on the latter dataset, drawing on the qualitative phase where relevant.

1. Qualitative exploration to understand the sector and influences on behaviour. This foundation stage involved 21 x 1-hour interviews in June – July 2024 with electricians, plumbers, as well as representatives from industry bodies, training providers, and specialists such as an architect, builder and kitchen designer. A separate report explores the foundation stage in depth, and the insights were used to inform the focus and language used within the second quantitative stage.
2. 15-minute online quantitative survey of plumbers and electricians. There were four sources of sample:
 - Master Electricians sent an email invite to take part to everyone on its mailing list
 - Consumer panel sample
 - A purchased lists of email addresses for plumbers
 - Advertising the survey through Facebook groups.

In total, 322 plumbers and electrician took part between 19/08/24 and 16/09/24.

The study focused on:

- Current state of play when it comes to influencing the consumer
- Perceptions and attitudes towards upskilling and training
- 'Funnel' metrics across five key appliances: heat pumps, hot water heat pumps, cooktops, EV chargers, solar.

Please note that where there are significant differences between plumbers, electricians and gas fitters we have included these in the report. If there are no significant differences, we present data at the total level. Also note that gas fitters are a sub-set of plumbers, so included within the overall plumber group.

The appendix to this report includes more detailed data at an appliance level.

With a total sample of 322, the margin of error is +/- 5.4% at 50% using a 95% confidence level.



Agenda

1 Business and energy landscape

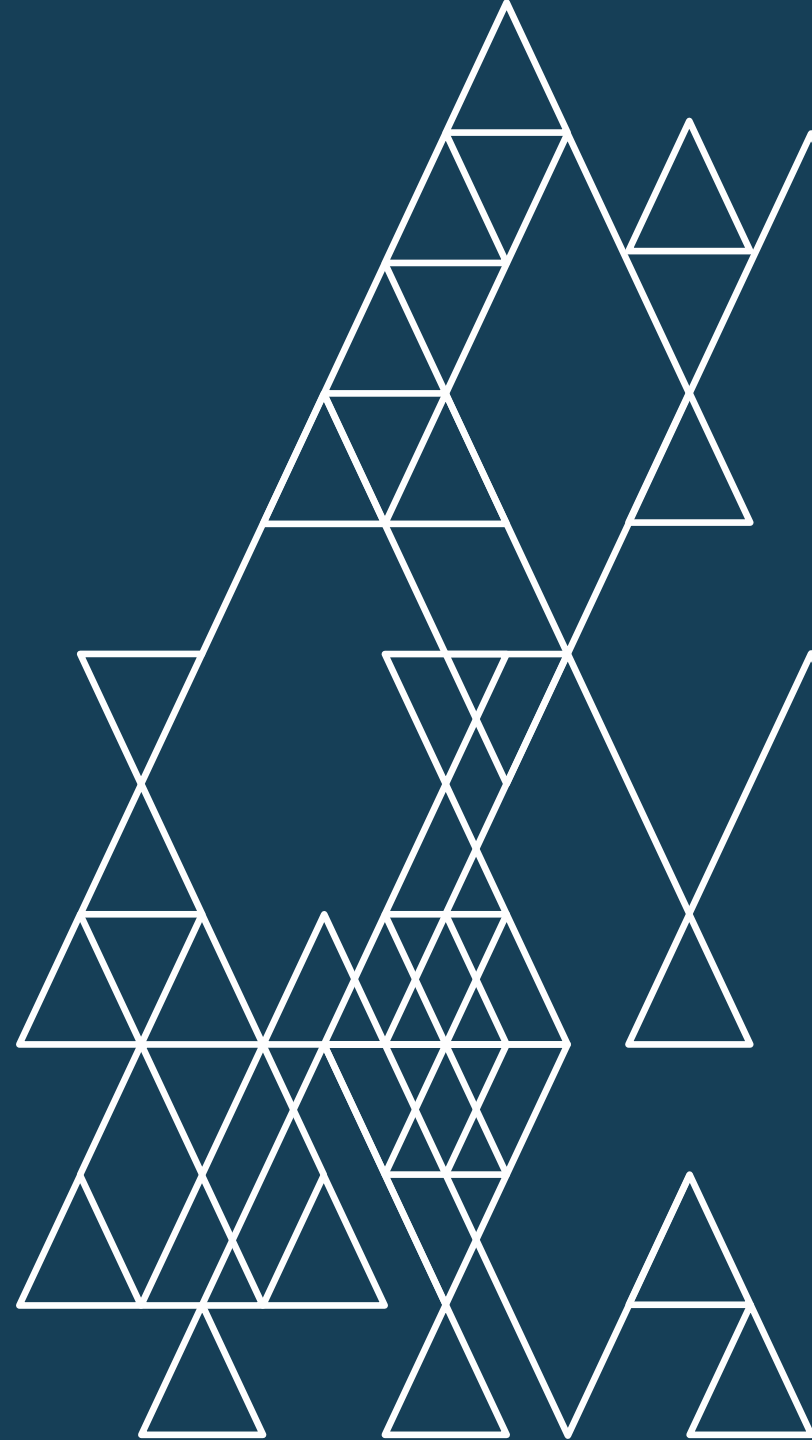
2 Ability to influence

3 Enabling and upskilling

4 Bringing it all together

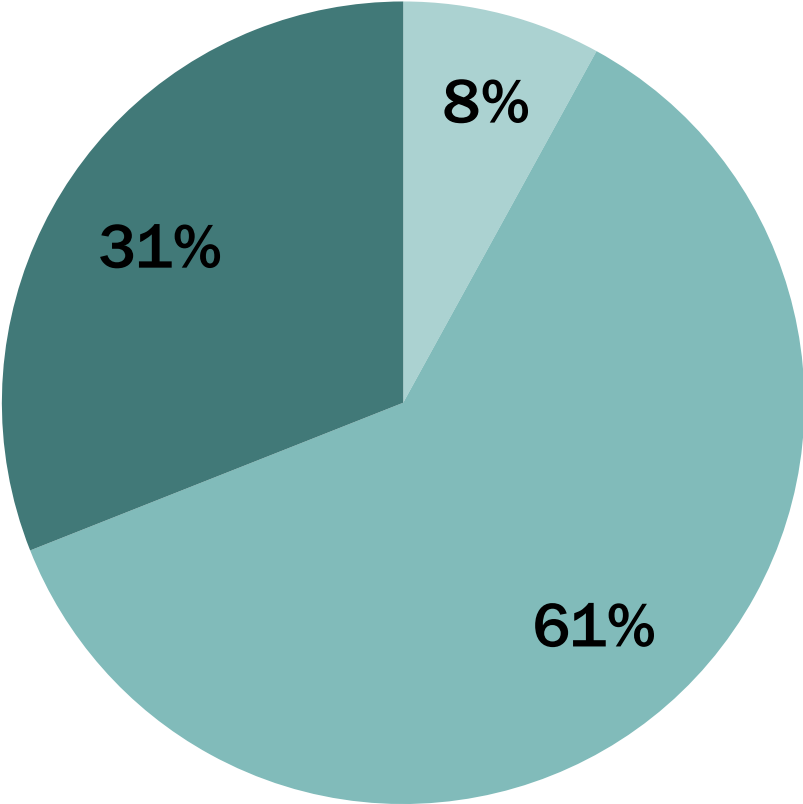
5 Appendix

Business and energy landscape

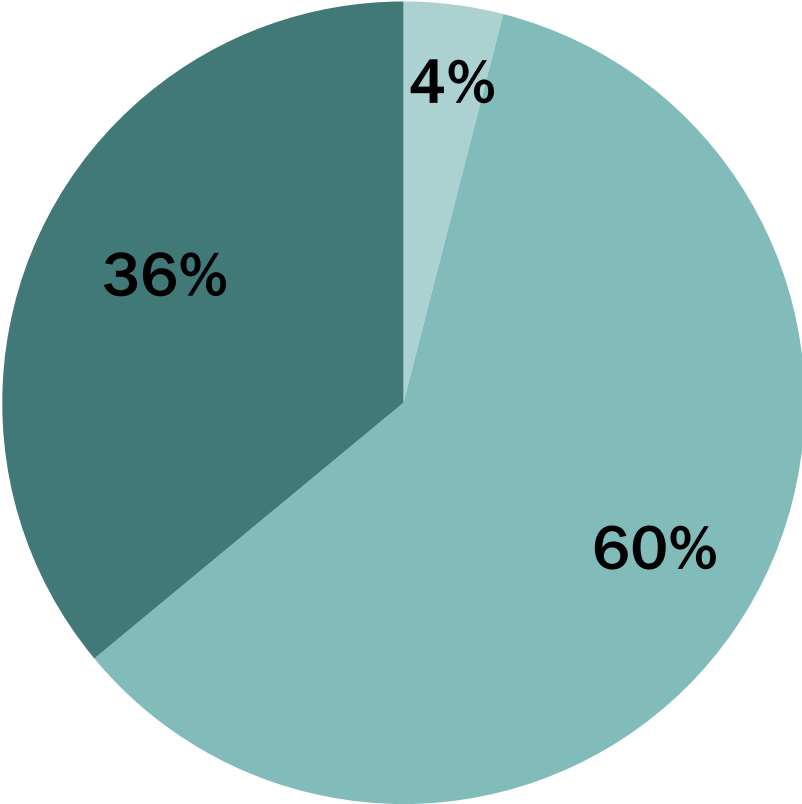


Plumbers and electricians perceive change within their industry. But this is at a steady – rather than increasing – rate

Perceived change to industry in the last five years



Anticipated change to industry in the next five years



- No change
- A little change
- A lot of change



Change is in part being driven by smart technology and broadening consumer demands

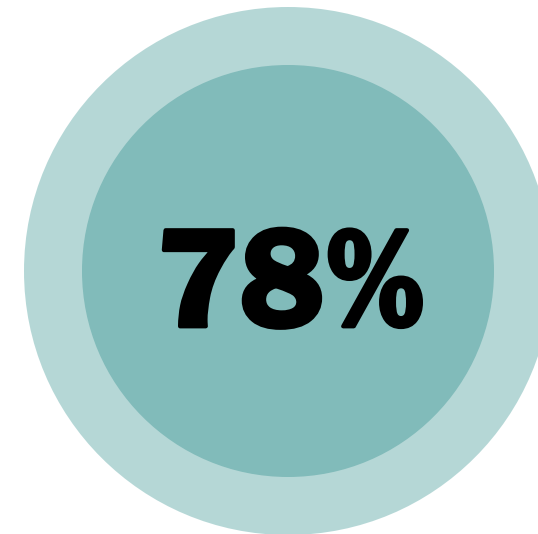
How plumbers and electricians think their industry will change in the next five years.

“I believe the internet of things will greatly change the way electricians operate. All home appliances will eventually be connected to the internet, meaning that Electricians will need at least a base level of IT/networking skills and knowledge to remain relevant and have the ability to fault-find.” *Electrician*

“I think the tech of the appliances we already deal with will alter. Therefore we'll be dealing with slightly different appliances. Energy efficiency is becoming a big thing so that'll have an impact on people's wants/needs.” *Electrician*

“I think the reality of moving or decarbonising our power sector will have massive implications for sparkies and they need to be able to advise customers about the reality of changing power sources and if there is enough power supply in their location.” *Electrician*

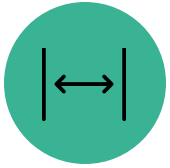
“Technology within the industry is constantly evolving and improving. Codes and standards are constantly changing which is requiring new skills and practices to be introduced.” *Plumber*



... agree customers are increasingly asking for diverse appliances which require wider knowledge

This changing environment demands more of plumbers and electricians

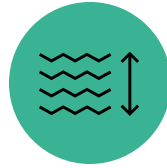
The qualitative phase of this project revealed three key sector implications relating to technological change:



BREADTH

There is increasingly a drive for plumbers and electricians to diversify into new areas of the trade.

- Electrification means home energy is less 'siloes' into disconnected energy systems, but one, whole system.
- With increasingly connected systems, necessity to deliver to the 'whole package' grows.
- Customers and partners, such as architects, are looking for plumbers and electricians / businesses who can 'do it all'.



DEPTH

Tradespeople are also increasingly required to have deep knowledge in new areas.

- The systems plumbers and electricians must handle are becoming increasingly complex, involving software integration and connectedness across appliances.



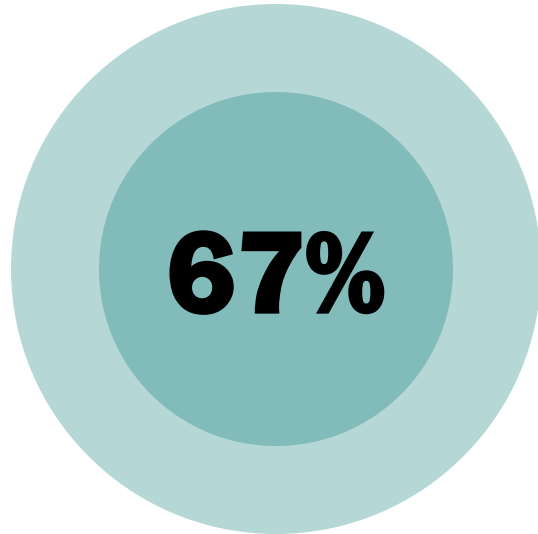
PACE

The pace of change of appliances and systems increases pressure on training and knowledge.

- New innovations are coming out more regularly.
- As things change, information becomes quickly outdated (e.g. solar), requiring plumbers and electricians stay up-to-date more than ever before.

And it can be challenging for skills to keep up, with expertise shortages observed across most businesses

A workforce that is unfamiliar with the latest technologies in home efficiency presents a clear barrier to making recommendations to customers, and ultimately householder adoption.



... agree 'my business finds it hard to find people with the necessary skills.'

“ You could influence the consumer all you want, and you can drum up consumer demand for those products, but if you haven't got a workforce that is confident, comfortable and aware of that product, you're going to end up with an issue.”

Electrician, qualitative phase

How plumbers and electricians think their industry will change in the next five years, example comments related to skills / training:

“The industry also needs more upskilling courses for Plumbers and Drainlayers to understand the changes that are going to happen whether they like it or not.” *Plumber*

“Less skilled workforce - lots of qualified people but lacking the required skills, training people is getting more expensive.” *Electrician*

“Harder to find skilled staff. More expensive to comply with requirements.” *Electrician*

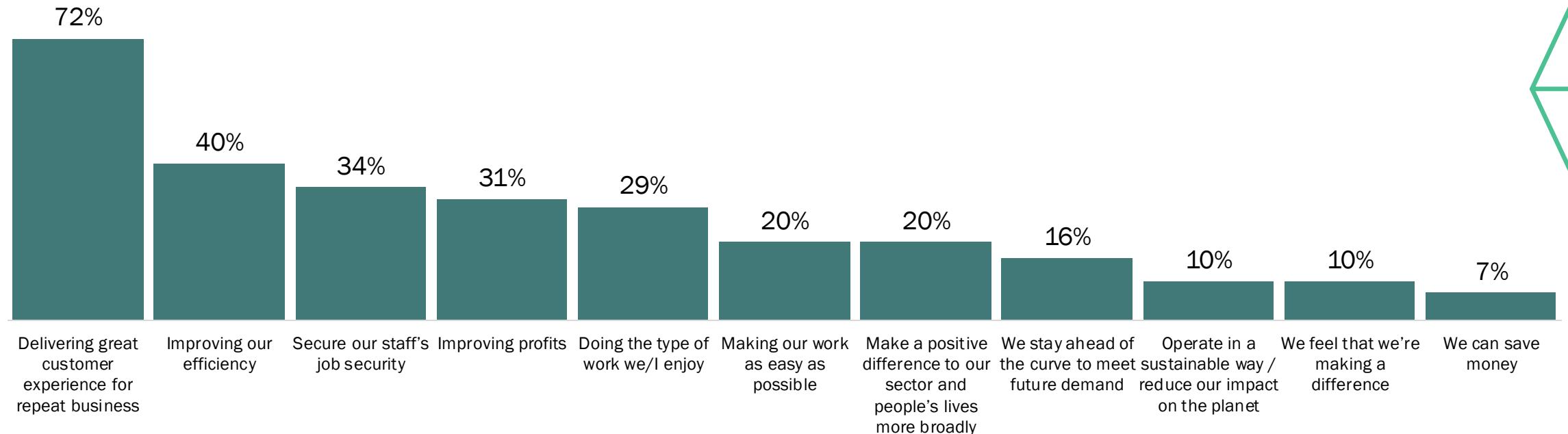
“New technology is rapidly growing. We have a skills shortage, not a resource shortage. The industry will always change, you are silly if you think it shouldn't or wouldn't.” *Electrician*



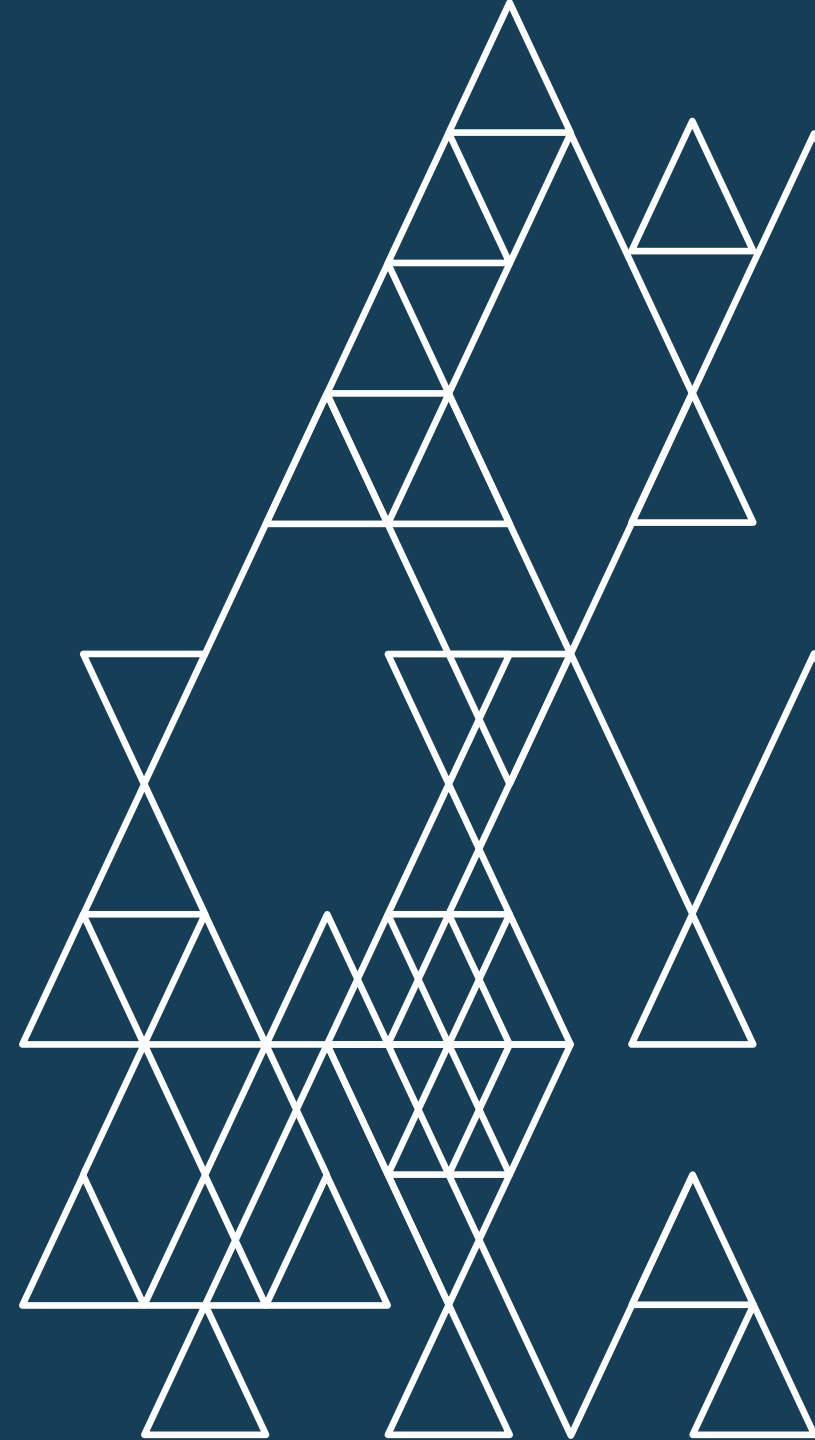
Considering what's important to the customer is key: in a competitive service industry, customer-centricity is at the heart of business decision making

Delivering great customer experience for repeat business is by far the most important driver for business decision making, highlighting how important customer satisfaction is within this industry. This is consistent across the trades.

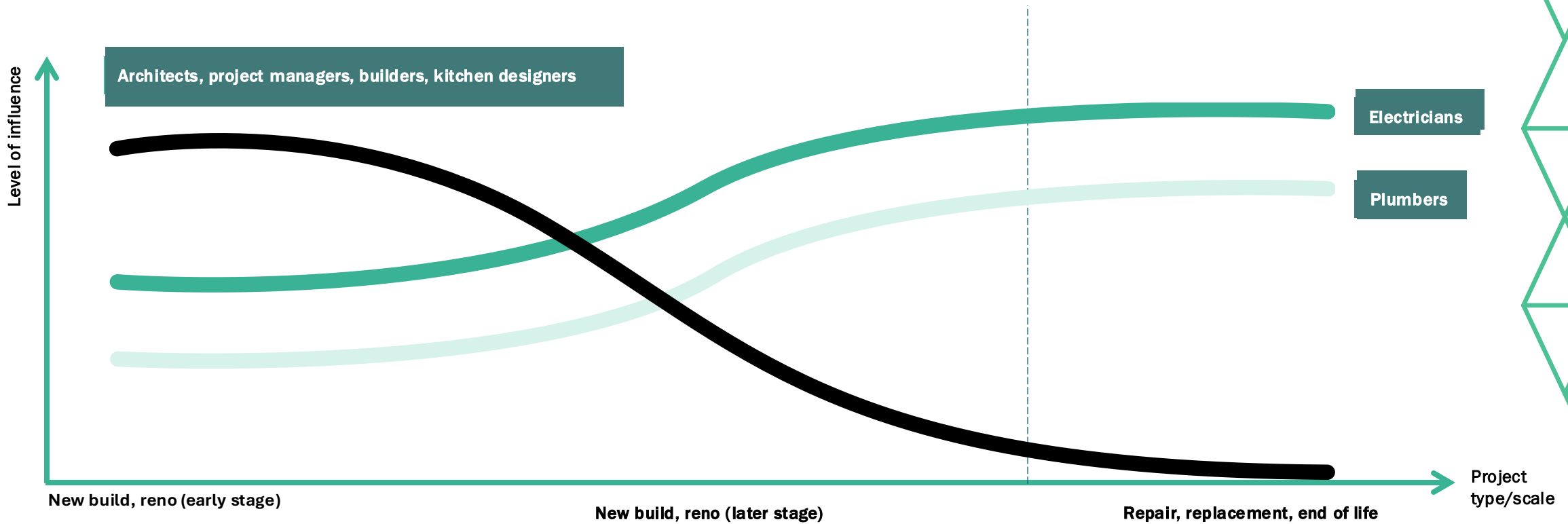
Business decisions drivers



Ability to influence



Scope to influence varies across project types and across different trades



In a large-scale project (new build or renovation), other players in the ecosystem tend to interface more closely with customers, and set the initial direction for appliance choice. Tradies may be consulted to support in decisions around the electrical systems and appliances in the home – though this is happening intermittently.

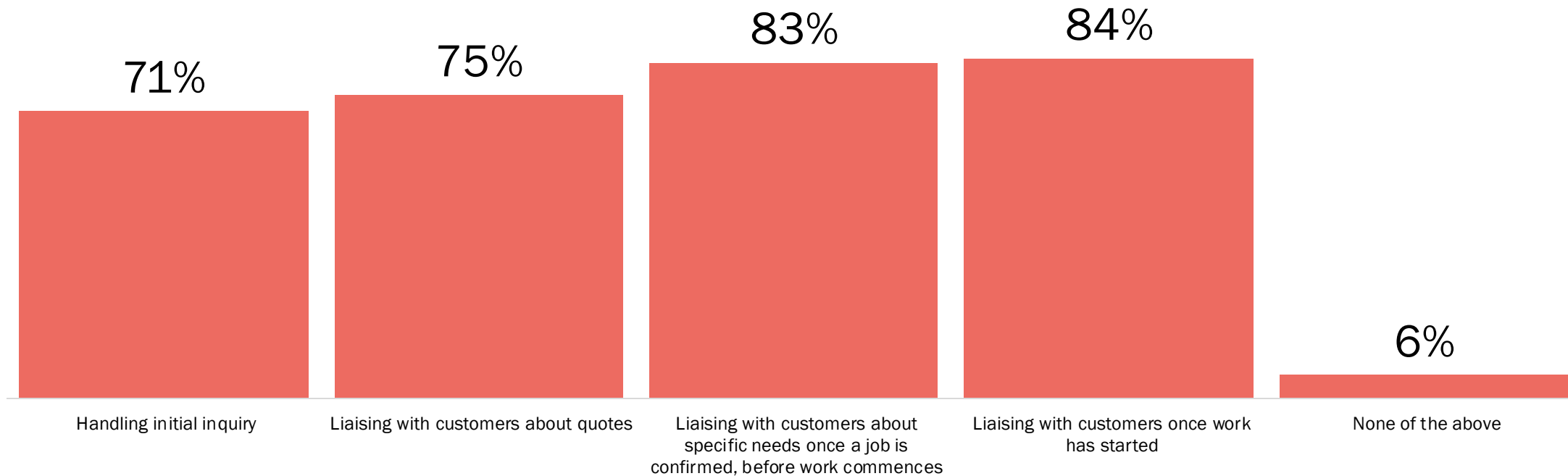
Tradies have capacity to influence customers directly when something breaks and needs replacing. The opportunity for influence depends upon the prior customer journey (i.e. they may have already purchased an appliance to be installed).



There are multiple touch points through which to influence: most plumbers and electricians have contact with end-customers across the customer journey

Results are consistent across trades, but vary with experience, with those in more junior positions having less contact earlier in a job.

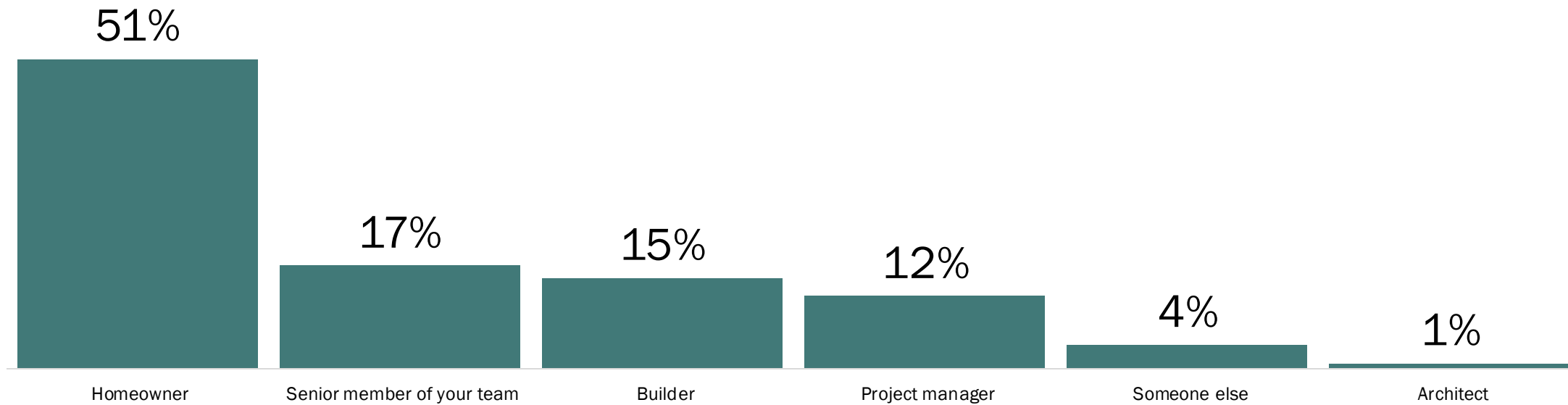
**Stages of the customer journey plumbers and electricians are involved with:
Are you involved in any of the following when communicating with clients/customers?**



The direct customer is diverse: homeowners are the end-customer in about half of jobs

Builders and project managers are the most common business-to-business customers, in over one-quarter of jobs.

Main contact on a job, in most recent residential job, average across five job types



Architects, kitchen designers, builders and other early-stage players often set the initial direction in new builds and renos

The foundation qualitative phase revealed how important business to business customers can be in influencing the end-customer:

These building ecosystem partners are a key ongoing/lead customer contact

With opportunities to influence around appliances before the plumbers and electricians are involved.

These partners can set an anchor point

Setting an initial direction for choice (e.g. what type of heating, what type of cooktop). Architects and builders can influence the overall structure for energy efficient technologies.

Their recommendations are holistic

With focus more upon the customer's needs and total home, rather than a specific energy efficiency view. May turn to plumbers and electricians for technical expertise, and there is opportunity to increase these kinds of interactions.

“ The customer has often already spoken to the architect or the kitchen designer, and normally the architect would have some deals with certain appliances as well.

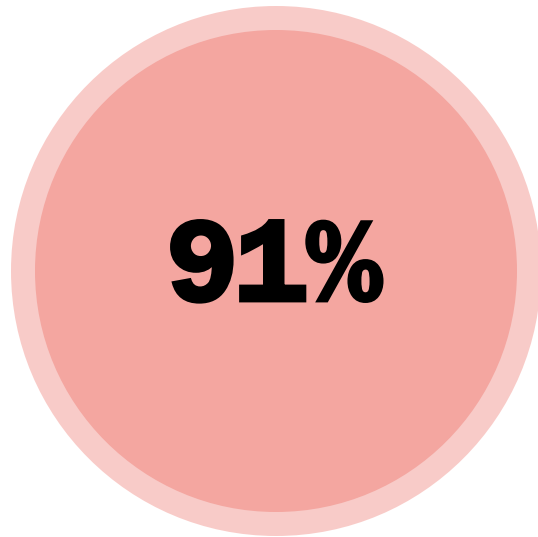
Electrician

Implication

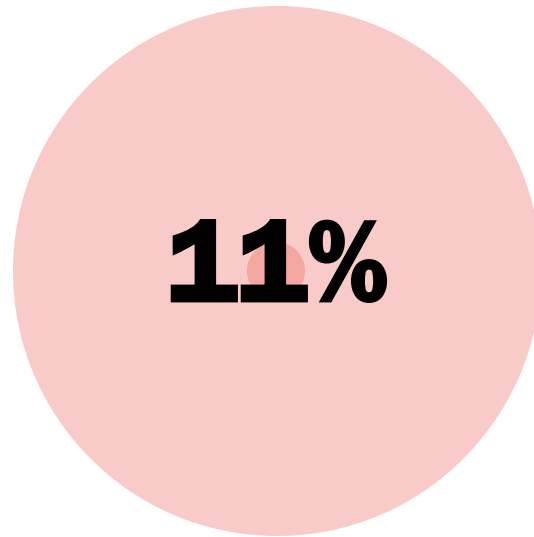
There is a growing need for plumbers and electricians and other partners across the ecosystem to get input from one another at the right time, to enable influence around the best products.

Most plumbers and electricians want to give advice, and already feel they're a trusted advisor. But they want to be involved earlier in the process.

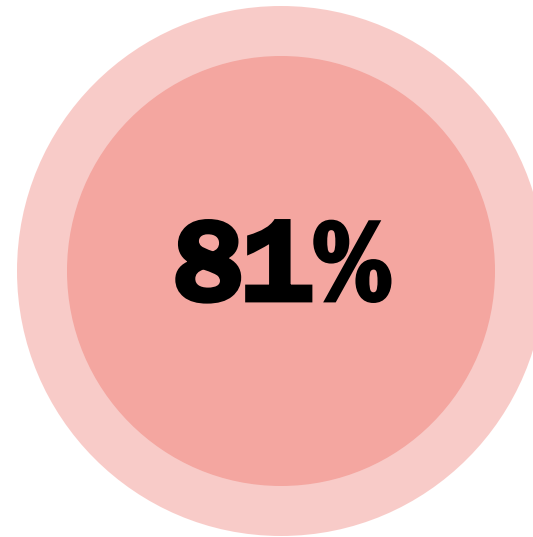
Advice agreement statements



My customers see me as a trusted advisor



I'd rather not offer advice to customers on which type of appliance to get



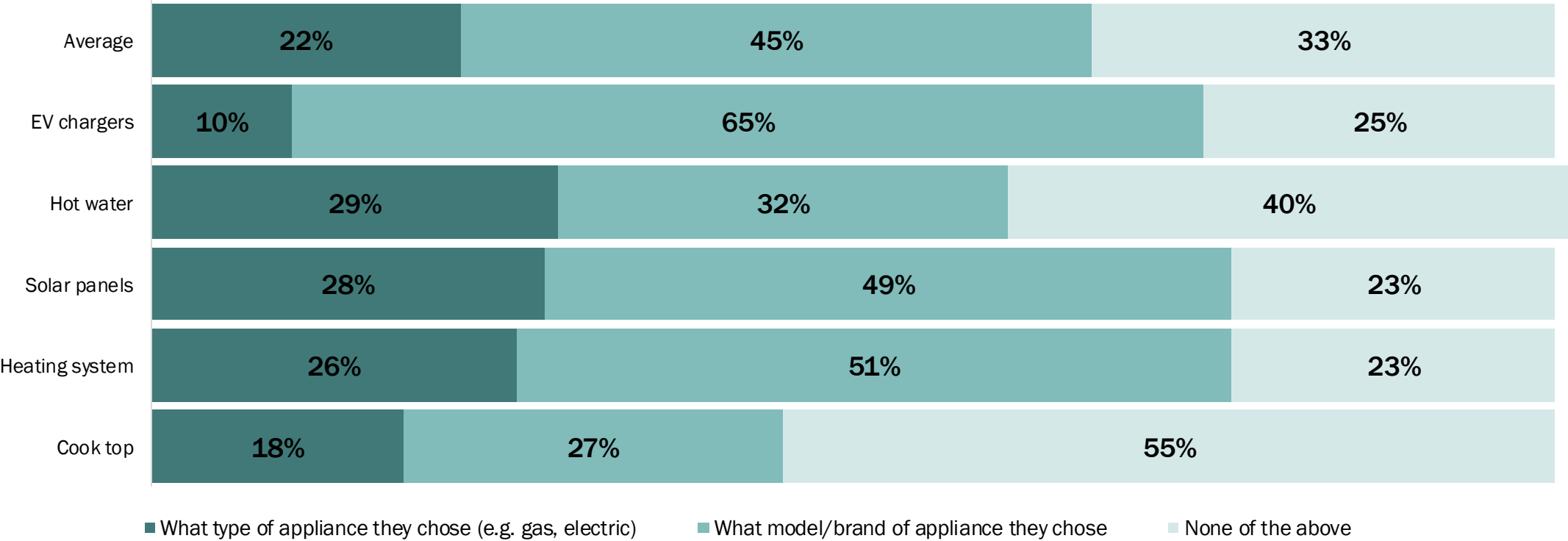
Jobs would often work out better if I was involved earlier in planning and decisions with the customer



Plumbers and Electricians tend to have more influence on the brand and model of appliance than its type

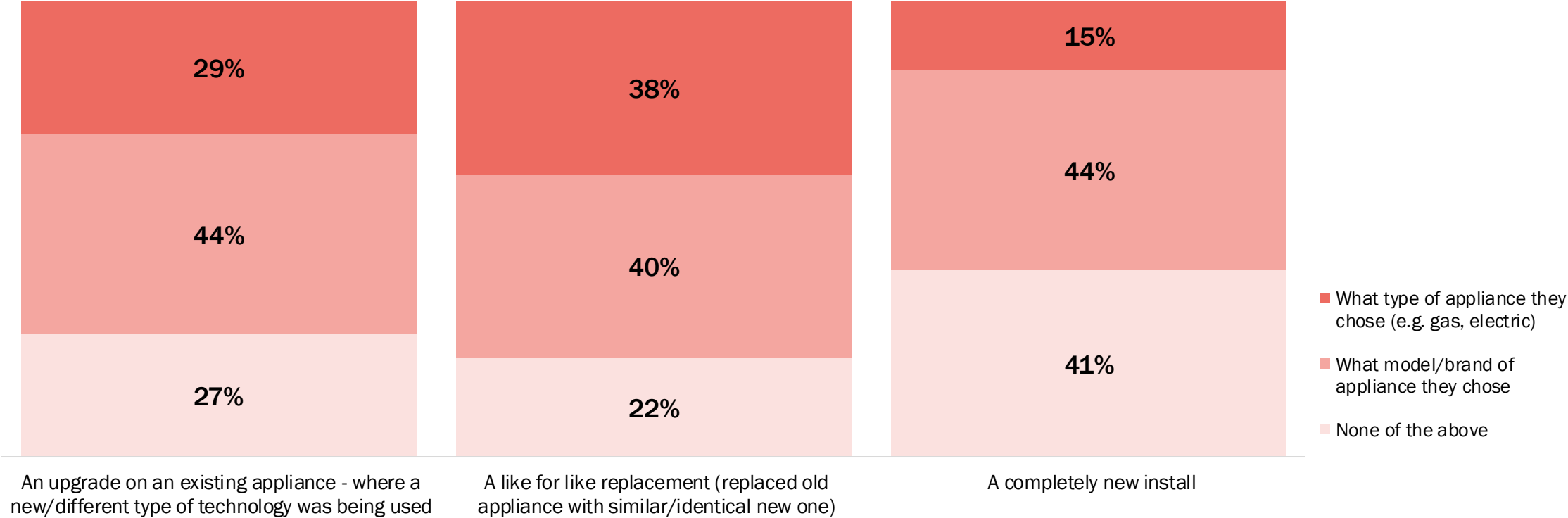
Opportunity to influence is currently strongest when it comes to solar and heating systems, and weakest when it comes to cook tops.

Plumbers' and electricians' involvement in decision making on most recent residential job, by appliance type



Plumbers and Electricians have greater influence on upgrades and like-for-like replacements than completely new installations

Plumber and Electrician influence across project types: average across appliance types.



But making recommendations can have risks associated with it

Around 1 in 10 (11%) of plumbers and electricians would rather not offer advice to customers on which type of appliance to get. This often centres around perceived risks of making recommendations.

Reasons plumbers and electricians would rather not give advice on appliance selection

“[If] they don’t like it, or it fails, this can hurt my reputation, and I get the blame for suggesting a recommendation.”

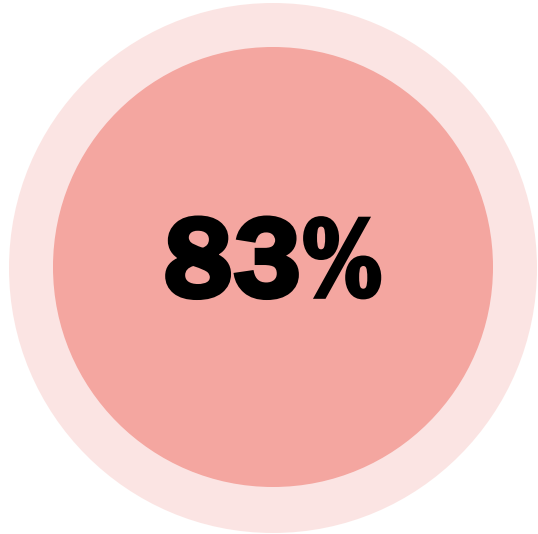
“If my advice is not what the customer wants they go somewhere else mostly.”

“Sometimes I have gotten it wrong in the past and I don’t want to be liable if the customer doesn’t like my recommendation.”

Q. You mentioned you’d rather not give advice to customers regarding which type of appliance to get, why is this?

Base: Those that rather not give advice n=35

And plumbers and electricians often stick to brands and appliances they're familiar with



... agree 'If I offer customers advice on appliances, I tend to go to appliances I have most experience with'

Does your business favour one brand / supplier over another for certain appliances when making recommendations to customers? By trade

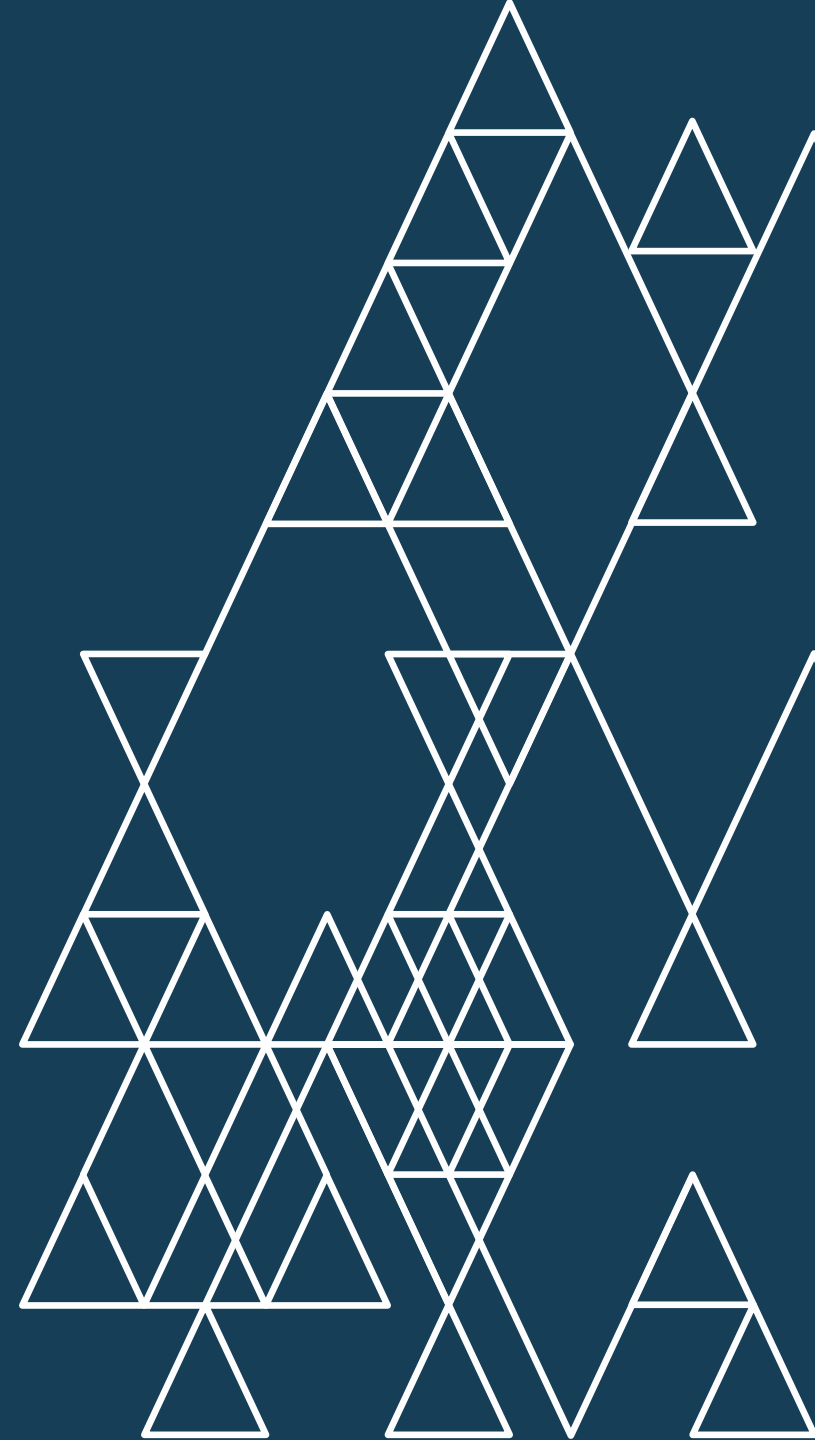
	NET	Electrician	Plumber	Gasfitter
Yes, almost all the time	17%	13%	21%	27% ▲
Yes, most of the time	43%	43%	44%	38%
Yes, some of the time	23%	24%	22%	19%
No	16%	18%	12%	16%
Don't know	1%	1%	1%	0%

▲▼ Significantly different to other groups

Q. Does your business favour one brand / supplier over another for certain appliances when making recommendations to customers? How strongly do you agree or disagree with the following statements?
 Base: Total sample n=322, Electricians n=173, Plumbers n=156, Gasfitter n=74



Enabling and upskilling



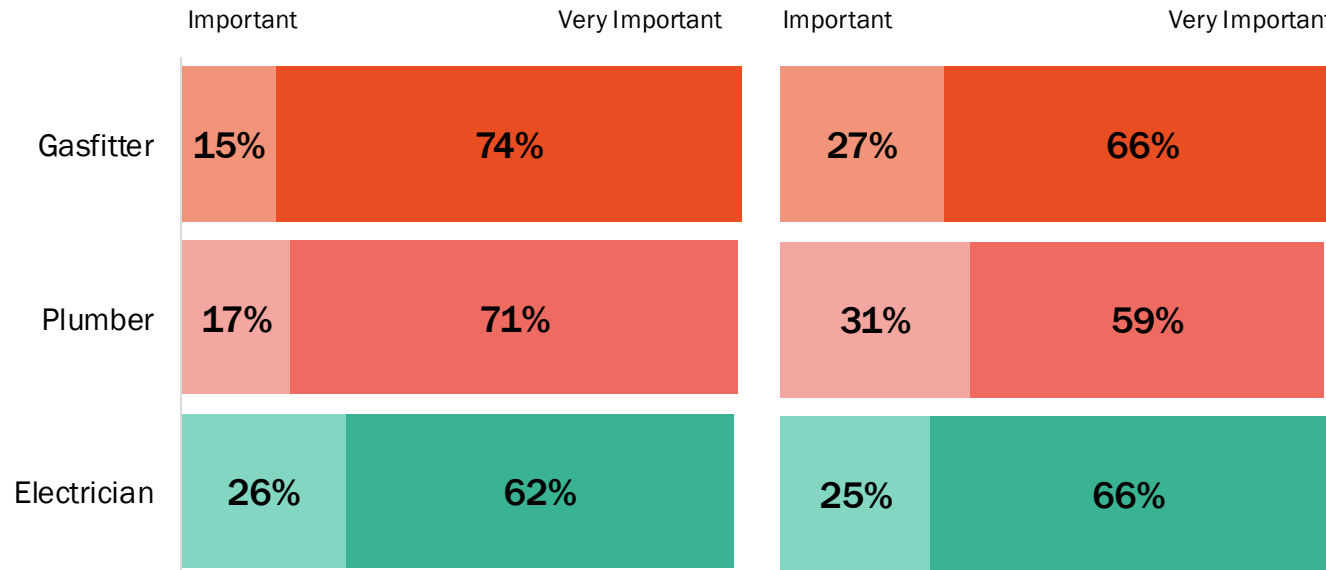
Plumbers and electricians place high importance on professional development and keeping up with technological advances

Upskilling remains important across all levels of seniority, with no significant difference between juniors, seniors and masters.

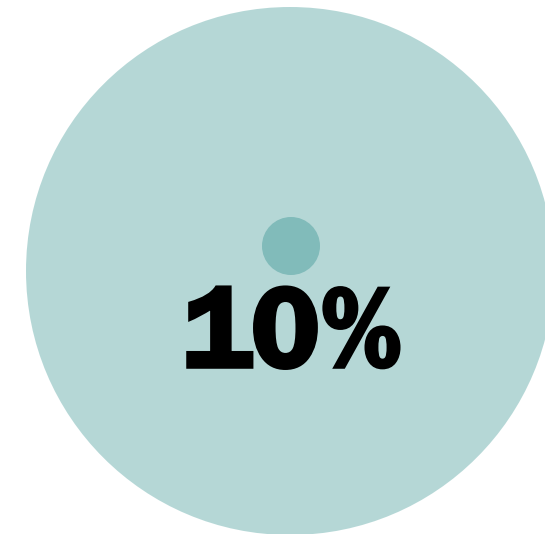
Importance of development and keeping up with technology

Keeping up with the latest technology in your trade

Developing in your role and learning new skills



There's no point in doing more training, I can get by with the skills I already have



And upskilling has an obvious financial gain, with wider skills meaning greater 'share of the job'

Training agreement statements

Training helps me to increase my 'share of the job' because I can expand my skillset and install more things

Plumbers and electricians total

Electrician

Plumber

Gasfitter

89%

88%

90%

95%

Evidence of appliance return on investment is a key enabler for plumbers and electricians to confidently make recommendations

A key difference between electricians and plumbers emerged here, with plumbers and gasfitters placing more emphasis on appliance-specific training.

Rated as 'very helpful' for assisting in confidently recommending energy-efficient appliances / systems

	Electrician	Plumber	Gasfitter
Evidence of average cost savings over time / running-cost efficiencies	58%	58%	58%
Evidence of expected 'lifespan' of an appliance / system	53%	62%	65%
Training courses specific to a particular appliance	44%▼	56%▲	61%▲
Retailer discounts or subsidies	43%	49%	47%
Evidence of the trade-offs between one appliance type and another	43%	45%	47%
Insight into consumer demands and trends	38%	36%	31%



At an appliance level, electricians are most familiar with induction cook tops, and least familiar with Home Energy Management Systems

Propensity to recommend is fairly evenly balanced across key appliances, with the exception of HEMS which only a minority would recommend. Appetite for training is highest for solar.

Key 'funnel' metrics by appliance

	EV Chargers	Induction cook top	Solar panels	Hot water heat pumps*	HEMS
Before taking part in this survey today, which of the following appliance types were you aware of	84%	88%	84%	84%	53%
Do you have any experience installing the following appliances	62%	77%	52%	62%	31%
Do you feel confident installing the following appliances	59%	76%	41%	55%	28%
Which, if any, of the following appliances would you be willing to do additional training with to build your skills	50%	23%	55%	35%	40%
Which of the following appliances would you actively recommend to a client	54%	52%	47%	51%	28%

Highest result of appliances

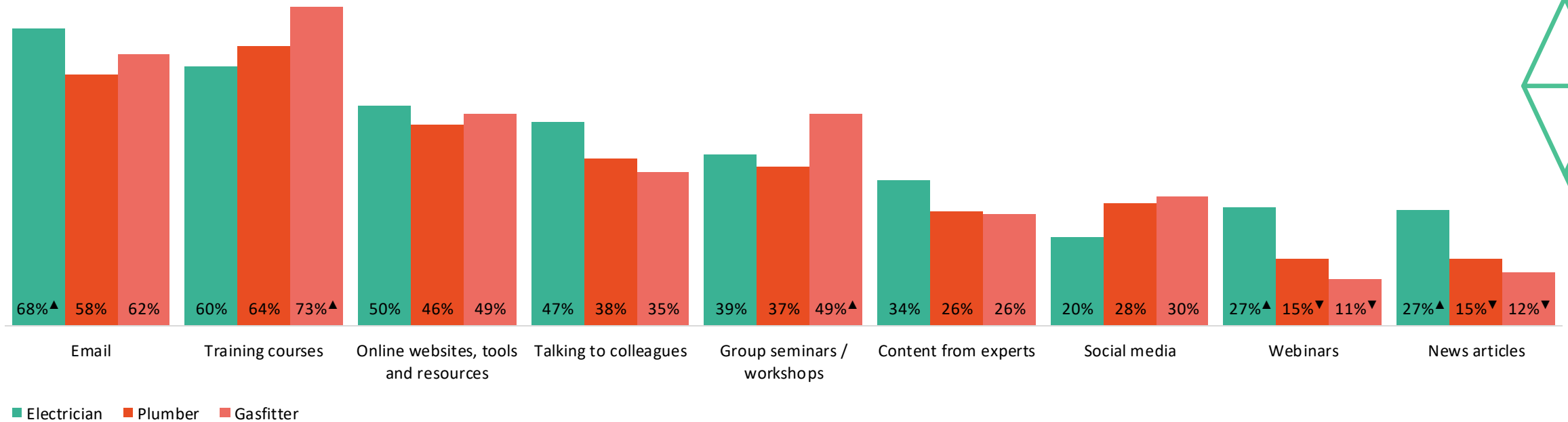
Lowest result of appliances



There's demand for both 'passive' and 'active' information, with emails and training courses topping the list for information preference

There are some variations in preference by trade: Electricians were significantly more likely than plumbers to show preference for email (68%), news articles and webinars (both 27%). Meanwhile plumbers had fairly low appetite for webinars and news articles (both (15%). Gasfitters have strong appetite for training courses (73%) and group seminars / workshops (49%), and, as with plumbers more broadly, lower than average interest in webinars (11%) and news articles (12%).

Preferred way to receive information relevant to trades: top 9 sources



Master Electricians / Master Plumbers are one of the leading sources of information for both their respective trades. But commercial organisations still have a strong influence

This likely reinforces the brand loyalty covered earlier, where 83% of plumbers and electricians tend to stick to brands they're familiar with.

Information sources plumbers and electricians are using to stay up to date with the latest technology

	Total	Electrician	Plumber	Gasfitter
Trade events	59%	54%	63%	73%▲
Manufacturer-specific training / training delivered from manufacturer brand	48%	48%	46%	59%▲
WorkSafe resources	43%	54%▲	31%▼	34%
Master Electricians publications / resources	40%	69%▲	7%▼	8%▼
Community engagement - e.g. plumbers and electrician's Facebook groups	33%	30%	35%	36%
Master Plumbers publications / resources	33%	9%▼	60%▲	70%▲
Online training / learning platforms like TradeSkills	28%	27%	30%	34%
The Skills Organisation	27%	28%	24%	22%
ETCO courses	25%	41%▲	6%▼	5%▼
Te Pūkenga courses	21%	18%	24%	28%
Competenz	11%	15%▲	7%▼	9%
Other sources / resources not mentioned above – please tell us what	7%	9%	5%	7%
None – I don't use anything	4%	4%	4%	1%



Awareness of EECA is lower than other peak bodies, so collaboration and partnerships will be strategically important for information dissemination

Organisational awareness

	Electrician	Plumber	Gasfitter
EECA (the Energy Efficiency and Conservation Authority)	59%▲	36%▼	46%
The Skills Organisation	58%	54%	69%▲
Master Electricians	88%▲	29%▼	34%▼
Master Plumbers	36%▼	81%▲	91%▲
Competenz	40%▲	22%▼	30%
WorkSafe	78%▲	63%▼	73%
Te Pūkenga	42%	47%	55%▲
None of the above	2%	4%	1%

We also need to think about the workforce and upskilling them to embrace these things, adopt it and be able to drive it... We should be leading the way around this stuff. We should be the credible, trusted advisor.

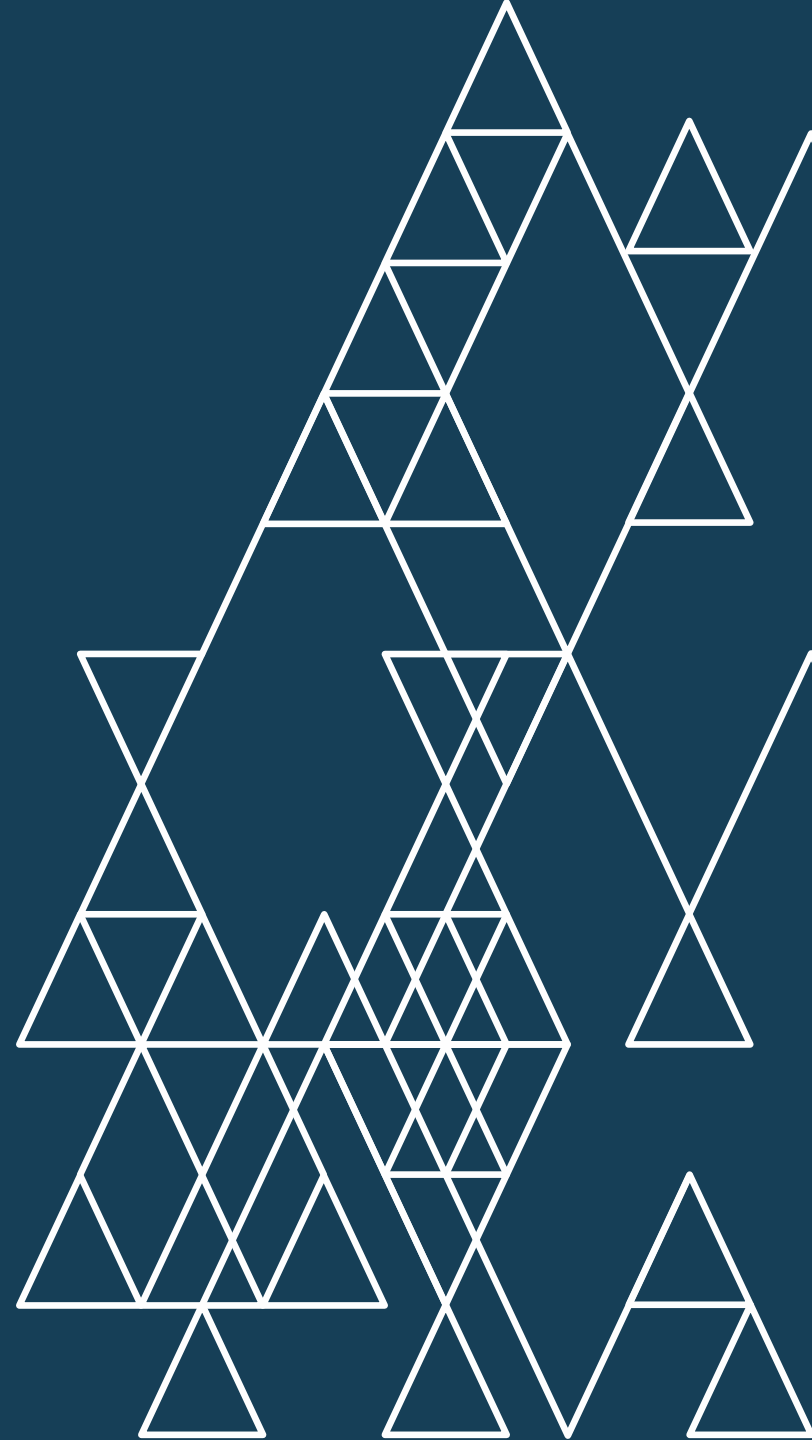
Industry body, qualitative phase.



EECA

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Bringing it all together



Summarising the opportunity

The need for ongoing upskilling and being customer-centric is strongly recognised

Plumbers and electricians are used to navigating change in their industry and are increasingly required to diversify skills to meet consumer demand.

This presents a sector challenge, with a need for a wider range of skills and growing need for information to help keep up.

And there's strong recognition of how important the end customer's needs are to be competitive: this is at the heart of business decision making.

There's strong appetite to influence consumer choice, but this is currently limited by experience and lack of evidence of impact

Electricians and plumbers are used to advising customers and see advantages in increasing their influence by becoming involved earlier in the consumer journey.

But scope to make recommendations with confidence is often limited by past experience – where they are most comfortable and where technology is tried and tested.

Through partnerships, organisations like EECA can play an important role in providing impartial evidence

With more compelling evidence, and a drive to disseminate more information, more widely, electricians and plumbers will have more confidence to help consumers invest in the most energy efficient choices.

EECA

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Thank you

