

# FOOD SAFETY CULTURE IN NEW ZEALAND FOOD BUSINESSES

RESEARCH WITH FOOD BUSINESS  
DECISION-MAKERS AND STAFF

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Ministry for Primary Industries.*

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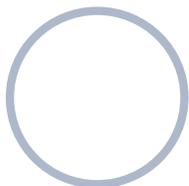
# Summary



# Overview of method and the key dimensions of food safety culture

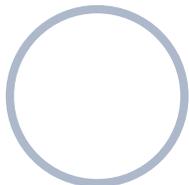
This project draws upon three sources of evidence to generate findings about six dimensions of food safety culture.

## METHOD



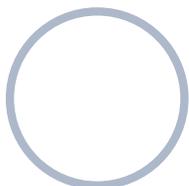
### A telephone survey with 900 business decision-makers

Purpose: To measure the current state of food safety culture in New Zealand businesses. Responses are from the perspective of informed research participants – either the *owner* (for small and medium businesses) or a *senior manager responsible for food safety* (in large businesses).



### A short online survey with 193 food safety staff

Purpose: To obtain an indicative viewpoint from staff about food safety culture. This survey allows us to detect differences (if any) between business decision-makers and staff.



### 20 in-depth qualitative interviews with business decision-makers

Purpose: To provide additional insights about what lies behind the survey answers, including the practical motivations and barriers which enable or disable the development of a good food safety culture and the language/tone used in business communications.



### The research provides a mixture of quantitative and qualitative information about six dimensions of food safety culture, but limitations of the method should be noted:

- All questions (including questions about behaviour) are self-reported
- The sample size from the staff survey is relatively small
- There is no agreed measure that records what 'good food safety culture' looks like across different types of business

## DIMENSIONS OF FOOD SAFETY CULTURE



# LEADERSHIP (creating a food safety vision, policies, setting expectations, inspiring others)



- **Businesses tend to have most of the basic features of good food safety procedures and policy, although two-fifths do not have food safety goals/KPIs** (small retailers are less likely to have food safety goals/KPIs).
- **Large businesses tend to have a formalised approach to food safety.** In particular, medium to large retailers/wholesalers and manufacturers are more likely to say they have food safety goals, and that they regularly report food safety performance data to a Leadership Team or an auditor.
- Larger businesses interviewed in the qualitative research identified a number of audit regimes and customer requirements which drive their food safety practices. Whereas, smaller businesses say they rely on more informal approaches to managing food safety – such as internal training and talking to their staff as they work alongside them.

## The three most commonly mentioned influences on food safety commitment described in the survey are:



Keeping customers safe



Being known for delivering a high quality product and



Staying in business and keeping people in employment.

[The influence of laws and regulations are relatively minor in comparison. Please note that these are spontaneous answers to an open-ended question in the survey].

- Brand reputation, satisfied customers, protecting market share, and minimising risk arose as strong motivational themes during qualitative interviews with medium and large businesses. Small businesses express similar motivations but often articulate these in terms of their own personal reputation among friends, family, and communities.
- A focus on food safety comes under pressure in a competitive environment with demanding production targets and stretched resources. Most decision-makers (9 in 10) say that food safety is emphasised even when there is pressure to meet production targets, but staff are less inclined to agree (around 8 in 10). This suggests that although production targets do not normally impact food safety, there will be occasions when they do. Businesses shared relevant examples when interviewed, such as times when staff skip cleaning, checking or recording when they are under pressure.

# MANAGEMENT COMMITMENT (managers 'walk the talk'):



Almost all businesses (9 in 10) are positive about their manager's commitment to food safety (for example, 96% agree that their managers 'walk the talk'), although there is some room to improve the clarity of feedback given to frontline staff about their food safety performance (with around 3 in 10 businesses not strongly agreeing that their managers provide clear feedback).



Frontline staff are generally positive about the commitment of managers in their business, but are significantly less positive than business decision-makers/owners. In particular frontline staff are less likely to agree that 'managers walk the talk', 'managers follow all the rules even when no one is looking', 'managers are held to account', and 'managers give clear feedback' (around 7 in 10 staff agree with these statements, compared with 9 in 10 decision-makers/owners). Qualitative interviews suggest that the expected food safety roles and responsibilities of staff are not always made clear by managers.



# ACCOUNTABILITY (everyone understands the food safety performance expectations of their job and are accountable for them at all levels)



Most businesses consider food safety performance to be a core part of employee performance (for staff handling food). For example, almost 9 in 10 businesses with staff performance review regimes discuss food safety during staff reviews.

Over 9 in 10 businesses say that there is 'a clear allocation of roles and responsibilities for food safety in their business'. However, staff are less inclined to agree (8 in 10 agree).

The research suggests that there is a slightly negative tone in how accountability is managed in practice. **Almost half of decision-makers and half of staff say that the first reaction to a food safety problem is to blame an individual.**

**Reward schemes which encourage good food safety behaviour are relatively rare** - only 13% of medium to large businesses have reward schemes (which increases to 23% of businesses with 100 or more staff). (Note that small businesses with 9 or less staff were not asked this question).

# SHARING BEST PRACTICE (not just training but focussing on the gap between knowledge and its application in the workplace)



- Most businesses (around 8 in 10) are positive about food safety communication with frontline staff. However, agreement is lower – around 7 in 10 – for the statement ‘food safety is regularly discussed at staff meetings’.
- Staff are also generally positive about communication, but are less positive than business decision-makers. In particular, there is a gap between management and staff about ‘food safety being emphasised even when we are under pressure to meet production targets’ and ‘food safety information being regularly communicated to staff’. Around 2 in 10 staff do not agree that food safety information is regularly communicated to them.
- An essential part of sharing best-practice is investing in staff training. **Over 7 in 10 businesses have sent staff on food safety training in the past two years (internal training is more common than external training).** It is **mainly frontline staff and supervisors that receive training.** Only 4 in 10 businesses providing training to their staff included directors.
- The qualitative interviews reveal that **businesses do not always perceive a need to train directors,** they consider training to only be relevant for frontline staff who are closely involved in operational parts of the business.
- **Most businesses (8 in 10) think that internal training is practical,** for example, demonstrating real-life tasks in their work environment. However, **fewer are positive about external training being practical (around 6 in 10 agree that it is).**



# FOLLOWING BEST PRACTICE (how the practices are linked together and how they influence behaviour)



- Despite most businesses saying there is frequent communication and widespread training, not all businesses agree that their staff 'follow the food safety rules' in practice. In fact, **over a third admit that they have some staff who do not follow the rules and procedures** (more common among larger businesses who, during the qualitative interviews, expressed concerns about temporary and part-time staff not following the rules).
- Sixteen percent of businesses say they have experienced a serious food safety incident in the past two years (either a serious complaint, unacceptable audit outcome, or product recall). This was more common among medium to large retailers/wholesalers (59%), medium to large manufacturers (29%), businesses with a turnover of over \$1.5m (24%), and importers (27%). The research suggests that **a serious food safety incident acts as a trigger to sharpen focus upon best practice**. Businesses experiencing a serious food safety incident are significantly more likely to invest in external training for staff – 64% have sent staff on external training vs. 43% of businesses not experiencing an incident. In addition, around 9 in 10 of these businesses say that they fully investigated the incident and made changes as a result, as well as sharing the lessons with staff. However, it should be noted that this point-in-time survey can only determine a link between a serious food safety incident and a focus on best-practice, not causation (to do so would require a longitudinal survey tracking changes over times).
- **Most businesses (around 8 in 10) have a positive relationship with their verifiers/auditors and ask them for advice, tips and best-practice. Businesses that have experienced a serious food safety incident in the past two years are particularly likely to do this (9 in 10).**
- **Almost 3 in 10 businesses admit that staff behaviour changes when the verifier/auditor visits.** The qualitative interviews suggest that this type of business only experiences a temporary change in food safety behaviour during the audit and that things return to normal after the audit.



# CONFIDENCE IN FOOD SAFETY COMMITMENT (confidence that the organisation values food safety)



Almost all (96%) businesses are confident that there is ‘a strong commitment to food safety throughout their business’. However, large businesses are less likely to be very confident (57% of businesses with 50+ are ‘very confident’ – compared with 72% of all businesses). 9 in 10 staff are confident (although supervisors are less likely than other staff to be ‘very confident’).



Analysis reveals that **trust in staff is the main statistical influence on level of confidence**. In particular, agreement that ‘staff will follow all the food safety rules even if no-one is watching’ has the greatest influence on overall confidence. If this statement is rated positively then overall confidence will be strong and vice-versa. Other variables such as sharing responsibility and ‘staff being clear about the impact of their actions’ are also relatively important drivers of confidence (business demographics are not strongly associated with confidence).



# SUMMARY OF TEN BEHAVIOURAL PROXIES INDICATIVE OF FOOD SAFETY CULTURE



# Research Question 1. How do food businesses approach food safety?

- **Large businesses** are subject to a wide range of stringent rules which are largely driven by the market. **Small businesses** rely on more informal approaches such as internal training and close interaction with staff.
- Both types of **business** are motivated by the need ‘to stay in business’ – which includes **delivering a reputable product, protecting their brand, and satisfying customers**. This is a more important motivator than compliance.
- Most businesses say that food safety is regularly discussed at staff meetings – but **there is room to improve the frequency of food safety discussions in meetings**, because a quarter of staff disagree and staff are less likely than business decision-makers to agree that food safety information is regularly communicated to staff.
- Most business owners, managers, and staff agree that food safety is a shared responsibility.
- Most businesses invest in induction and training for staff (although efforts are largely targeted at frontline staff and their immediate supervisors).
- Most decision-makers (9 in 10) say that food safety is emphasised even when there is pressure to meet production targets, but staff are less inclined to agree (around 8 in 10). This suggests that **production targets can sometimes impact food safety behaviour**.
- **There is sizeable gap between owners/decision-makers and staff when it comes to agreement with various statements about line-managers**. For example, almost all decision-makers agree with the statement ‘managers walk the talk’, compared with three-quarters of staff. Almost 9 in 10 decision-makers agree that managers give clear feedback about food safety performance – compared with 7 in 10 staff.



## Research Question 2. Is food safety culture different in different sectors/segments of the food industry?

- Survey responses varied most by size of business (measured in terms of number of staff) and whether or not the business operated across more than one site. Other business demographics such as industry, turnover, and location had relatively less influence.
- Larger businesses are more likely to have formal food safety approaches such as performance recording, food safety goals, staff performance reviews, and external training. They are also more likely than smaller businesses to have good working relationships with verifiers and auditors.
- Despite the efforts of larger businesses to adopt good practice, this does not appear to make them more confident in their staff. Larger businesses are less likely to say that their frontline staff frequently discuss food safety and they are less certain that 'staff follow the rules even when nobody is watching' (only 21% of businesses with 100 or more staff 'strongly agree' with this statement – compared with 56% of all businesses).
- Overall confidence that 'there is a strong commitment to food safety throughout their business' is highest amongst small businesses - 75% of businesses with 1-9 staff are confident, compared with 66% of businesses with 10-49 staff, and 57% of businesses with 50+ staff.
- Multi-site businesses are slightly more likely than single-site businesses to have concerns around the connection between management and staff. Multi-site businesses are less likely to agree that 'staff receive clear feedback about food safety performance from managers'. They are also less likely to say that staff are encouraged to offer suggestions which will improve food safety performance. (Around 8 in 10 multi-site businesses are positive about these measures compared with 9 in 10 single-site businesses).
- The qualitative research suggests that large businesses employ more workers that are deemed to be 'high risk' (such as casual or temporary staff) – and the relationships between management and staff can be more distant in a large business. Whereas within small businesses owners often work alongside their staff and have built up trusted-relationships with them over time. This helps explain why large businesses are less likely than small businesses to trust their staff.



# Research Question 3. Is there a link/correlation between food safety culture and compliance?

- We only have limited evidence in this survey (mainly because we did not have formal compliance data for the majority of respondents).
- However, the research suggests that there is **not a clear correlation between compliance and food safety culture** (albeit we have measured 'compliance' using a self-reported measure of 'food safety incidents' which may not reflect compliance with a particular regulatory regime). Businesses that self-report serious food safety incidents (such as an unacceptable audit outcome or a major food safety complaint) are no more, or less, likely to believe their organisation is fully committed to food safety.
- We think that background factors will influence correlations. Large businesses, particularly if they are manufacturers, are likely to be high volume producers and are more likely than low volume producers to experience one of the food safety incidents described in the survey. This type of business may also be sufficiently resourced to be able to identify, and resolve, food safety issues – including making further investments in staff training. This situation makes correlations less clear-cut because it results in a business which scores well on food safety culture (because it is investing in solutions) but also scores poorly on experiencing serious food safety incidents (which is our proxy for 'compliance').
- Ongoing compliance data for a large number of businesses is required in order to fully answer this research question.



# Background, research objectives and methodology



# Background and research objectives

The Ministry for Primary Industries ('MPI'), on behalf of the Food Safety Assurance and Advisory Council (FSAAC), commissioned research to gather robust data to support the Food Safety Culture debate and track Food Safety Culture in New Zealand food businesses against a baseline over time. FSAAC had commissioned this piece of research to

- a. Understand how the level of food safety culture can be improved in New Zealand
- b. Get data to support the food safety culture debate
- c. Be able to track food safety culture over time.

The research findings of these initial surveys and interviews outlined in this report provide broad picture insights about perceptions of food safety in the New Zealand food industry. The report explores areas such as leadership, management commitment and accountability. The findings could inform the development of programme of work to improve food safety culture and will be fed into relevant work streams at MPI. Moving beyond anecdotal evidence, the data gathered provide a sound basis to engage in an informed discussion with stakeholders and can be used as a baseline to assess how the New Zealand food safety culture develops over time. Repeat surveys will add richness and could focus on particular areas of interest.

MPI had three specific *research questions* for the baseline research:

- **Research Question 1. How do food businesses approach food safety?** (*This is answered throughout the whole research report*).
- **Research Question 2. Is food safety culture different in different sectors/segments of the food industry?** (*All charts describe statistically significant differences by type of business – if any are present. But some slides explore findings by type of business in more detail, including slides 27, 28, 84 and 103*)
- **Research Question 3. Is there a link/correlation between food safety culture and compliance?** (*This is answered on slides 104-107*)

# The research explored a number of dimensions associated with food safety

The question topics were influenced by descriptions of food safety culture by Frank Yiannas and by the Food Safety Standards Australia New Zealand (FSANZ).

We also drew upon academic studies which investigate food safety climate and food safety maturity models. Academics in this area include Lone Jespersen F. Abidin and Brita Ball\*.

The framework used to shape the research questions is illustrated to the right.

The report is structured so that it explores research findings for each of the dimensions of food safety culture.

.....

\* Relevant references:

- Food Safety Standards Australia New Zealand (FSANZ) Annual Report 2015/16  
[http://www.foodstandards.gov.au/publications/annualreport201516/Documents/AnnualReport201516\\_FullVersion.pdf](http://www.foodstandards.gov.au/publications/annualreport201516/Documents/AnnualReport201516_FullVersion.pdf)
- Frank Yiannas, *Food Safety Culture: Creating a Behaviour-Based Food Safety Management System* (2008)
- Lone Jespersen *Food Safety Culture: Measure What You Treasure* (2015):  
[https://foodsafetytech.com/feature\\_article/food-safety-culture-measure-what-you-treasure/](https://foodsafetytech.com/feature_article/food-safety-culture-measure-what-you-treasure/)
- F. Abidin *Measuring food safety culture: Insights from onsite foodservice operation* (2013):  
<http://lib.dr.iastate.edu/cgi/viewcontent.cgi?article=4152&context=etd>
- Brita Ball, Anne Wilcock, and Scott Colwell – *Tool for Measuring Food Safety Climate, University of Guelph* (2011).



# Methodology: overview of the three sources of evidence used in the research



## **A telephone survey with 900 business decision-makers**

Purpose: to measure the current state of food safety culture in New Zealand businesses. Responses are from the perspective of informed research participants – either *the owner* (in a small or medium business) or *a senior manager responsible for food safety* (in large businesses).



## **A short online survey with 193 food safety staff**

Purpose: to obtain an indicative viewpoint from staff about food safety culture. This survey allows us to detect differences (if any) between business decision-makers and staff.



## **20 in-depth qualitative interviews with business decision-makers**

Purpose: to provide additional insights about what lies behind the survey answers, including the practical motivations and barriers which enable or disable the development of a good food safety culture and the language/tone used in business communications.

# Methodology: survey of decision-makers

- Most findings in this report are based upon a telephone survey of business decision-makers in the food sector. In small and medium businesses, interviews are with the ‘owner’ whereas in large businesses interviews are with ‘a manager or director with responsibility for food safety’. Please note that self-employed or sole traders are not included in the sample - so the survey only includes responses from *employers*.
- The MPI Research and Evaluation team and FSAAC provided input at the questionnaire design stage.
- The questionnaire was tested and refined by Colmar Brunton.
- This report is based on **900 telephone survey interviews**.
- Fieldwork was conducted between 22 June and 15 August.
- The average questionnaire length was 22 minutes.
- The final overall response rate was 57% - which is higher than normal for business surveys which might be due to issuing pre-notification letters, the relevant nature of the topic matter to respondents, correctly identifying non-food businesses in the sample, and multiple call-backs from Colmar Brunton’s fieldwork team.
- The survey included businesses from the following sectors: horticulture (referred to as ‘growers’ in this report), food manufacturers/processors, food retail/wholesale, and hospitality (cafes, restaurants, caterers, pubs/clubs, and takeaways).
- Please note that MPI and Colmar Brunton made a decision to not include livestock farmers in the sample – so ‘growers’ refers to horticultural growers only.
- The sample was mainly drawn from two commercially available databases: Inivio and Martins – the survey was supplemented with a small number of dairy and meat businesses provided by MPI.
- The findings have been weighted by size and sector so they are broadly representative of all *food businesses in New Zealand* (excluding zero-employee businesses). Slide 109 in the Appendix contains a profile of respondents.
- Please note that we attempted additional analysis of survey respondents by attempting to allocate each survey respondent to a ‘risk category’ based upon MPI’s Food Act 2014 transition timetable (<https://www.mpi.govt.nz/food-safety/food-act-2014/transition-timetable/>) which categorises businesses into one of three National Programmes or a Food Control Plan depending on the food safety risks associated with their activities. However, given that the categories used to record ‘food activity’ in the survey questionnaire do not always align well with the Food Act categories, we were unable to match a sufficiently large number of respondents to MPI’s risk categories.

## Methodology: survey of staff

- Upon completion of the survey, we asked respondents in businesses with 10 or more staff whether they would be willing to forward invitations to a short online survey targeting staff (this was a low-cost approach and only obtains 'indicative' information from a limited sample of staff).
- The staff survey was sent to 520 business decision-makers by email. **193** staff completed the online survey (a further 90 attempted to complete it but were ruled out because they were too senior – for example, on the Senior Management Team of a business).
- Of the 193 respondents, 88 were frontline staff and 105 were supervisors.
- It should be noted that most staff work in large businesses (slide 110 contains information about the profile of staff responding to the survey). This should be taken into account when reading the report.
- Because of the relatively small sample size it was felt to be inappropriate to apply industry or size weighting to the staff survey data. Because of this, and because of the small sample size, results from the staff survey should be treated with caution.

# Methodology: qualitative interviews

- In order to provide additional insights into the survey results, **20** qualitative telephone interviews were undertaken.
  - The sample was split between 10 businesses that appeared to have a strong food safety culture (based on survey answers) and 10 businesses that appeared to have a weak food safety culture. In reality we found that there were not clear distinctions between good and bad culture among each group of businesses – instead there is a continuum from businesses that are more deliberate in their approach compared with other businesses that are more informal in their approach.
  - All participants were ‘the person in their organisation responsible for food safety’, with the exception of two interviews undertaken with frontline staff (verbatim quotes from decision-makers and from staff are included in this report).
- The qualitative sample included a spread of businesses by:
  - Number of employees:
    - six businesses with 1-9 staff
    - six businesses with 10-49 staff
    - eight businesses with 50+ staff
  - Industry:
    - 7 food or beverage manufacturers or processors
    - 4 cafes and 1 pub
    - 4 supermarkets
    - 1 grocery retailer
    - 2 food wholesalers
    - 1 horticulture business
  - Geographical location (spread throughout New Zealand).
- Interviews were 45 minutes in duration, and completed between the 8<sup>th</sup> and 23<sup>rd</sup> of August 2017.

# Reading this report

- There are three sources of evidence used in this report: the telephone survey (of business decision-makers), the online staff survey, and the qualitative interviews. The source of evidence is referenced at the bottom of each slide. The main source of evidence used in most of the charts is the telephone survey, in some places the telephone survey findings are compared alongside the findings from the short staff survey which asked similar questions. Qualitative interview slides are generally presented separately from survey findings.
- It should be noted that the answers were most positive for the telephone survey of business decision-makers – this survey may be subject to a degree of social desirability (where respondents over-report positive behaviours to interviewers). This should be taken into account when reading the results.
- All subgroup differences in this report are statistically significant at the 95% confidence level. If survey results are not broken down by subgroup this is because no significant differences were detected.
- Results in the charts do not show decimal places (e.g. 6.4% is rounded to 6%). This may mean that the sum of two reported findings is different than expected. For example 6.4% plus 6.4% is rounded to 13% - but the reader may expect it to round to 12% (because the decimal places are not displayed in the report).
- When describing survey findings we often describe a type of business by their broad industry grouping and size – using one of eight categories. The following table describes the labels we use and how those businesses are defined from the survey data. For example, a *medium to large retailer/wholesaler* is a business who says their main source of income is from one of the retail/wholesale categories and has 10 or more employees – we did not separately analyse ‘large businesses by sector’ (such as 50+ staff within retail) because the sample sizes would become too small for effective analysis – although the report does contain some subgroup analysis by size-band alone (for example, separating out businesses with 100+ staff). Please note that we include ‘cafes’ in our definition of ‘hospitality’.
- The small sample size for the staff survey means that we cannot conduct subgroup analysis by business demographics, such as size and sector of business. It should be noted that most staff work in large businesses (see Slide 110) – this should be taken into account when reading the report.

Analysis group	Draws most of its income from one of the following industries	Has this number of employees
Small growers/horticulture (n=29)	Mushroom or vegetable horticulture/growing, fruit or tree nut horticulture/growing, grain or other food horticulture/growing	Less than 10
Medium to large growers/horticulture (n=39)	Mushroom or vegetable horticulture/growing, fruit or tree nut horticulture/growing, grain or other food horticulture/growing	10 or more
Small manufacturers (n=119)	Manufacturing or processing of fish or seafood, dairy, poultry eggs/meat, meat or meat products, fruit or vegetables, beekeeping or honey, grains or cereals, beverages or wine, bakery products, or sugar or confectionary	Less than 10
Medium to large manufacturers (n=215)	Manufacturing or processing of fish or seafood, dairy, poultry eggs/meat, meat or meat products, fruit or vegetables, beekeeping or honey, grains or cereals, beverages or wine, bakery products, or sugar or confectionary	10 or more
Small retail/wholesale (n=87)	Supermarket or grocery, butcher or specialised food retail, or food or beverage wholesaling or distribution	Less than 10
Medium to large retail/wholesale (n=97)	Supermarket or grocery, butcher or specialised food retail, or food or beverage wholesaling or distribution	10 or more
Small hospitality (n=191)	Cafes, restaurants, takeaway food services, pubs, taverns, bars or clubs (serving food)	Less than 10
Medium to large hospitality (n=123)	Cafes, restaurants, takeaway food services, pubs, taverns, bars or clubs (serving food)	10 or more

# Leadership



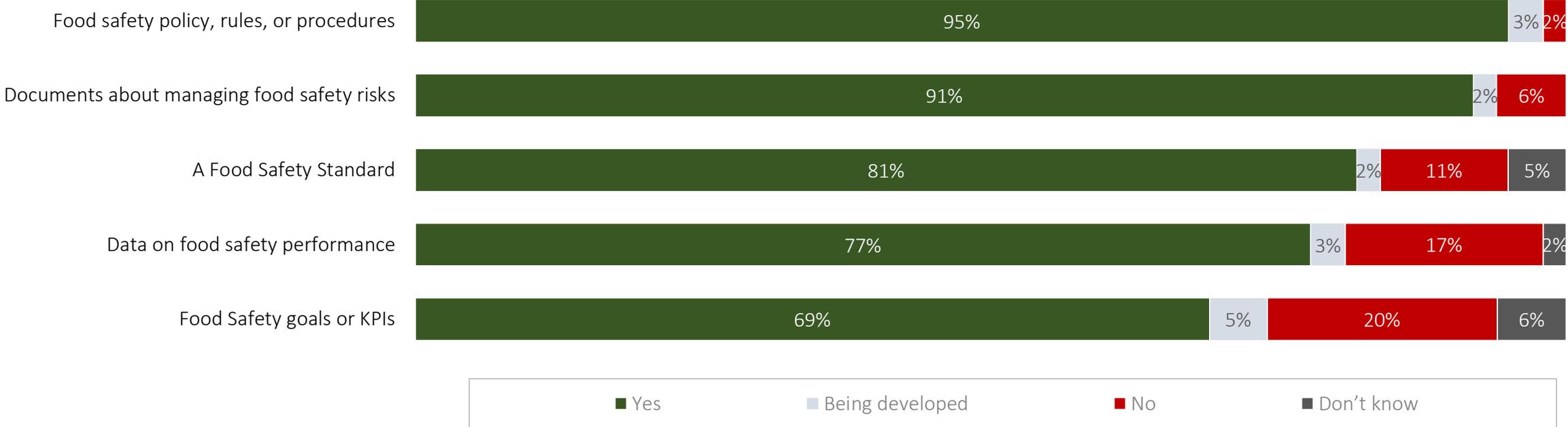
# Goals and formalised approaches to food safety



Food safety leadership involves a range of behaviours from owners and senior management. At a minimum we would expect businesses demonstrating food safety leadership to have a food safety policy, measure food safety performance, and have food safety goals. Businesses tend to have most of these core features, although two-fifths do not have food safety goals/KPIs.



*Formalised approaches to food safety*



Medium to large manufacturers are more likely to say that they have these formalised approaches to food safety (see next two slides).

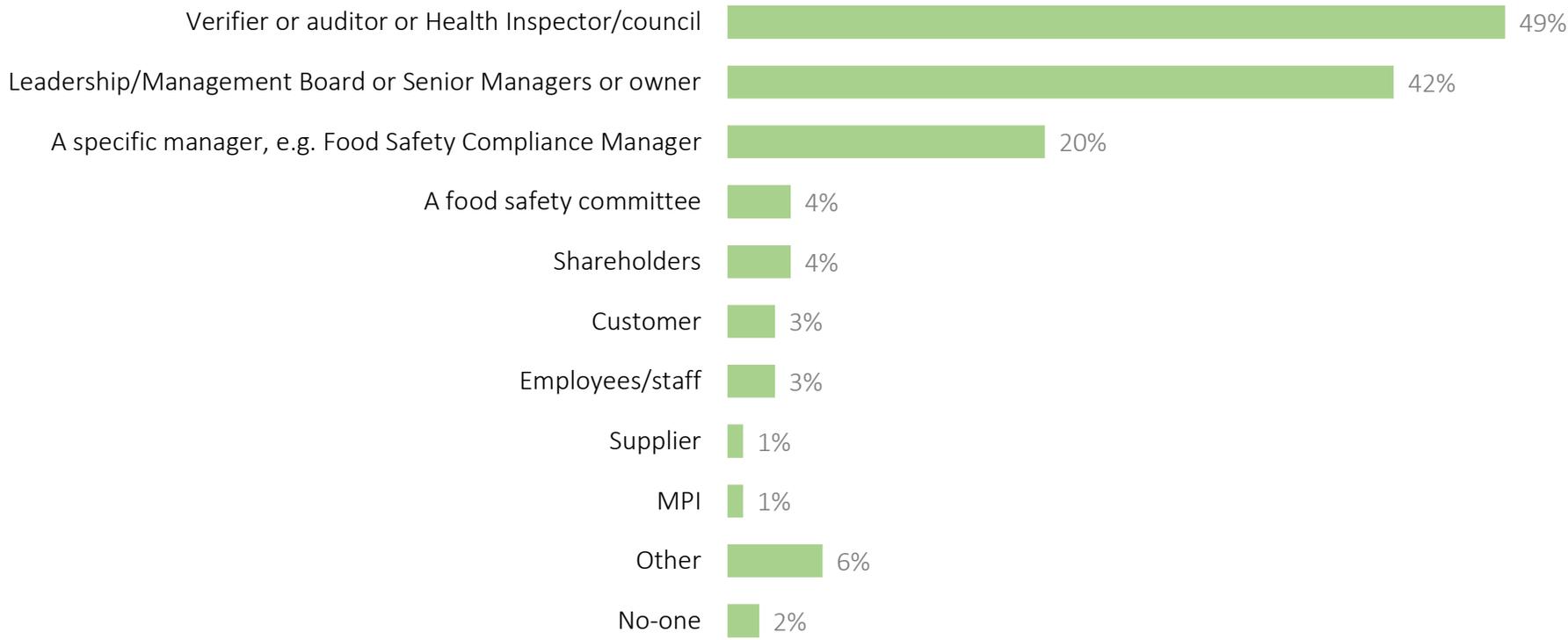
Staff responding to the online survey gave almost identical answers to this question – which is an indication that formalised approaches to food safety are well communicated within businesses.

For businesses that record safety performance data – this tends to be reported to verifiers/auditors or to a leadership/management team.

Reporting food safety performance data to staff is rare (only 3% do this), although it is probably an indication of a strong food safety culture (the sample size is too small to determine the type of business that does this).



*Who receives food safety performance data*



Large businesses tend to have a more formalised approach towards food safety compared with small businesses. In particular, medium to large manufacturers, and to a lesser extent medium to large retail/wholesalers, are more likely to have formalised approaches.



**Medium to large manufacturers (i.e. 10 or more staff) more likely to have:**

- A food safety policy, rules or procedures (100%)
- Documents about managing food safety risks in their business (100%)
- A food safety standard (96%)
- Food safety performance data (96%)
- Food safety goals or KPIs (90%)

**Medium to large retail/wholesalers (i.e. 10 or more staff) more likely to have:**

- Documents about managing food safety risks in their business (98%)
- Food safety performance data (92%)
- Food safety goals or KPIs (87%)

**Other significant differences:**

- Auckland businesses are more likely to have documents about managing food safety risks (96%)
- Otago and Queenstown businesses are more likely to have food safety performance data (90%)

On average businesses had 4.1 of the 5 features we investigated. This was higher for medium to large manufacturers, medium to large retail/wholesalers, and (to a lesser extent) medium to large hospitality businesses. It was lower for small retail/wholesale businesses.



Analysis group	Average number of formalised approaches in place (out of 5*)	Significantly different from the norm?
Small growers/horticulture (n=29)	4.0	-
Medium to larger growers/horticulture (n=39)	4.1	-
Small manufacturers (n=119)	4.0	-
Medium to large manufacturers (n=215)	4.8	Significantly higher
Small retail/wholesale (n=87)	3.6	Significantly lower
Medium to large retail/wholesale (n=97)	4.6	Significantly higher
Small hospitality (n=191)	4.1	-
Medium to large hospitality (n=123)	4.4	Significantly higher

- \* The 5 features examined were:
- Food safety policy, rules or procedures
  - Documents about managing food safety risks
  - A food safety standard
  - Data on food safety performance
  - Food safety goals or KPIs

The qualitative research suggests that larger businesses articulate (and measure progress against) a number of food safety performance goals. Goals and measures cover a range of domains which are often linked to external requirements from customers and regulations.



KPIs may exist on a number of levels:

- Product KPIs include:
  - Standards on how the product should look
  - Microbial limits are adhered to
  - Zero tolerance for foreign contamination.
- Customer KPIs include:
  - Reduction in the number of customer complaints
  - No significant customer complaints
  - No significant illness (related to product consumption).
- Others have check sheets in place, which serve as KPIs.

*“We keep an eye on things, I have a check sheet that I sign off. But there's nothing written down [KPIs]... but I don't know whether I'd want that. As long as the form is in place, we're abiding to guidelines.”*

*[Large Food Beverage Wholesale/Distributor]*

*“We have responsibilities drawn from shelf life guides from Head Office, traceability for the departments, and 3 monthly audit and external audits. We have a system in place to report customer complaints and share information with other similar supermarkets in our chain.”*

*[Large retailer]*

*“We manage and record all our inputs - anything that is sprayed onto grapes are recorded; time and date of harvest is recorded; time and date of each stage in the process is recorded.”*

*[Large wine grower]*

*“We do have performance measures, but they're not difficult to achieve. It basically comes down to no major incidents.”*

*[Large food manufacturer]*

*“We operate under the BRC standard and we have a food safety program as well – our monitoring involves daily discussion with people on the line as well as analysis of trends using relevant data.”*

*[Large food manufacturer]*

*“We have daily and weekly monitoring of all our equipment. We follow up any quality complaints we might get from a customer and investigate those thoroughly. We just make sure all the staff are aware of and follow the correct procedures in our daily operations.”*

*[Large retailer]*

Small businesses interviewed in the qualitative stage said they rely more on informal approaches and close supervision. They often refer to good food safety as ‘common sense’.



Small businesses use informal approaches. Goals, performance data, and KPIs are not prominent features of their business. They often refer to food safety as ‘common sense’, especially if they feel they are undertaking the appropriate behaviour already. When asked for the most important action to improve food safety (see slide 47), smaller businesses tend to focus on just keeping the establishment ‘clean’. Small businesses sometimes do not believe there is value in formal processes.

*“We know food safety well enough ourselves and we tell our employees how to keep ingredients safe. We have delayed having formal food safety goals. It is quite hard for small businesses, if there was someone giving us templates on how to record what needs to be recorded such as the refrigeration temperature. It would be nice to have the council educate us as well. To be honest we’d need more back up to prioritise and implement these kind of things.”*

[Small retailer]

*“It’s more kind of an informal check... just keeping an eye on slow moving stock.”*

[Small retailer]

*“It’s just not something we’ve ever thought about.”*

[Small food manufacturer/processor ]

*“It’s just common sense: If you don’t do anything silly you should be able to stay safe, as in your own kitchen.”*

[Small hospitality business]

*“Common sense is pretty much the guts of it... and I have plenty of that.”* [Small Food Manufacturer/Processor]

*“Our staff are very conscientious... they’re all aged between 35 – 73 years. So they are all conscientious of things being done the right way... they don’t need to be told what to do.”* [Small retailer]

Small businesses sometimes admit that they do not apply their own formal processes consistently.



Among small businesses that do have a more formalised approach, they sometimes perceive this to be more relevant for certain types of staff such as new or temporary staff. When probed, they said they do not frequently look at their own formalised procedures.

*“For new people, it’s probably worth putting more effort into process, then I wouldn’t have to tell them over and over.”*

*[Small food manufacturer/processor]*

*“Yeah, we have folders with formal procedures... but I couldn’t put my hand on it straight away.”*

*[Small food manufacturer]*

Staff surveys about food safety attitudes and behaviour are uncommon and tend to suggest that only minor changes, or no changes, are needed.



21%

of businesses with 10 or more staff\* have undertaken a survey on food safety behaviours or attitudes in the past two years.

More likely to have undertaken a staff survey:

- Businesses operating across more than one site (28% vs. 17% operating at one site)
- Importers (31% vs. 22% of exporters and 17% of other businesses)
- Businesses with a Board of Directors (27% vs. 15% of businesses without a Board)

But  
minor  
impact..

Mostly these surveys say that the business has to undertake only *minor changes* (53%), or *no changes at all* (40%) – with a further 3% saying the survey suggested ‘major changes’ were needed and 3% who were unsure what the survey suggested.

Businesses who took part in a survey which suggested changes were needed, tended to say they implemented those changes (for example, 90% of those who took part in a survey suggesting minor changes, said they made minor changes as a result of the survey).

Almost a third of businesses with ten or more staff have a specific food safety committee.



31%

of businesses with 10 or more staff\* have a specific food safety committee.

More likely to have a committee:

- Manufacturers (61%)
- Retailers/wholesalers (42%)
- Businesses with 50 or more staff (51%, compared to 23% of businesses with 10-49 staff)
- Multisite businesses (39% vs. 28% of single-site businesses)
- Exporters (56%) or importers (57%) (compared with 20% of other businesses)
- Businesses with a turnover of over \$1.5m (39%, compared with 20% of businesses with a lower turnover).

Motivations and barriers  
that influence the  
relative prioritisation of  
food safety within the  
business

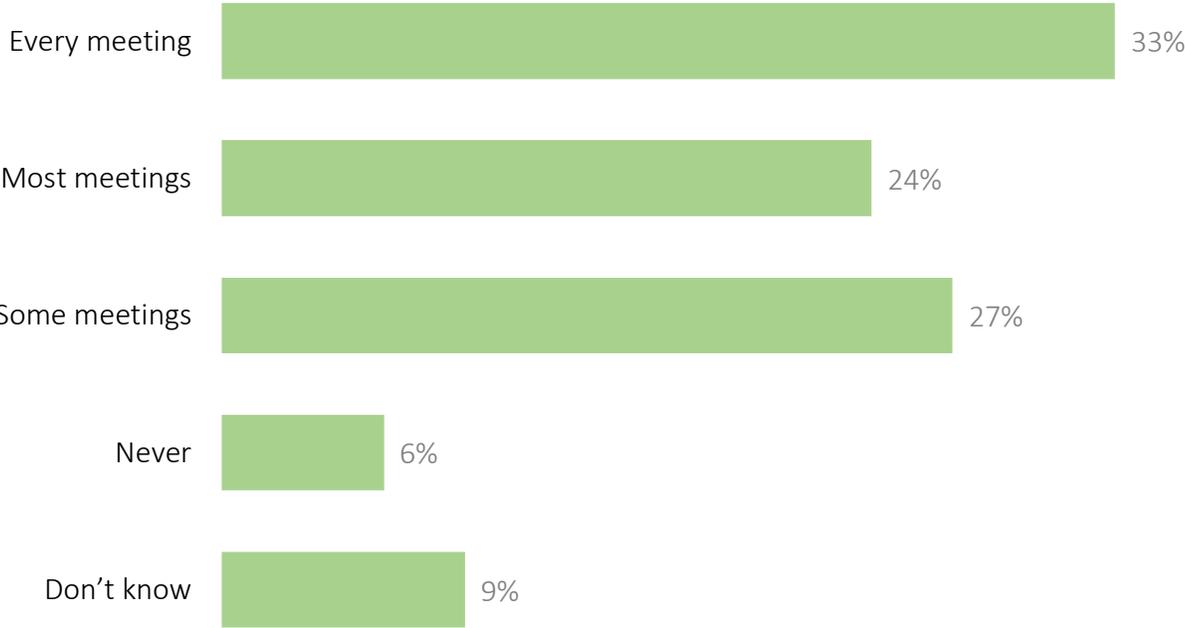


Six in ten businesses with a Board of Directors or Management Team say food safety is discussed *at most/every meeting*. This means that food safety is not always discussed at a leadership level.

The following slides (which describe findings from the qualitative interviews) identify the factors which prioritise, or deprioritise, the importance of food safety within the business.



*How often leadership team discusses food safety*



**57%** say their leadership team discusses food safety at every/most meetings.

More common among medium to large retailers/wholesalers (79%).



# Research participants say ‘staying in business’ is the strongest motivator for adopting stringent food safety practices.

We explored the key influences and pressures on food safety prioritisation during the in-depth interviews. The findings are described in the following slides but are summarised below.

- There was a strong sense that businesses focus on food safety behaviour when they recognise a direct link between food safety and the consequences for them and their business.
- The prime influencer across businesses (of any size) is to ensure long term sustainability and profitability – to basically ‘stay in business’. Common to all of the businesses interviewed was the potential negative consequences of poor food safety upon:
  - Satisfied customers
  - Reputation
  - Current market share
  - Avoidance of harm
  - Investing for the long-term (to realise benefits and reduce risk).
- During the interviews some businesses could clearly articulate specific benefits associated with food safety, including *improved organisational performance* and *staff motivation* (discussed later). These businesses have a holistic view of food safety – it is regularly discussed by management and staff, and forms part of the company’s values. But even within these businesses, avoiding negative consequences (or ‘loss aversion’) is a powerful influence.
- Relative to the strong influence of potential business-consequences and business-benefits on food safety behaviour, food safety *rules, regulations and audit processes* appear to be less important.
- There are a number of pressures, such as production targets and staff shortages, which are a negative influence on food safety behaviour – these are discussed towards the end of this section.



## Potential consequences for customer satisfaction are a major motivation.

Businesses seek to provide certainty and safety to their customers. For larger businesses their trade is often ‘business-to-business’ – where the impact of losing even one customer can be significant.

*“Food safety is not driven from the top-down, it’s driven back to us from the market.” [Medium food manufacturer]*

*“If the customer finds something [in the product], even something small, it will come back to us.” [Large retailer – frontline staff]*

*“The most important thing for us is to ensure wholesome and safe food so our customers gets a product which we have ensured is safe for consumption. We make sure the customer is safe at all times.” [Large manufacturer]*

*“Our focus is on customer retention and the ultimately, the bottom line is the ‘dollars’. We ensure we have a healthy and safe product to get money and to retain customers and get new customers.” [Large food manufacturer]*

*“The need for food safety programmes has grown along with our industry. But more than being driven by the likes of MPI and legislation, for us it is about the customer. Our standards are very much retailer driven. You must comply or you won’t have a customer. You won’t have a business.” [Medium horticulture]*

Additionally, larger businesses like to be able to ‘demonstrate’ to their customers that their food is safe.

*“To make sure the food we make is healthy and safe to eat... and we can prove it.” [Large food beverage wholesale/distributor]*

*“We can trace our safe food from the minute it leaves our back door to the minute it goes out to the customer.” [Large retailer]*

*“We have a lot of customers coming through the plant to see how their product is being made. Maintaining that image, that level of compliance around hygiene is very important.” [Large food/beverage manufacturer/processor]*



# Enhancing brand reputation and maintaining a competitive edge in the market are also key motivations.

For larger businesses, food safety is closely interlinked with perceptions about the quality of their product. They seek a strong brand reputation where they are known for safe and high-quality products. This reputation often reaches beyond their immediate customer base to the wider public or business community.

*“Our actual company reputation is based on producing a quality product.” [Large food/beverage manufacturer/processor]*

*“We want to be the best seafood company in the world and to do this we need to be performing at the highest level – we got the FFC2200 standard audit standard and that is world recognised.” [Large wholesaler]*

*“We want to make good food and we want everyone to love our brand. We are really proud of our products.” [Large manufacturer]*

Some acknowledge the role that reputation plays in providing reassurance and trust – they are aware that negative consequences have the potential to expand beyond their immediate business to impact their business-partners.

*“We sell wholesale, our customers need to know when they can trust our products and on sell them.” [Large food beverage wholesale/distributor]*

Some businesses emphasise that having a positive reputation for food safety is essential for maintaining a competitive edge in the marketplace.

*“There's a lot of competition out there, if we don't do things properly, someone else will.” [Large food beverage wholesale/distributor]*

*“Food safety is about the satisfaction of getting the job done right and enables us to maintain a competitive edge. Strong adherence to food safety as evidenced by customer and third party audits is a powerful marketing tool for us.” [Large food/beverage manufacturer/processor]*



Investing in food safety is seen as a good way to reduce risk to the business and to the end-user of the product.

Large businesses are willing to invest upfront in order to minimise risks and realise wider benefits.

*“Our focus on best practice is all about risk minimisation to the business. If we had a failure, it could be catastrophic to the business. If time and money is not put in at the front end, then there's a danger of a product recall at the other end.”* [Large food manufacturer]

*“We invest in quality and safety which is one of our company goals – one of our values is to ensure both safety and high quality products for our customers.”* [Large food manufacturer]

*“Investment in food safety eventually reduces costs, it assists with training... there's always a better way, technology moves on, products change, you get exposure to what others are doing.”* [Medium food manufacturer/processor]

Staff in large businesses may never meet the end-customer. To increase customer-focus, managers often look for ways to alert their staff about the potential consequences of their actions. One business we interviewed produces fruit-pieces (unbranded) which end up in breakfast cereal. To ensure staff understand the potential consequences, management provide scenarios which seek to establish a personal connection between food safety behaviour and the customer. For example, they have fruit pieces that go out in a 10kg box, this could end up in 500 boxes of cereal. They multiply this again, to show the number of people who could be affected by a food safety issue. Even in large businesses, friends and family may act as a reference point when considering potential consequences.

*“No one wants to accidentally cause harm... imagine if that was your friends or family.”* [Large food/beverage manufacturer/processor]

*“We try and reinforce to staff, it might be your day job, but it's what people eat... and that could be your daughter or your granddaughter.”* [Large food manufacturer/processor]

*“Our food safety behaviour is driven by making sure that our product is the best product we can provide, and that it is not going to harm our customers.”* [Large retailer]

*“We go over cases both in New Zealand and internationally... like the baby formula contamination... to show how one mistake can have a huge effect. It's not about scaremongering... It's about doing things correctly.”* [Large food manufacturer/processor – frontline staff]



Small businesses are subject to similar influences, but they express them in different ways because of their personal connections with the local community. Three examples are given below.

### Satisfied customers

The goal for many, is to ensure satisfied customers who return to their business time-and-time again.

*“You want the customers kept happy, so they are returning customers... it’s all about staying in business.” [Small retailer]*

*“We only trade in our local community. You have to have high standards. If our product is no good, we don’t get repeat business.” [Medium grower/horticulture]*

Small businesses meet their customers face-to-face on a frequent basis, they are often on first-name terms.

*“We are in a small town and our jobs depend on looking after our customers.” [Medium café]*

### Reputation

Smaller businesses (which are normally single site), are likely to be in close proximity to the end users of their goods. They may also see their business as a reflection of themselves personally.

*“I lead by example, this is my business and I have worked very hard. My staff know that food safety is a foundation of our success.” [Medium café]*

*“It is my name above the door. We don’t want incidences of food poisoning which will damage my own reputation”. [Small winery]*

*“It is a reflection of me and my career. I am super proud of my ‘A’ [food premise grading]. Back in the day, you used to be able to get an ‘A Gold’ and I was super proud of that too! It is like winning a gold medal as an Olympian.” [Small Winery]*

### Avoiding harm

Small businesses may literally be producing food for their family and friends.

*“Our community is small. People know each other. Besides the impact on the business, we’d be poisoning our own friends and family.” [Medium Retailer]*

An emphasis on food safety can be further enhanced when businesses realise the benefits of food safety (i.e. they move beyond simply thinking about the potential negative consequences of something going wrong).



Some connect food safety with business growth

*“Management commitment can increase when they see the commercial benefits of investing in food safety. That it allows them to get opportunities. It is good for PR and it gives them peace of mind.”* [Medium beverage processing]

*“They realised the company is growing and to meet the demands they have to invest in food safety. They saw the impact on the bottom line. So this role, full-time was created. They have recognised the benefits of doing it right. The peace of mind that comes with it. We do deal with high risk products and they want to meet and exceed expectations to secure the contracts.”* [Medium, beverage manufacturing and processing]

Communication about food safety can increase the connection between owners, managers and staff

*“I do not expect my staff to do anything I can’t or won’t do. I am absolutely hands on ... everyone understands the rules and consequences and we take our responsibility personally. We all have a responsibility to the public and to each other in this business.”* [Small tavern and takeaway]

*“We now have a real openness for staff to communicate with the management.”* [Large manufacturer]

A focus on food safety can help motivate staff

A number of participants identified benefits for staff – including job security and building pride in the company.

*“It helps build a strong company, so they have job security... it’s not going to just collapse.”* [Large food/beverage manufacturer/processor]

*“They can be proud of the product. They are proud to say, I work for this company.”* [Large food beverage wholesale/distributor]

*“We have happy, long-lasting, staff. They are passionate about the food and the restaurant. We get some amazing comments about the place.”* [Small hospitality business]

Another benefit for some, is not having to deal with unhappy customers.

*“If the customer comes back (dissatisfied with product), it’s quite stressful. Dealing with uptight customers is never any fun.”* [Small retailer]

# Rules, regulations and audits are important but are not sufficient to change behaviour.



## Audits are taken seriously for the most part and businesses use them to improve food safety performance

Generally speaking businesses take audits seriously and often take steps to ensure the audit regime increases food safety performance in the long-term.

*“With audits, we have a big drive to make sure we do it right... reinforcing to staff that Q.A. are not just doing it for fun, it’s required when we work in this industry.”* [Large food/beverage manufacturer/processor]

*“We reinforce, it’s not just for the audit, we want it to be permanent.”* [Large food/beverage manufacturer/processor]

*“Non-conformance issues are sorted straight away. Recommendations are worked through over the following months.”* [Large food beverage wholesale/distributor]

Sometimes businesses conduct ‘pre-audits’ to ensure the best outcome from the audit, this may involve preparing staff and emphasising improved habits. This may have some advantages for improving staff knowledge and behaviour.

*“I make sure they know answers to questions... refresh them. I talk to them about what the auditor might be asking... especially some of the newer staff. I tell them some of the questions the auditor might ask, so they can answer without getting too stressed.”* [Large food beverage wholesale/distributor]

*“If it’s not a habit, it’s easy to slip up when auditors are onsite... so we monitor the guys everyday, make sure they do it properly everyday.”* [Large food/beverage manufacturer/processor]

## However rules and audits do not necessarily change behaviour

Some businesses admitted that food safety rules, and food safety audits, did not change permanent behaviour in their workplace.

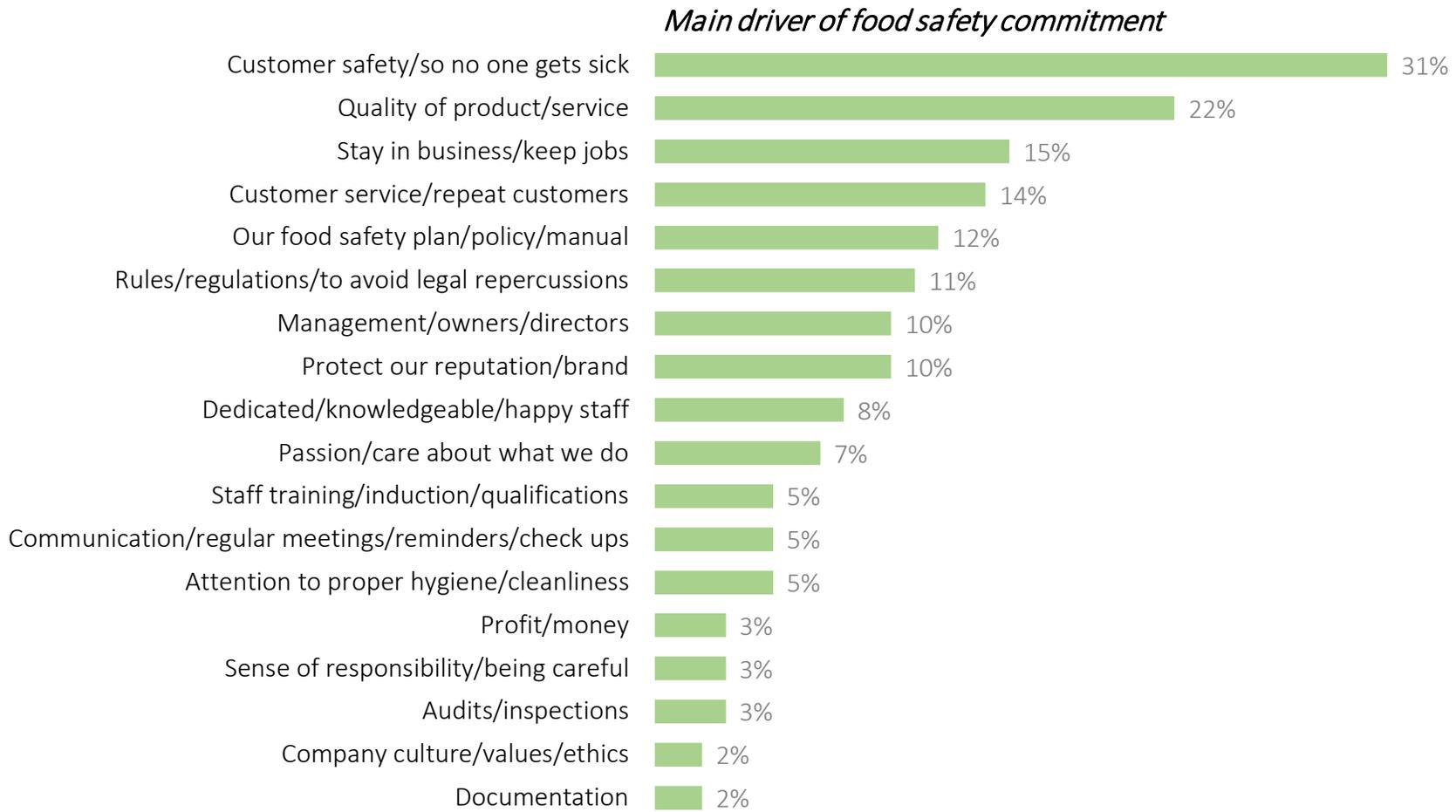
*“It is all about behaviour- you can have the best intentions in the manual but if no culture is in place, then it won’t work.”* [Large retailer]

*“Sure, behaviour does change when auditors are onsite. There’s a move towards better practice. But in our business, that behaviour is not so good everyday because there’s a lack of enforcement. The ongoing focus is more around volume and less about cleaning and hygiene practices.”* [Large food manufacturer, supervisor]

*“MPI are the only one we get... they come and audit every year. It doesn’t really change behaviour... we might just give something an extra clean, make sure it’s up to scratch.”* [Small food manufacturer]

*“After an audit, we start with a bit of a bang with actions, then over time, some will stick and others will slip back...”* [Large food manufacturer]

Findings from the survey correspond with the findings from the qualitative interviews. According to businesses in the survey the top three drivers of food safety commitment were: customer safety, product-quality, and staying in business. Food safety policies and regulations were mentioned less often.



A focus on food safety can come under pressure in a competitive environment with demanding production targets and stretched resources.



### Competitive pressures

Some believe that competitive pressures can build pressures to cut corners. For example, external pressures may prioritise a need for speedy service, increased production targets, and/or meeting financial budgets at the expense of food safety.

*“You must understand, we are competing with McDonald’s and Burger King. Speed is expected. People want it immediately!”*  
[Small tavern and takeaway]

### Production target pressures

Businesses can forgo good practice when there are production target pressures.

*“I guess we’re in a enviable position where we’re struggling to match sales volumes. But that means, if time is spent down to cleaning, that directly translates to lost sales.”* [Large food manufacturer]

*“It is difficult when there is pressure on output, like x number of bottles by this time. When can you do cleaning etc.?”* [Medium beverage processing]

*“There is a high importance on production not quality as the main goal for the company.”* [Large food manufacturer/processor – frontline staff]

*“Some think, if I do it, and I save time, I look like I’m more efficient.”* [Large food manufacturer/processor – frontline staff]

*“I feel that food safety can take a back seat to meeting production targets. In our company food safety is a responsibility of the technical team, not management.”*  
[Large food manufacturer/processor – frontline staff]

### Staff resourcing pressures

Another pressure is staff fatigue and lack of adequate supervision. In addition, when people are away sick, other employees have to cover the position/responsibilities and this sometimes involves cutting corners.

*“Cleaning doesn’t get done as well as it should when you fill in for someone else.”* [Large food beverage wholesale/distributor]

*“Sometimes things are so busy, you get to the blast chiller five minutes late. That impacts on temperature and it is not intentional. So you might fudge your recording. You can see how it happens.”* [Medium food wholesaler and distribution]

*“The packers work really long hours. I don’t know maybe it is laziness. But they just can’t be bothered at the end of a long day and the supervisors tend not to stay late to oversee it gets done. e.g. correct cleaning and storage of brooms after cleaning.”* ( [Large horticulture]

In addition, the commitment of staff (both managers and frontline) influences the degree to which a business prioritises food safety.



### Management philosophy and accountability

As discussed elsewhere in the report (see slides 51, and slides 59 to 61) the commitment and accountability of managers is an essential part of food safety culture. A lack of action or accountability at management level leads to food safety being deprioritised.

*“Our previous manager was not the best... there were times when we’d clearly identified one person was at fault. The manager would defer it to the supervisors, who would often let it go or give a warning... but there was no follow through with warnings...”* [Large food/beverage manufacturer/processor]

*“Previously, the priority was getting it done whatever way you can.”* [Large food manufacturer]

*“Senior leadership down to department leaders are never required to report on food safety compliance/performance.”* [Large packing and storage business, frontline staff]

*“There is a lack of accountability for managers.”* [Large grower/horticulture, frontline staff]

### Staff being unwilling to change their behaviour

It can be hard to prioritise food safety when staff are disengaged. In these situations staff can lack a sense of individual responsibility or defer the responsibility to others.

*“Often happens around housekeeping issues... like an overflowing bin, they’ll say, it’s not my responsibility, it’s someone else’s job, I’m not the cleaner.”* [Large food/beverage manufacturer/processor]

Staff can also be reluctant to change – particularly if they do not see the benefits of adopting a new behaviour or process.

*“Most staff have been here a long time... that was the way they were taught, they’ve been reluctant to adopt [new ways].”* [Large food manufacturer]

*“People don’t like change, especially if they don’t agree with the change or they can’t see any issues with how things were done.”* [Large food manufacturer]

*“We only maintain food safety until BRC audits then people stop – it is not a 24 hour every day practice - changing culture is hard.”* [Large grower/horticulture, frontline staff]



# Resource constraints are the main pressure for small and medium businesses

## Resource constraints among small and medium sized businesses

Small businesses often describe the resource implications associated with food safety.

*“The practices and requirements are costly. Just think about cleaning products – that is costly alone.”* [Medium size café]

*“The premises – it is just too small. Having the right facilities like chillers and freezers take up a lot of space. I don’t have the space so we do the best we can.”* [Medium retailer]

However, some have developed strategies to overcome these pressures.

*“I have got a good arrangement with a supplier. I call them at 9pm every night with my order and they deliver the next day. I don’t have the space to keep stock at temperature for long periods of time or the money for the power it takes. This way I always have just what I need and the storage temperature control for longer time is on their side.”* [Small tavern and takeaway]

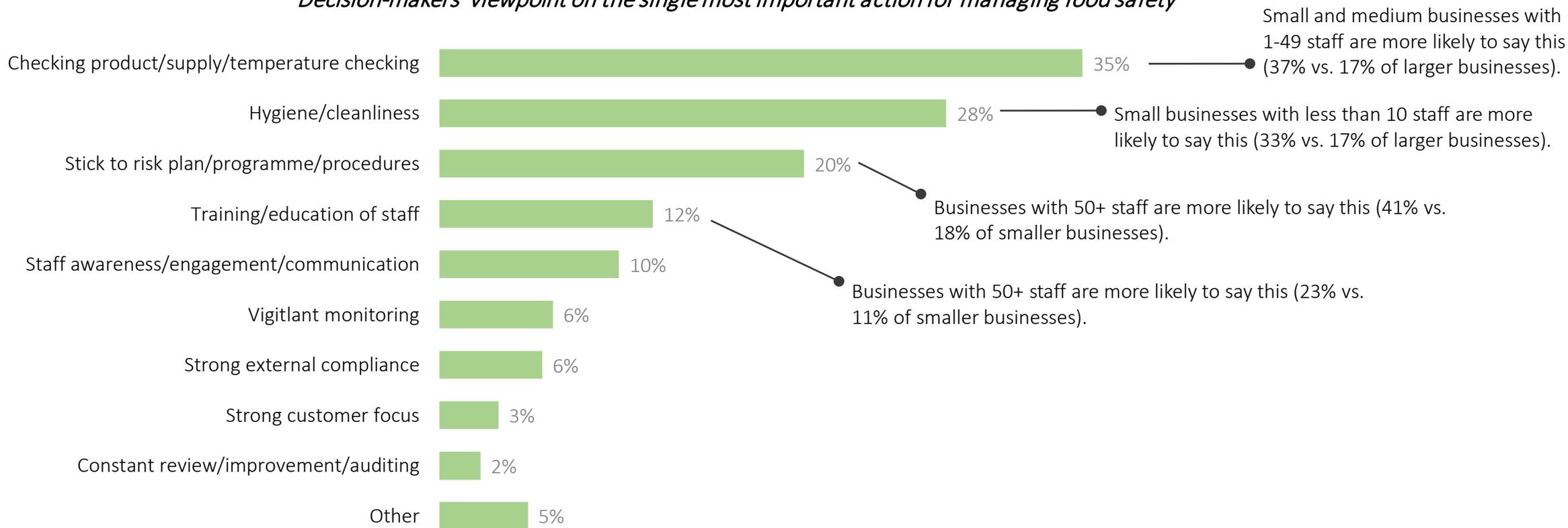
# Decision-makers' views on the most important action to manage food safety



Checking or storing the product correctly and temperature checking as well as hygiene are the two things businesses think are most important for managing food safety. Checking temperatures/products and hygiene are more important for small businesses. Risk plans and training are more important for large businesses.



*Decision-makers' viewpoint on the single most important action for managing food safety*



Illustrative quotes from the survey show a range in thinking: from relying on simply having a procedure through to engaging staff. Here are quotes which focus more on the basics of hygiene, temperature checks, and having procedures.

*“We just go for the bare minimum, we do the testing and validation that we need to do, but food safety training is above and beyond.”*

[Large manufacturer]

*“Personal hygiene and hygiene in the kitchen and premises.”*

[Large hospitality business]

*“Basically it is just in-house systems and good process management and verification activities.”*

[Large grower/horticulture]

*“Use your nose - if it doesn't smell right - you throw it away.”*

[Small hospitality business]

*“Food temperatures and we make sure there is no cross contamination, we ensure that chefs defrost using correct procedures.”*

[Large hospitality business]



Encouraging wider engagement in the business involves staff awareness and training and continuous improvement. For many businesses, food safety management is about a range of actions.



*“Having trained staff who are vigilant. Producing rules and documentation is important but not sufficient.”*

*[Small manufacturer]*

*“We expect people to behave in a professional manner and we write it into their employment contracts – so that food safety is every-ones responsibility.”*

*[Large hospitality business]*

*“It is trying to build a quality culture right across our business - it involves education through training, awareness of issues, a right-first-time attitude from management to the factory floor.”*

*[Large manufacturer]*

*“Communicating with our staff - having very clear and simple expectations and standards and communicating clearly to our staff and setting up systems that people can follow.”*

*[Large manufacturer]*

*“Constantly reviewing our food processes and keeping up to date with industry standards.”*

*[Large manufacturer]*

*“1. Following our Rules and Regulations and our Risk Management Programme which we have lodged with MPI. 2. Regular testing and monitoring of food contact surfaces, swabs etc. 3. Staff aware of Rules and Regulations, knowing what is going on, self correcting, e.g. if one person is not following the rules, then others will correct him/her about finding our faults before MPI do, as they are always on site for verification, and ultimately if MPI do find fault, then corrections are made. Also it's not MPI and us, we work together.”*

*[Large manufacturer]*

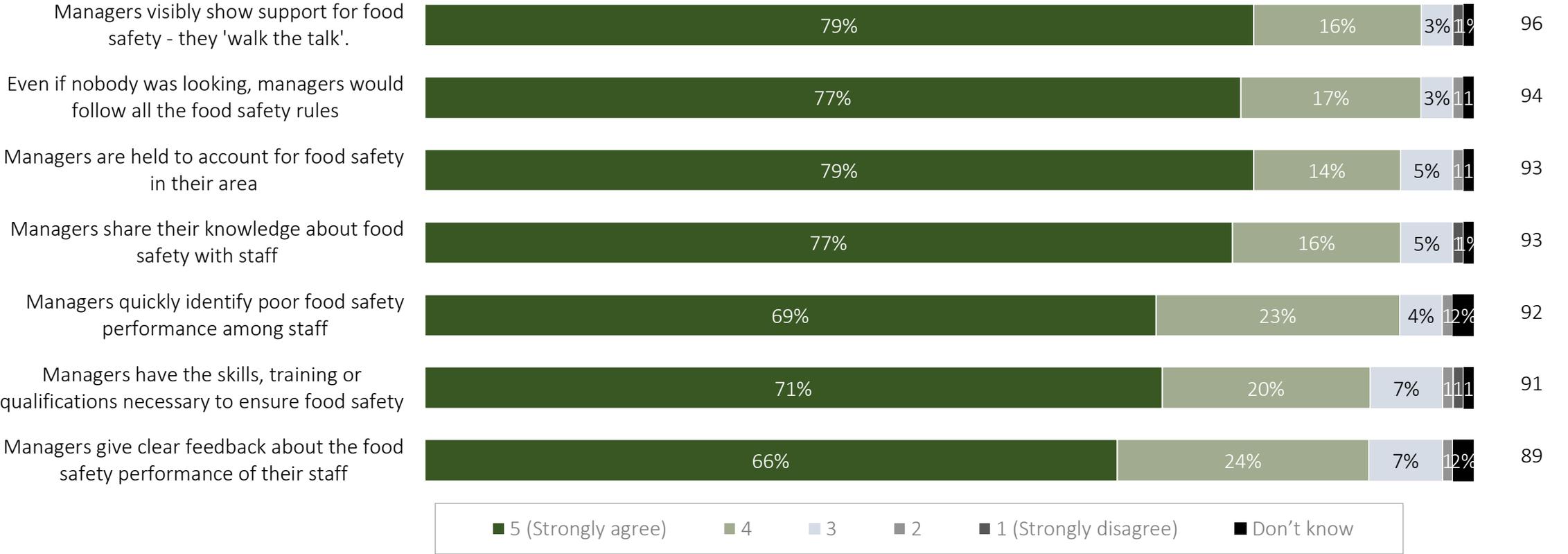
# Management commitment



Most businesses are positive about their own managers and supervisors, although there is some room to improve timely and clear feedback to staff about their food safety performance (not everyone strongly agrees with the statements below).



*Management commitment (viewpoint from decision-makers)*



Multisite businesses are slightly less positive about managers' ability to provide *quick* and *clear* feedback (88% and 82% respectively agree, compared with 94% and 91% of single site businesses).

During the qualitative interviews, decision-makers often discussed the importance of leadership by example, walking the talk, and close personal interactions between managers and staff on the frontline.



Managers in large businesses demonstrate commitment to food safety through visits to the production line and discussions with frontline staff.

*“We ask managers to debrief with production staff, shore management, and vessel staff. We encourage all our factory managers to be part of the quality control system.” [Large manufacturer]*

*“Our senior managers have to spend at least a day in production every year. It’s a good refresher for them. It brings up morale in the factory... they [management] know what we do and they get their hands dirty.” [Large food manufacturer/processor – frontline staff]*

*“The site manager stands up and talks about it to us as a team and is encouraging, he explains and is a great communicator, he walks the talk.” [Large grower/horticulture – frontline staff].*

Smaller businesses often reference the phrase ‘walk the talk’ which demonstrates leadership by example. In many small businesses the managers work closely alongside the staff.

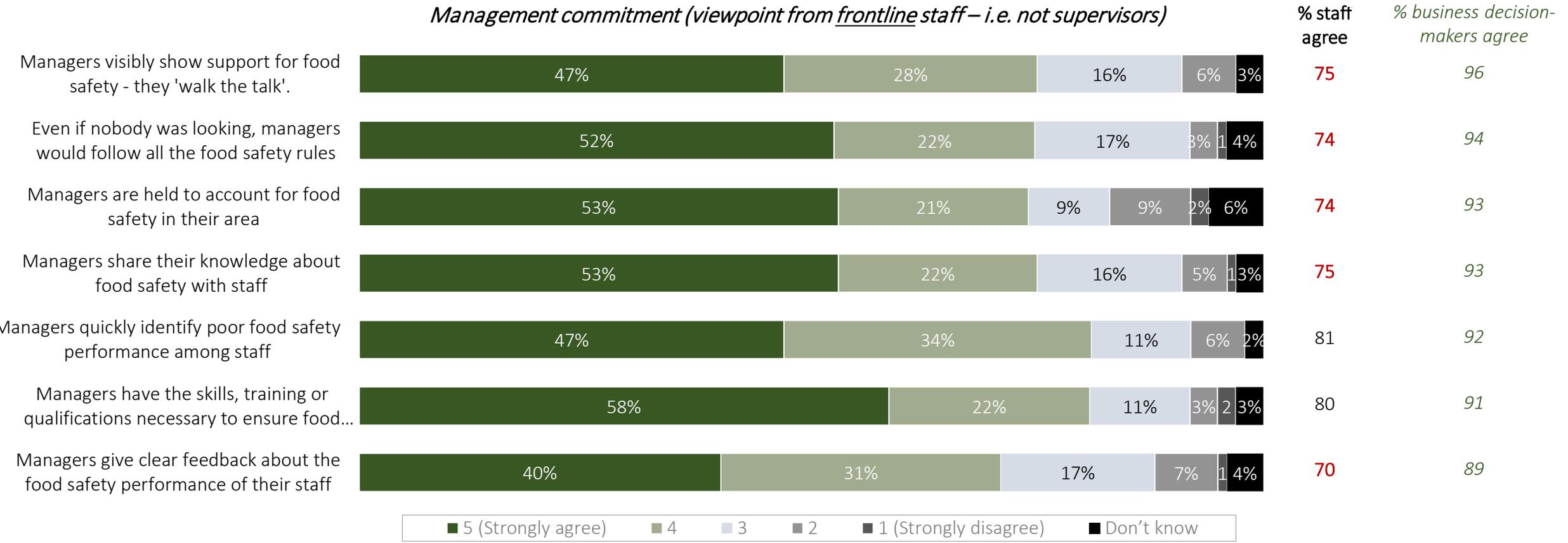
*“You need to walk the talk... that means doing the job the way it’s meant to be done. If something needs doing, you get on and do it. If I’m up to my elbow, then so are they.” [Small food manufacturer/processor]*

*“Safe food should be available to everybody. They must believe it. I must show my passion. I must demonstrate how they contribute and add value to food safety.... They must always understand the context.” [Medium beverage processing]*

Frontline staff responding to the staff survey are significantly less positive than business decision-makers. The gap is largest for the first three statements in the chart (*managers walk the talk, even if nobody was looking, managers would follow all the rules, and managers are held to account*) and the last item in the chart (*managers give clear feedback*). There is around a 20% gap between the views of decision-makers and staff on these statements.



*Management commitment (viewpoint from frontline staff – i.e. not supervisors)*



Please note the relatively low proportion of staff who 'strongly agree' that managers give clear feedback (40%). During qualitative interviews there was an indication that staff can feel confused about their role in food safety because it is not always made explicit (see slide 60).

# Accountability for food safety performance



Most businesses consider food safety performance to be a core part of employee performance (for staff handling food).



*Accountability for food safety performance as a condition of employment*

Over 8 in 10 businesses with 10 or more staff\* have regular performance reviews with managers and staff who handle food. Of these...

**89%** discuss food safety performance in managers' performance reviews.

**87%** discuss it in staffs' performance reviews - more common among:

- Retail/wholesale businesses (95%)
- Businesses in Auckland (96%).
- However, it is less common among growers/horticulture (64%)

Source: telephone survey. A1, A1b, A2, A3.

Base: Businesses with 10+ staff and performance review systems (n=388)

**95%** tell frontline staff to report diarrhoea, a stomach upset, or vomiting in their household (small manufacturers more likely to 'not' tell staff this, only 88% do). However, slightly fewer staff say this (83%) - lower for staff working in wholesale and distribution businesses.

Source: telephone survey and staff survey. A6.

\* Note that to minimise survey burden on small businesses this question was not asked to businesses with 1-9 staff. Base: All respondents (n=900 business decision-makers and n=193 staff)

In the qualitative interviews, businesses confirmed that food safety performance is considered 'part of the job' for staff handling food.



Businesses said that they do not see the need to 'motivate staff' about food safety issues because it is assumed to be a condition of employment – some have formal disciplinary processes as part of the employment contract.

*"It's worth more than their job. They [staff] know it they don't want a job, then don't do it [follow food safety guidelines]."*  
[Small food manufacturer/processor]

*"Motivate staff? It's just part of their job... they're employed to work under those conditions."* [Large food beverage wholesale/distributor]

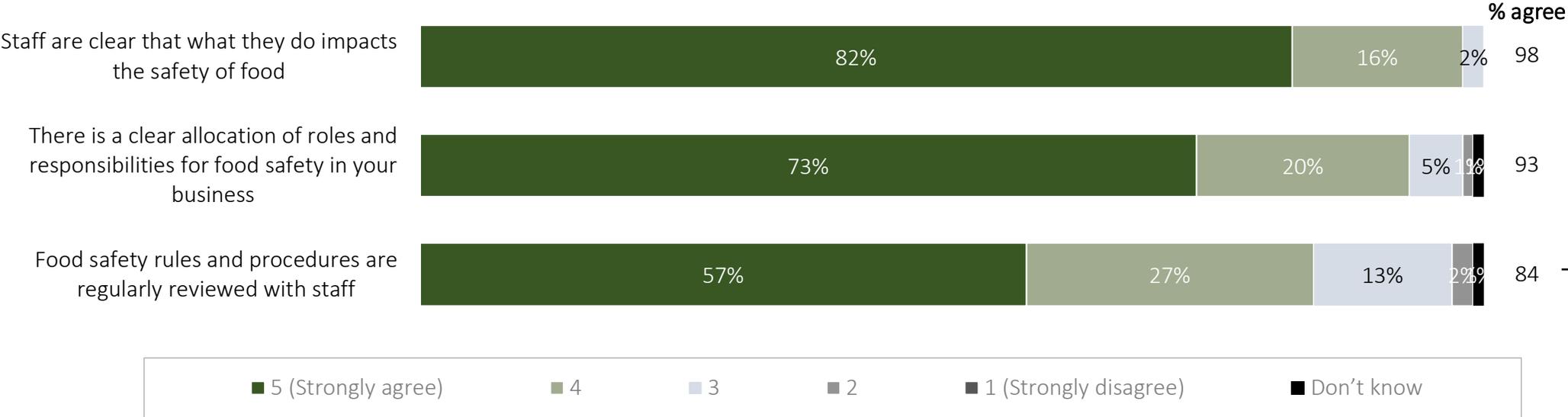
*"I just follow what's best for the company, best for the customers."* [Large retailer – frontline staff]

*"You do it because it is right, because it makes sense, and because you are required to. It's your job."* [Medium food wholesaler and distributor]

Almost all businesses agree that their staff *know that their behaviour impacts food safety* and that there is a *clear allocation of roles and responsibilities*. But not everyone agrees that *staff are involved in reviews of food safety rules and procedures* (multisite businesses are less likely to agree).



*Accountability (viewpoint from decision-makers)*



→ More likely for single-site businesses (87% vs. 74% at multisite businesses)

Businesses interviewed in the qualitative research described how food safety responsibilities are articulated through relevant documentation and implemented by middle management. However, staff are less likely to feel accountable if they are not clear about their role and how it relates to food safety.



Responsibilities relating to food safety are allocated by key individuals in management; or in smaller organisations by the owner/operator. Specifics are usually articulated through relevant documentation, overseen and implemented by middle management / supervisors, and the processes and protocols are executed by hands-on staff who receive training, mostly in-house. In a minority of instances there may be use of outsourcing to certified providers for quality assurance.

*“Everything is written down... records, improvements, changes... it does lift the overall standard of hygiene and food safety. It allows us to easily redress issues...”* [Large food manufacturer/processor]

*“There’s been a real change in culture [with the new manager]. They are taking responsibility more seriously, there’s a greater push, it’s your area, it’s your responsibility. More focus that personal accountability and responsibility is important.”* [Large food/beverage manufacturer/processor]

Businesses acknowledge that without communication and education, accountability would not work.

*“We’ve found that you can’t have a process for everything... you need to get people to think.”* [Large food manufacturer/processor]

*“It comes down to awareness of food safety amongst all staff and at all levels. We ensure that all staff understand why food safety is important and thus everybody acts on it. When we explain it clearly they understand why it is so important.”* [Medium food manufacturer/processor]

*“We talk to staff about the dollar value if something doesn’t go right... we put it in a monetary value of how much it actually costs. Then bring it back to them, if the company has a bad year, there’s no wage increase, there’s no [company] BBQs.”*  
[Large food/beverage manufacturer/processor]

Management being explicit about food safety roles and responsibilities is an important factor in ensuring accountability.



A barrier for some is that roles and responsibilities around food safety are not explicit. For some owners this extends to their own role.

*“We don't have any clear procedures written down. It has only been introduced in passing conversation briefly – therefore it is left up to individual staff to comment and inspect the safety of the food.”* [Quote from worker in small café]

*“I'm perceiving it more my responsibility because I'm overall in charge of the shop... I don't know if it's explicit.”* [Small retail owner]

Leading by example is important for ensuring accountability.

*“When managers lead by example it works way better. But it doesn't work like that most of the time. Some, newer managers show initiative and try, but for others, especially those who have been here for long... unless you actually ask them to, it doesn't happen. Then the little things are just let slide because they have so much to do.”* [Large horticulture]

However, when management make the expectations explicit, it makes the job of holding staff to account easier.

*“It's clear. Hard rules. The 'house rules'. We make expectations clear. It is on the wall, covered in induction and they sign that they saw and understand. If people don't know, you can't hold them to account.”* [Medium food wholesaler and distributor]

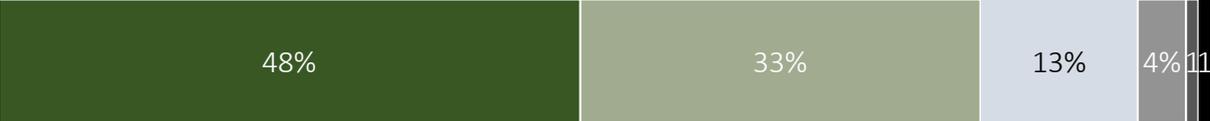
As described on slide 54, the findings from the staff survey also reveal that there is room for improvement 'providing staff with clear feedback about their food safety performance' (with only 40% of staff strongly agreeing that managers do this). And the next slide shows that staff are slightly less positive than management about the clarity of role allocation and accountability for food safety within the business.

Staff responding to the staff survey are generally positive about accountability, but are less positive than business decision-makers (there is a gap of about ten percentage points between staff and decision-makers). (Note that there are no significant differences in how frontline staff vs. supervisors answered this question).



*Accountability (viewpoint from staff)*

There is a clear allocation of roles and responsibilities for food safety in your business



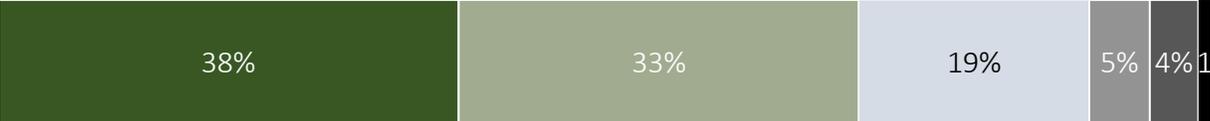
**% staff that agree**

**81**

*% business decision-makers that agree*

93

Food safety rules and procedures are regularly reviewed with staff



**71**

84



Source: staff survey. A7 – To what extent do you agree or disagree with the following statements about roles and responsibilities for food safety?  
 Base: All staff (n=193)

Only a minority of businesses have formal reward systems for staff who identify food safety problems.



### *Reward systems*

**13%** have formal reward systems for staff who identify food safety problems

More common among:

- Medium to large manufacturers (27%)
- Businesses with 100+ staff (23%).
- Exporters and importers (19% for both, vs. 11% of other businesses)
- Businesses who have experienced a major food incident in the past two years (21% vs. 10% of businesses that have not)

Source: telephone survey. A3b.

Base: All businesses with 10+ staff (n=474)

A small number of the businesses interviewed in the qualitative research have developed staff reward systems which encourage good food safety behaviour. Sometimes staff are rewarded for food safety behaviour as part of a wider reward scheme (i.e. the reward system is not only about food safety).



Some seek to encourage positive behaviour and reward those who are perceived to go above and beyond what's required of them.

*"We have a monthly award [\$50 PakNSave voucher] for someone who goes beyond what's expected, who does more than what's required."*

[Large food/beverage manufacturer/processor]

*"We have a chocolate fish award once a month... to celebrate success more... if someone identifies something before it becomes an issue."*

[Large food manufacturer/processor]

Some seek to raise awareness of food safety by connecting it with external events, for example Australia Food Safety Awareness week.

*"Australia has a Food Safety Awareness week and we tie in with that. There's a prize of a \$50 Prezzy card up for grabs, for everyone who enters. It's not just about food safety at work, but food safety at home as well."* [Large food manufacturer/processor]

Others mainly seek to discourage negative behaviour, for example, staff have a set bonus attached to KPIs associated with food safety behaviours. The bonus may be at risk if staff fail to hit their KPIs, such as, product testing coming back as substandard, failing an audit or caught not using the right equipment.

*"Our staff have a bonus tied to their KPIs every six months. So their overall wages are at risk if they haven't hit their KPIs... some of that \$1,000 is at risk... it could cost them."* [Medium food manufacturer/processor]

For most, the concept of staff bonuses or rewards has simply not been considered.

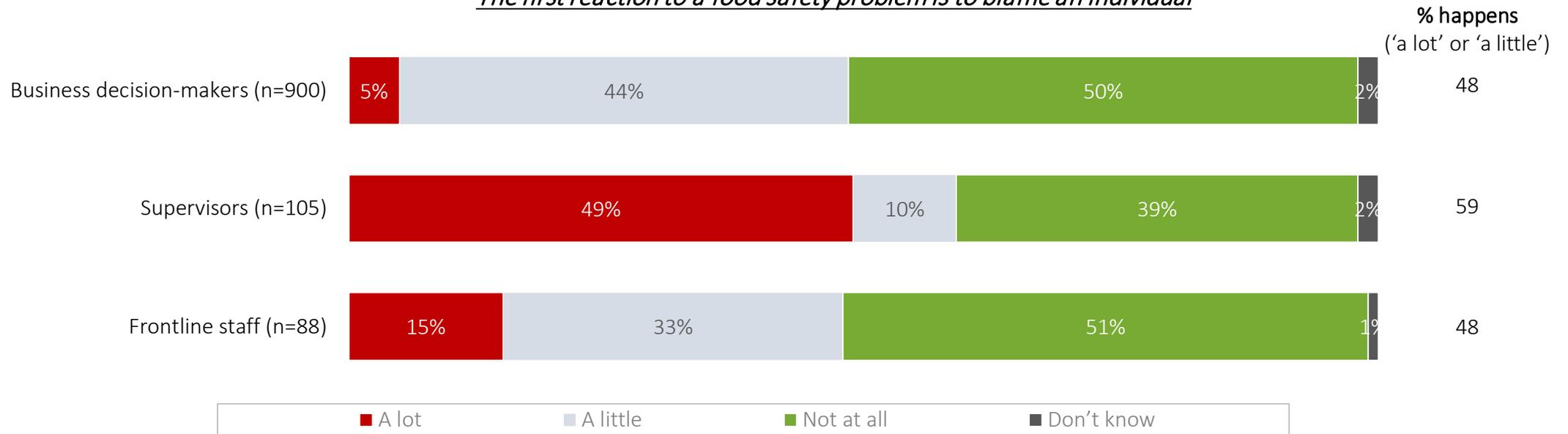
*"No, no bonus... I've never thought about it... I think 'thank you' does it pretty much."* [Small food manufacturer/processor]

*"We don't reward behaviour, we tend to discipline poor behaviour."* [Large food manufacturer]

It appears that ‘blame’ culture is more common than ‘reward’ culture. Around half of business decision-makers and staff say that sometimes the first reaction to a food safety problem is to blame an individual. Supervisors are particularly likely to say this happens (59% vs. 48% of frontline staff and business decision-makers).



*Views on whether the following statement applies to their business:  
‘The first reaction to a food safety problem is to blame an individual’*



**48%** of business decision-makers say this happens ‘a little’ or ‘a lot’

More common among:

- Larger businesses (although it still occurs in smaller businesses often) (58% of businesses with 50+ staff, vs. 47% of businesses with less staff)
- Businesses that do not have a formal leadership or management team (61%, vs. 46% of businesses with a leadership/management team)

Businesses interviewed in the qualitative research perceive blame culture to be common but that it is simply part of ‘human nature’. It is a symptom of focusing on problems rather than seeking solutions.



Some suggest a core motivator is simply to defer the blame away from oneself. By singling out another individual, it immediately places the focus on the other person.

*“It’s easier to say it’s someone else’s fault, rather than my fault. It’s quite common.” [Large food/beverage manufacturer/processor]*

Some link this behaviour to human nature and a follow on from childhood behaviour.

*“It’s just human nature... blaming someone else shifts the blame away from me. Just like when we were kids.”*

*[Large food beverage wholesale/distributor]*

Some suggest that blame culture is a symptom of focusing on problems rather than seeking solutions.

*“It seems to be the way some people operate... blame someone, rather than find a solution.” [Large food manufacturer]*

# Sharing practice & knowledge



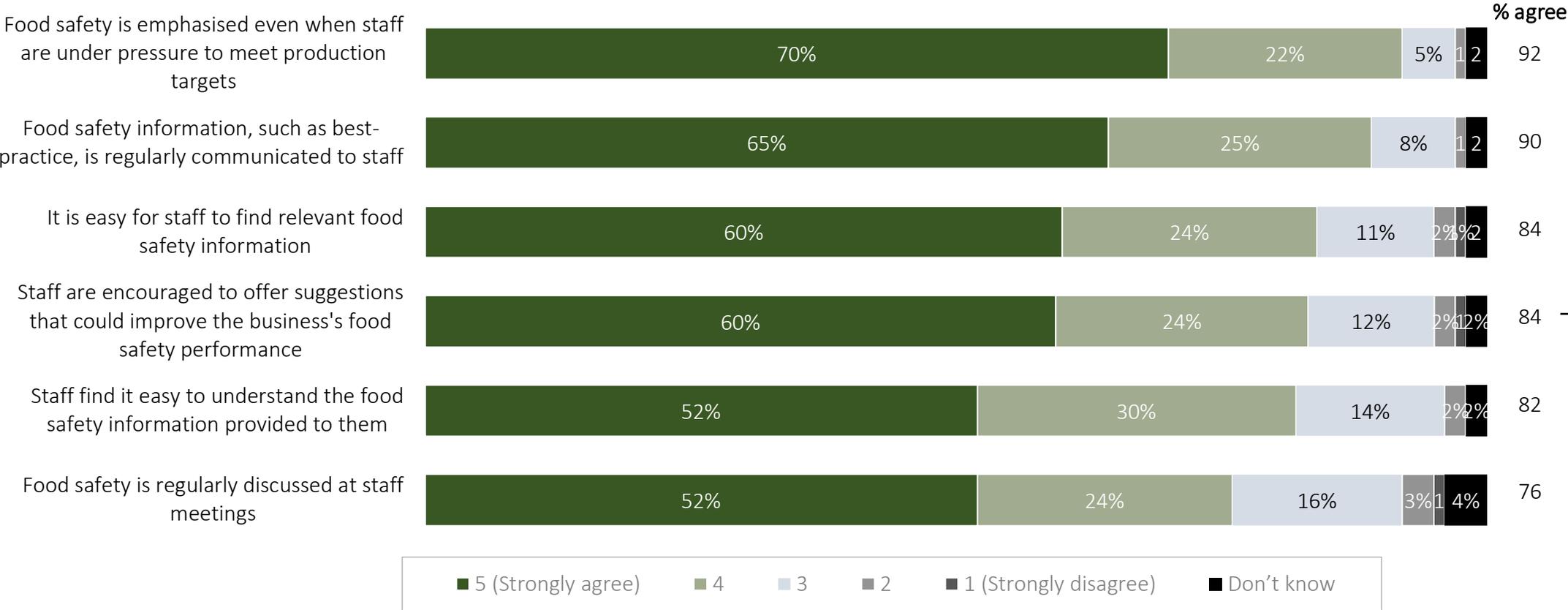
# Communication about food safety within the business



Most businesses are positive about food safety communication with frontline staff (although agreement is slightly lower that food safety *is regularly discussed at staff meetings*).



*Staff communication (viewpoint from decision-makers)*

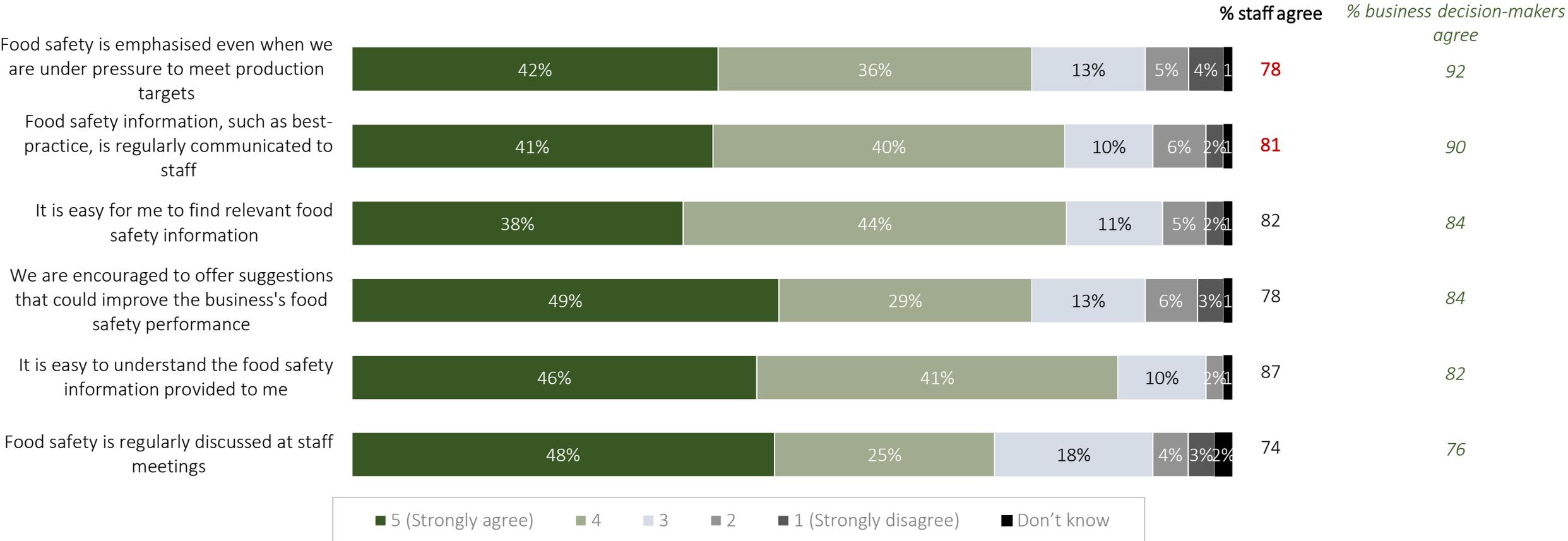


→ More likely for single-site businesses (86% vs. 78% at multisite businesses)

Those responding to the staff survey are also generally positive about communication, but are less positive than business decision-makers. The gap was largest for the first two statements in this chart *food safety is emphasised even when we are under pressure to meet production targets* and *food safety information is regularly communicated to staff*. There is around a 10% gap between decision-makers and staff on these questions. [Slide 44 describes the findings from the qualitative research which suggest that production targets can have a negative influence on food safety prioritisation].



*Staff communication (viewpoint from staff)*

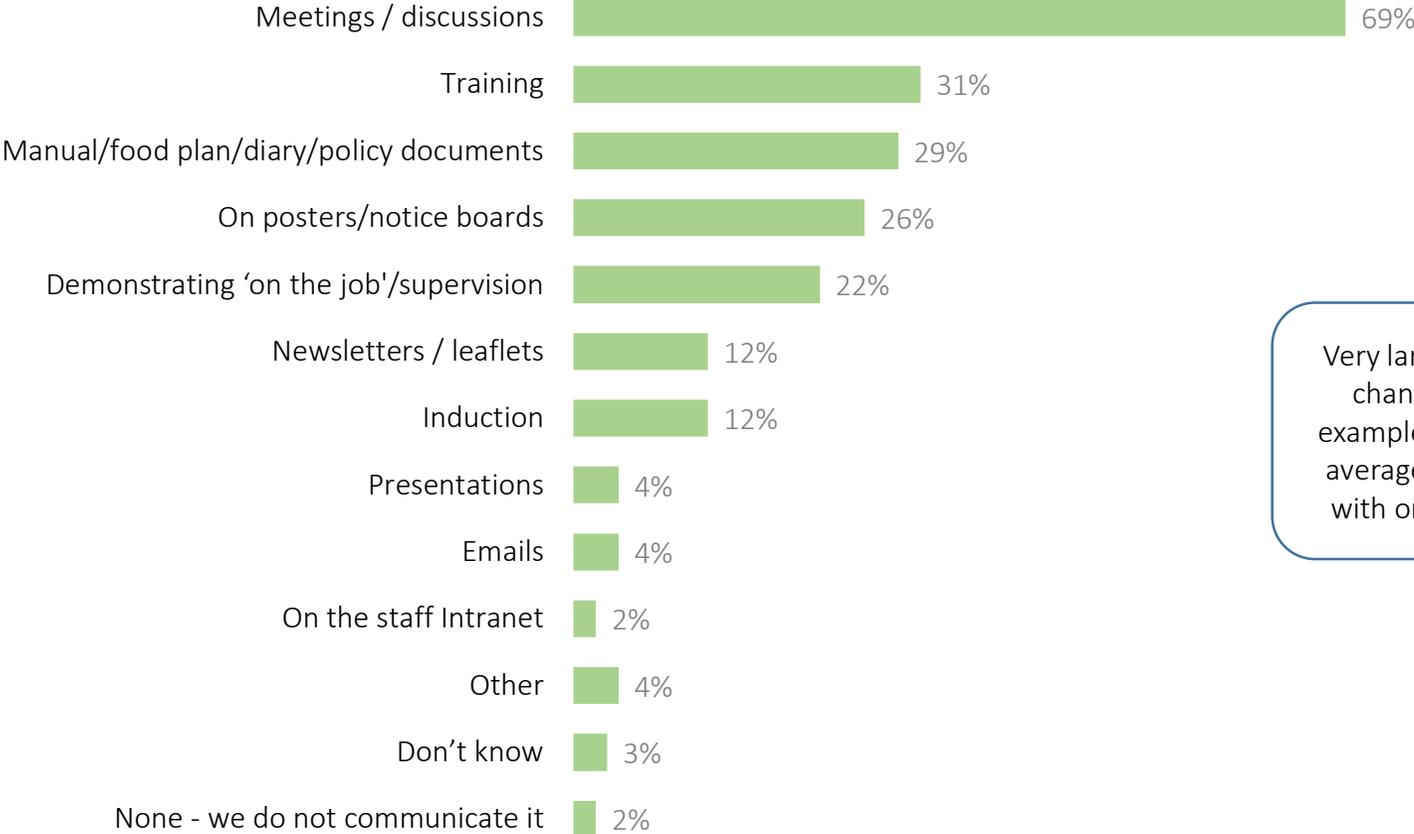


Supervisors are more likely than frontline staff to agree that *food safety information (such as best-practice) is regularly communicated to them (84% vs. 78% of frontline staff)* and that *it is easy to understand food safety information (90% vs 83%)*.

Most businesses communicate food safety to staff in meetings (but training, manuals, and posters are important channels too).



*How food safety is communicated to staff*



Very large businesses use a wider range of channels to communicate to staff (for example, businesses with 100+ staff use an average of 3 of these channels, compared with only 2 for businesses with 1-9 staff).

Source: telephone survey. S3 – How is food safety information communicated to non-management staff?  
 Base: All respondents (n=900)

The qualitative interviews suggest that meetings are a key channel for discussing food safety. In smaller businesses meetings tend to be informal – often managers are working alongside their staff and can talk about issues as they arise.



Larger businesses tend to have more scheduled, formal meetings with clear agendas.

*“We have weekly production meetings... we talk about problems, review the cleaning schedule and [lab] test results.”*

*[Medium food manufacturer/processor]*

*“Every month we have a staff meeting, and one component of that is quality and food safety. Our manager attends to help answer questions, but also to provide support, to help facilitate and drive what we do.”* [Large food/beverage manufacturer/processor]

Meetings in smaller businesses tend to be informal and issues are raised in an ad hoc manner. In saying that, many in smaller businesses feel they have a ‘good handle’ on what is going on because they often work alongside staff (and don’t feel the need for meetings of a more formal nature).

*“Our meetings are pretty informal... sitting around at smoko time. We’re all in one place, so we talk about stuff then.”*

*[Small food manufacturer/processor]*

*“You can’t beat just walking around the site... hygiene procedures are on display. Are they wearing the correct clothing? Have they washed their hands? You can pick up on the small things they don’t do... it’s a change to correct there and then.”*

*[Medium food manufacturer/processor]*

Most agree that signage around the premises acts as an effective prompt which encourages good food safety behaviour.



Most businesses have multiple signage throughout their workplaces.

*“We have all the standard industry signs, what you would expect to have... that’s more about common sense... wash your hands, don’t run, wear your high viz, procedures for staff before entering certain areas...”* [Medium food manufacturer/processor]

Most are positive about signage and perceive it to act as a good reminder.

*“The signs are helpful because all the signs are right in front of you... how you handle stuff, wash your hands, just remind you what you have to do... every day, do this first, do this next...”* [Large retailer – frontline staff member]

Others acknowledge that signage can become ‘part of the wallpaper’.

*“We have plenty of signs... wash your hands, keep it clean... it acts as a reminder. In this business, washing your hands is standard anyway, so yeah, I guess it becomes part of the wall paper.”* [Small food manufacturer/processor]

It is interesting to note that supplier catalogues for signage and other health and safety products can act as an indirect influence – a couple of businesses mentioned that staff use those to source food safety ideas and keep up-to-date with new products and services.

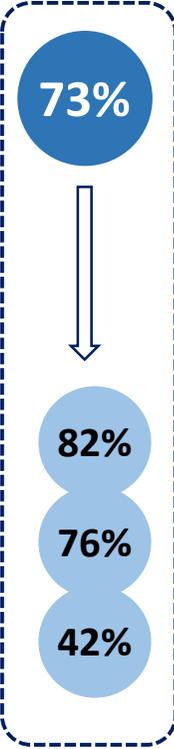
# Internal and external food safety training



Over 7 in 10 have sent staff on food safety training in the past two years (internal training is slightly more common than external training). It is mainly frontline staff and supervisors that receive training (only 4 in 10 of those providing training included directors). In addition, most businesses (almost 9 in 10) say that staff handling food require an induction.



*Food safety induction and training*



73% have undertaken food safety training in the past two years (27% have done internal training, 13% external training, and 34% have done both internal and external). Training is more common among:

- Businesses who have experienced a serious food safety incident (92% - see slide 91 for more details).
- Businesses with 50 or more staff (98%)
- Importers (84%)
- Businesses in Auckland (87%).

Of those undertaking training:  
82% have trained frontline staff\*

76% have trained managers/supervisors

42% have trained directors (or the owner) [note this did not vary based on whether the business has a Board or not]

Source: telephone survey. T1 – have any staff undertaken food safety training in the past 2 years? and T2 – who received this training?  
Base: All respondents (n=900)



86% say that all new staff handling food receive a food safety induction. Nearly all medium to large manufacturers and retail/wholesalers say this (97% for both).

Source: telephone survey. T3 – Do all new staff handling food receive a food safety induction before they are allowed to start handling food?  
Base: All respondents (n=900) \* (please note that this proportion - %staff going on training - corresponds almost exactly with the same question in the staff survey)

# The qualitative interviews reveal that not all businesses perceive a need for training directors.



Some businesses suggest the lack of food safety training for directors and senior management is simply due to location, with directors not being based onsite. In this context on-site supervisors take responsibility.

*“Our directors don’t do training because they’re not actively onsite. They are instructed by us when they are on site.”* [Medium food manufacturer/processor]

Others don’t see food safety training as part of the directors’ role – which comes back to job specialisation.

*“We’ve never considered the need [for directors/management] to do it [training]. We’ve got people in place to do it.”* [Large food manufacturer]

*“Traditionally, [food safety] training has been more operations focussed.”* [Large food manufacturer/processor]

Some owners/managers feel they have sufficient experience from their previous roles.

*“It’s probably quite important for people coming in [to the industry]. But we’ve all been here for years.”* [Small food manufacturer/processor]

*“I haven’t done any [food safety] training here. But I was a qualified chef in a previous life, so it’s been instilled in me.”* [Small retailer]

Resource constraints also limit training opportunities for senior staff.

*“We are really small, so I can’t have staff doing other things or going on a day or two training for food safety. I just can’t afford it. People need to be at work. It is just not practical. And if it isn’t part of the flow of work, it interrupts or requires extra time and effort, it can get forgotten or neglected because we are a small team.”*  
[Medium retailer]

*“[It would be good if] HACCP training was not so expensive, so anybody can go and do it. I looked at one but it was about \$3,000. More affordable training... would encourage anyone working in the food industry to do it.”* [Large food beverage wholesale/distributor]

Over 8 in 10 agree that their recent training was 'practical' (medium to large hospitality businesses are particularly likely to agree). The staff survey had a similar finding (see next slide). Businesses generally find internal training to be more practical than external training (only 59% agree that external training was practical).



*Views on practicality of training (viewpoint from decision-makers)*

% agree

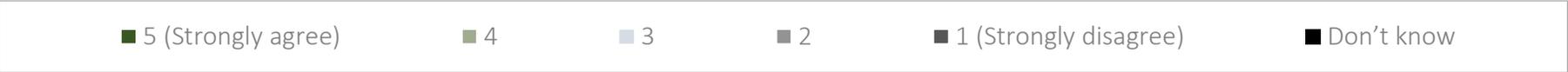
The training was practical, for example demonstrating real-life tasks in your work environment (n=699)



Internal training only (n=204)



External training only (n=101)



**82%** agree training was practical.

More common among:

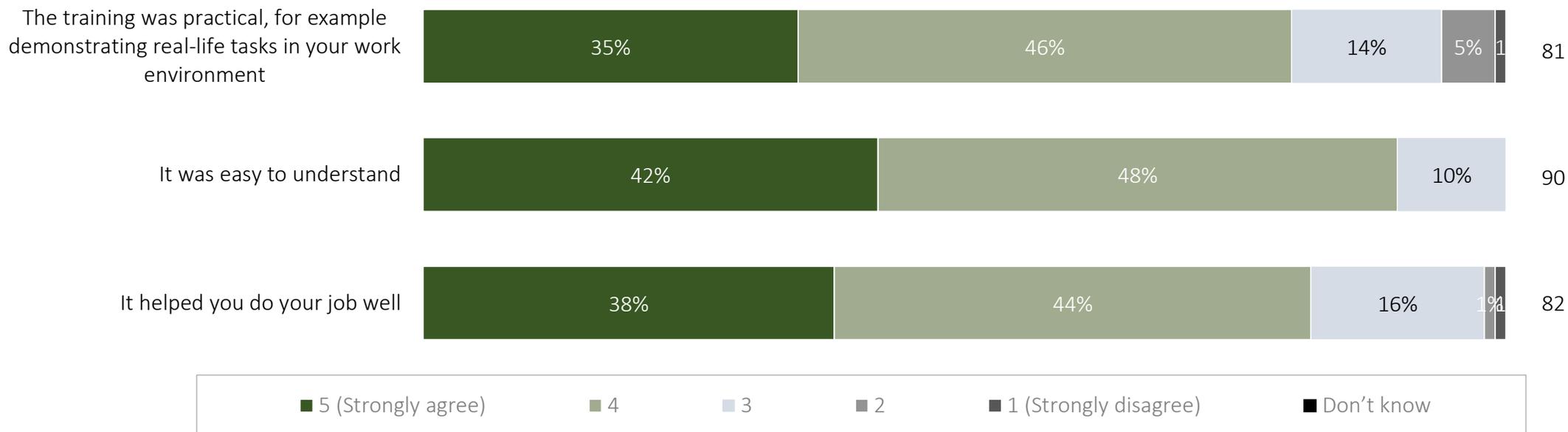
- Medium to large hospitality businesses (90%)
- Businesses with 10-49 staff (88%)



Staff are generally positive that the training was practical, easy to understand, and helped them do their job well. Please note that due to small base sizes we could not analyse the views of staff about ‘external’ vs. ‘internal’ training separately.

*Views on all food safety training received (both internal and external)  
(staff viewpoint)*

% agree



**82%** agree training was practical.

More common among:

- Medium to large hospitality businesses (90%)
- Businesses with 10-49 staff (88%)

# Communicating food safety to consumers



In total 19% of food businesses give out information to the public about how to consume their products safely (beyond what the law requires). The two main channels are 'verbally' and 'packaging / labels'.

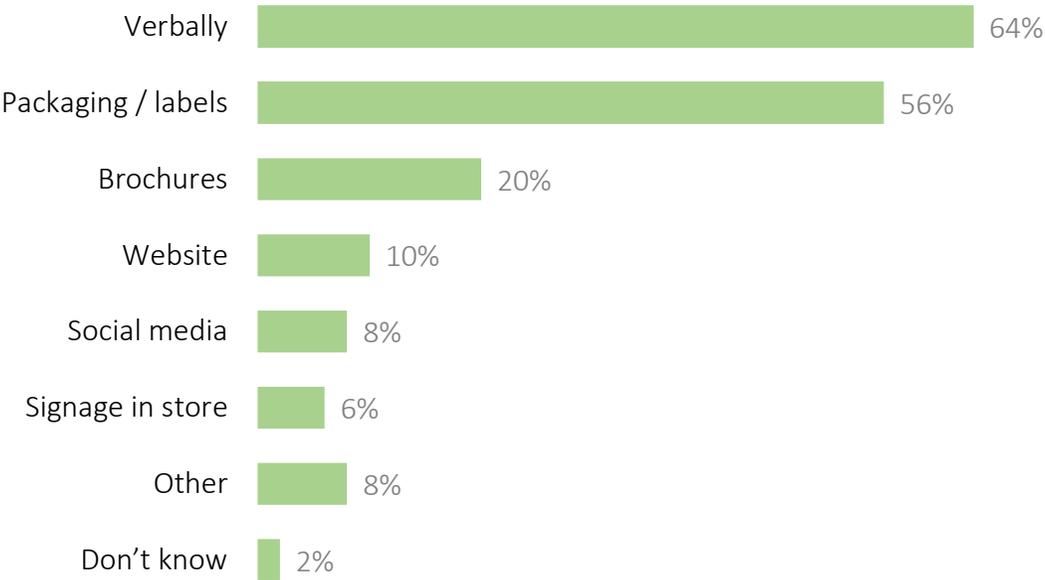


19%

give information to the public about how to handle or consume food products safely (beyond what the law requires). More common among:

- Small retailers (61%), medium to large retailers (46%), small manufacturers (36%), and medium to large manufacturers (24%)
- Importers (30% - compared with 18% of other businesses – including exporters)

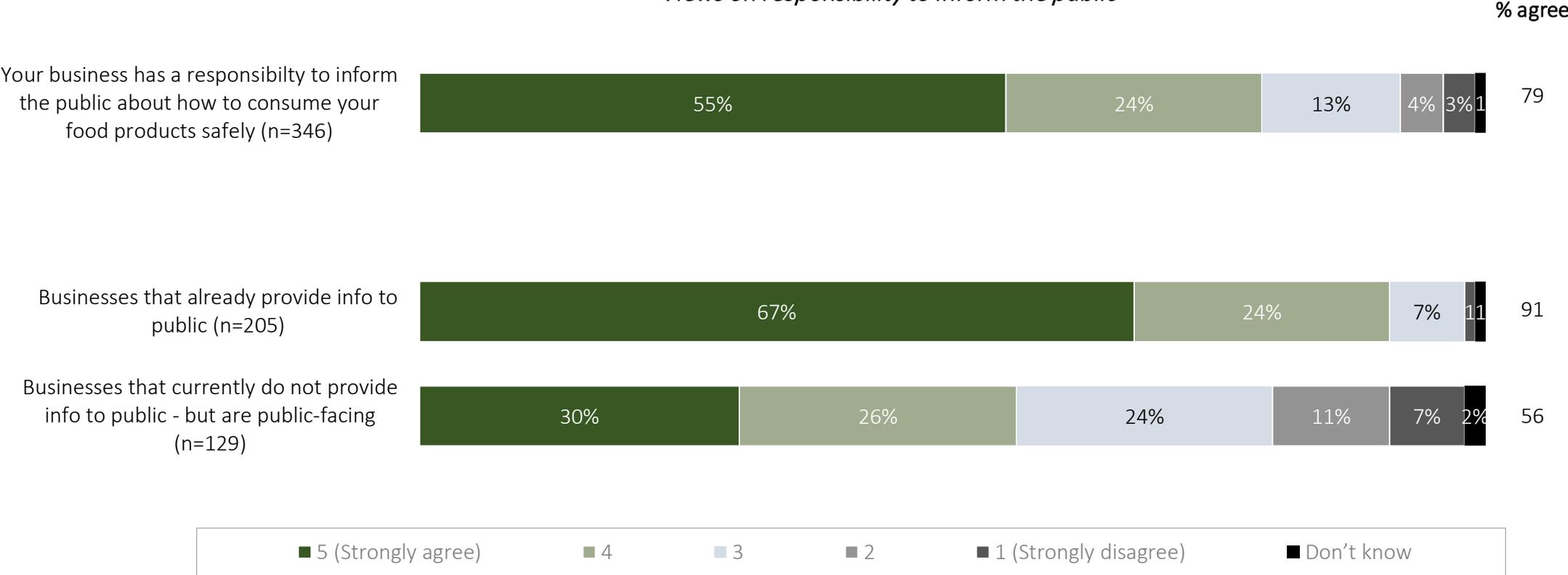
*Channels used to communicate with the public*



Over three-quarters agree that their business has a responsibility to inform the public about how to consume food products safely. Agreement levels are lower among those who do not currently provide information to the public (despite the fact they sell directly to consumers). There are no significant variations by type of business.



*Views on responsibility to inform the public*



# Following best practice



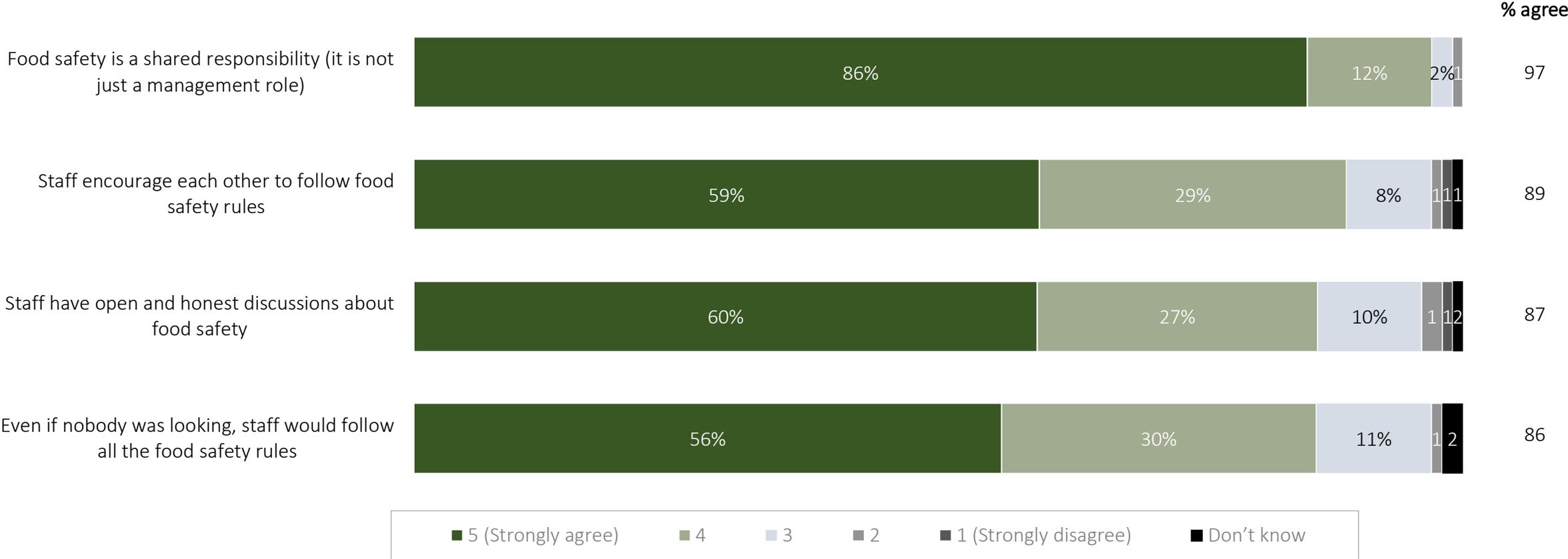
The behaviour of  
non-management  
staff who handle  
food



Most businesses are positive about their staff when it comes to food safety – although agreement that *they all follow the food safety rules* is slightly lower than agreement with other statements. As the next slide shows, very large / multisite businesses are less confident in their staff (e.g. only 2 in 10 large businesses strongly agree that staff follow rules).



*Staff engagement in food safety (viewpoint from decision-makers)*





Businesses with more staff, and multisite businesses, are less likely to ‘strongly agree’\* with statements about their staff engaging with food safety.

Statement about non-management staff (who handle food in the business)	% of businesses with 1-9 staff that ‘strongly agree’	% of businesses with 10-49 staff that ‘strongly agree’	% of businesses with 50-99 staff that ‘strongly agree’	% of businesses with 100+ staff that ‘strongly agree’	% single-site businesses that ‘strongly agree’	% multisite businesses that ‘strongly agree’
Staff have open and honest discussions about food safety	62	62	50	40	64	46
Staff encourage each other to follow food safety rules	61	62	53	34	63	45
Even if nobody was looking, staff would follow all the food safety rules	61	50	31	21	59	42

Note: no real difference by size for these two statements:

Staff are given the equipment or tools needed to ensure food safety	80	86	80	71	82	74
Food safety is a shared responsibility (its not just a management role)	86	86	89	85	84	84

\* Interestingly these differences (by size and single/multisite) become less apparent if we look at all those who ‘agree’ (either strongly agree or somewhat agree). This signifies that although larger multi-site businesses are *generally* confident in their staff, their degree of confidence is *less strong* compared with smaller single-site businesses.

Source: telephone survey. S5 – I’m going to read out four further statements about food safety in your business. To what extent do you agree or disagree with the following statements.

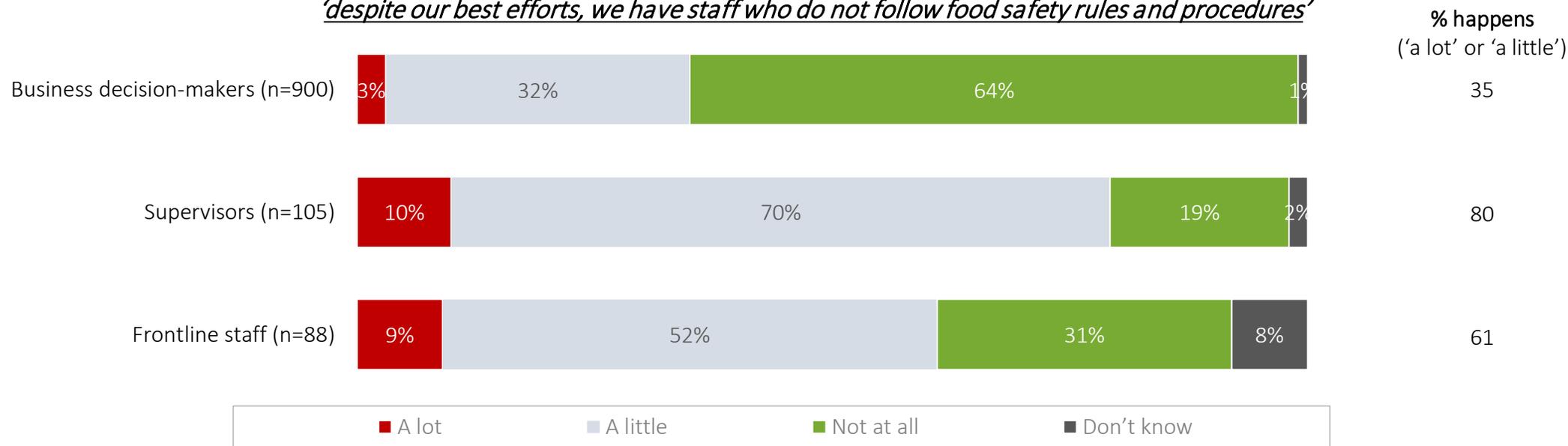
Base: All respondents (n=900)



Over a third of businesses admit that they *have some staff who do not follow the rules*. Businesses that have experienced a serious food safety incident in the past two years, importers, and larger businesses are more likely to admit this. In fact, a high proportion of very large businesses (with 100+ staff) say this happens (72% say it happens ‘a lot’ or ‘a little’).

This chart shows the views of supervisors and frontline staff separately. Supervisors have a particularly negative view about this statement.

*Views on whether the following statement applies to their business ...  
‘despite our best efforts, we have staff who do not follow food safety rules and procedures’*



**35%** of business decision-makers say this happens ‘a little’ or ‘a lot’

More common among:

- Businesses with 50-99 staff (52%) or 100+ staff (72%)
- Importers (45%) and, to a lesser extent, exporters (42%) vs. non importer/exporters (32%)
- Businesses that have experienced a serious food safety incident in the past two years (48%, compared with 32% of businesses who have not had an incident)

**80%** of supervisors say this happens ‘a little’ or a ‘lot’.

**61%** of frontline staff say this happens ‘a little’ or a ‘lot’.



In the qualitative interviews businesses identified particular types of staff considered to be ‘high risk’ (in terms of poor food safety behaviour). This includes: trainees, students, migrant workers, and temporary/casual staff. Medium to large businesses are more likely than small businesses to employ a full range of staff-types, but will pursue strategies to mitigate the risks (such as limiting food-handling among casual workers).

#### Staff considered higher risk:

- Trainees / new recruits undergoing training

*“The young guys coming in don’t want to wear hair nets. They are more worried about what it looks like rather than food safety.” [Medium retailer]*

- Students on work experience / placement

*“She didn’t know better, but she sneezed right onto the tray of muffins. We had to throw the whole lot out.” [Medium café]*

- Migrant workers - these include language barriers and cultural practices from other nations.

*“We have migrant staff who come annually for 10 years and that is different. But when they first arrive – before you can do food safety you have to do basics, like personal hygiene. They have their own personal hygiene issues. Some have limited experience of running water, a shower, or they don’t know how to use a washing machine. So we have people in the staff housing to help and the supervisors and leaders. And we have signage in all languages.”*

*[Large horticulture]*

*“[English as a second language] is my biggest barrier. They watch a video but we need to make sure they understand.”*

*[Large food beverage wholesale/distributor]*

- Casual or temporary staff - many businesses have active strategies around staffing to limit the potential effect on food safety practices. Some seek to employ a dedicated full time workforce. Others limit food handling among casual staff.

*“We try not to have casual or temporary staff... just full time staff. Culture and values are easier to instil if they work full time. We do have two workers who work part-time, but they’ve stepped back from full-time to part-time.” [Large food/beverage manufacturer/processor]*

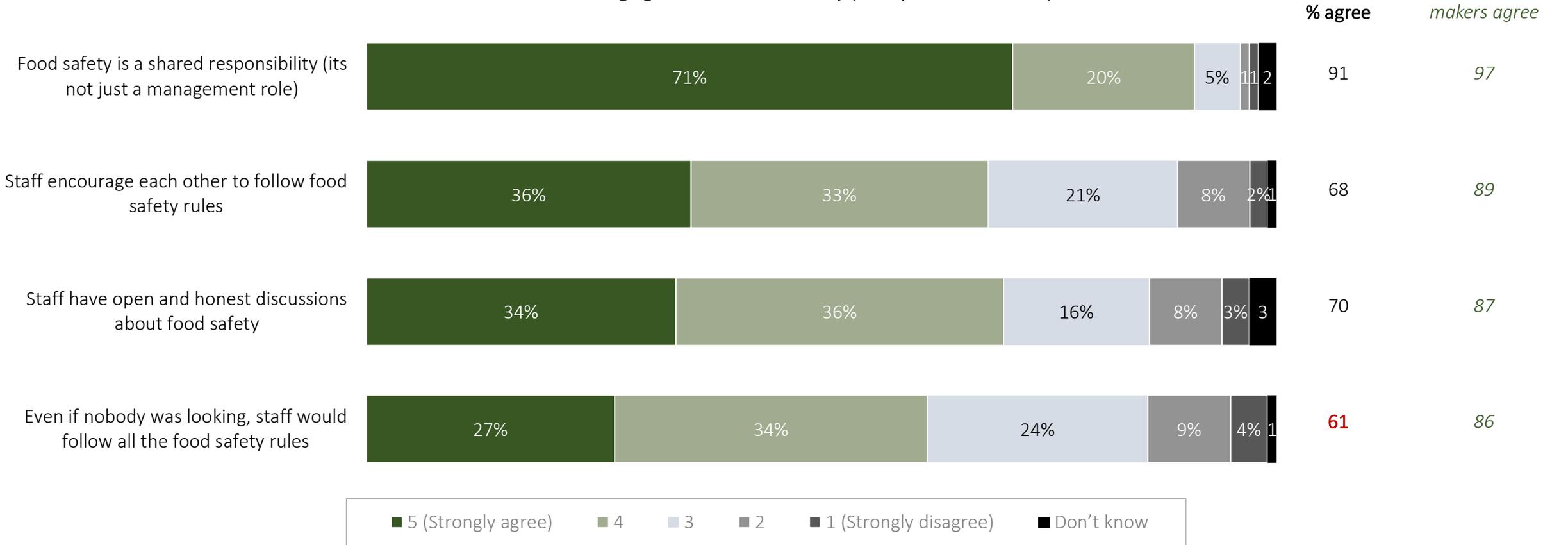
*“We don’t put casual staff in the position that would involve food safety... we don’t expose them to the product.” [Medium food manufacturer/processor]*

Staff responding to the staff survey are also generally positive about staff engagement in food safety, but are less positive than business decision-makers. The gap was largest for the statement *even if nobody was looking, staff would follow all the food safety rules* – only 6 in 10 staff agreed with this statement (there is a gap of 25 percentage points between staff and decision-makers on this question).

(Note that there are no significant differences in how frontline staff vs. supervisors answered this question.)



*Staff engagement in food safety (viewpoint from staff)*



Almost all business decision-makers and staff agree that staff are provided with the equipment and tools needed to ensure food safety – although staff are slightly less positive – findings elsewhere suggest that this may relate to a lack of awareness about roles and responsibility and/or not always being given clear feedback (see slides 59 & 60 for details).



*Provision of adequate equipment and tools*

% agree



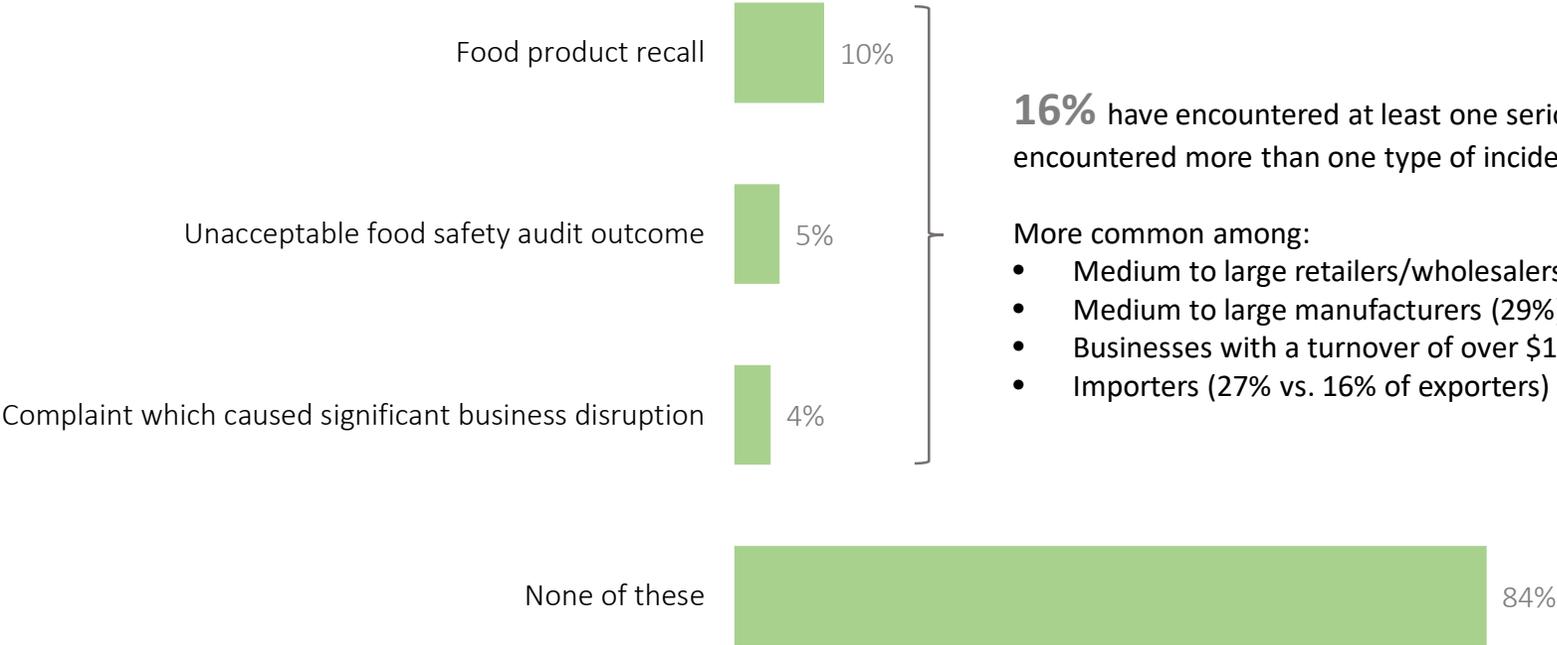
# Learning from incidents / verifiers



Most businesses say they have not encountered any serious food safety incidents in the past two years.



*Serious incident in past two years*



**16%** have encountered at least one serious issue in the past two years (some encountered more than one type of incident).

- More common among:
- Medium to large retailers/wholesalers (59%)
  - Medium to large manufacturers (29%)
  - Businesses with a turnover of over \$1.5m (24%)
  - Importers (27% vs. 16% of exporters)

# Food safety incidents can act as a catalyst for change.



**Businesses who have experienced a serious food safety incident are more likely to invest in external training (which is a good proxy for 'prioritising food safety').**

64% of businesses experiencing a serious food safety incident in the past two years have sent staff on external training (within the last two years) – this compares with 43% of businesses who have not experienced a recent food safety incident.

**Multivariate analysis shows that 'experience of an incident' is one of the most important predictors of investing in external training**

In fact, multivariate analysis\* confirms that *experiencing a serious food safety incident* is one of the top three influences on the tendency to invest in external training. It is relatively more important than almost all other business demographics (with the exception of 'turnover'). The top three predictors of the tendency to invest in external training are listed below:

- 1** Turnover - businesses with a higher revenue are more likely to invest in external training.
- 2** The experience of a serious food safety incident – it is interesting to note that this is more important than other business demographics such as size and sector.
- 3** Staff size is the next most important influencer.

However, it should be noted that this point-in-time survey can only determine a link between a serious food safety incident and a focus on best-practice, not causation (to do so would require a longitudinal survey tracking changes over times).

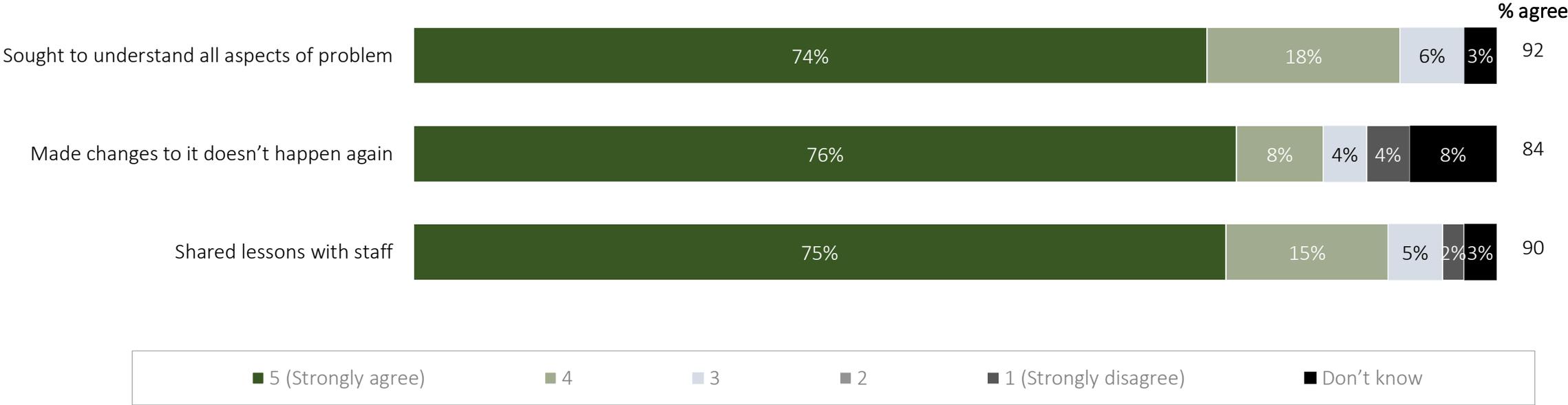
It should also be noted that, as Slide 106 shows, a serious food safety incident is *not* associated with different ratings for the key food safety culture variables such as trust in staff and confidence in the food safety commitment of the whole organisation (suggesting that it takes more than an incident to change culture).

\* This analysis was based upon CHAID, which stands for Chi-squared Automatic Interaction Detector. CHAID detects interaction between variables in the data set and is a useful alternative to multiple regression. In this case the data set was not particularly well-suited to regression analysis (partly because of the type of variables used and the small proportion of the dataset that had actually encountered an incident). CHAID uses chi-squared tests to create optimal splits in the data. Note that this is not a bivariate analysis, and does not use numerical or ordinal variables so it is not appropriate to report 'correlation coefficients' (an answer tree is available upon request).

Most businesses experiencing serious food safety incidents seek to learn from them (a high proportion strongly agree that they fully investigated the incident and made changes / shared lessons with staff). As the previous slide shows, they are also likely to invest in external training.



*Whether businesses learn from serious food safety incidents*



The qualitative research also suggests that businesses seek to learn from incidents, and this tends to involve new processes or training for staff.



*“We had to recall [product] because the bagging was done wrong. They were printed incorrectly. What was on the bag didn't match the product. We did training with the areas concerned and implemented a training sheet that needs to be signed off.*

*When someone says it from outside the business, it's more meaningful because it is from a different perspective.*

*Our focus is now on understanding why it happened and how to resolve it so it doesn't happen again. It's less about blame. It's good to put another robust checklist in place. It saves a multitude of work, compared with products being recalled.”*

*[Large food/beverage wholesaler/distributor]*

*“We had an incident when our refrigeration system collapsed. We put everything on hold, and did testing [microbial growth, sensory].*

*We ended up dumping a whole lot of stuff and cancelled the whole production run for the day. The rest went down the drain.*

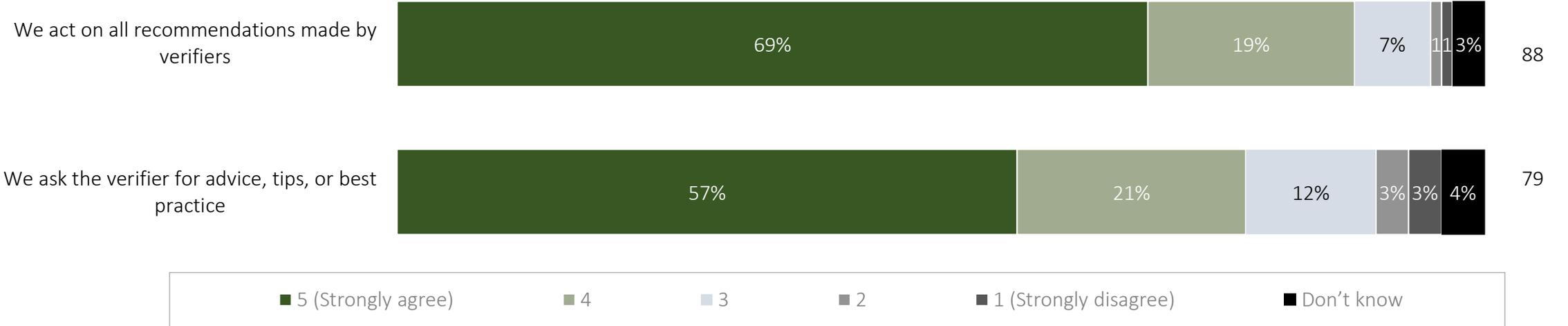
*Our learnings... the [refrigeration] alarm system was not working efficiently, the threshold for the alarm to ring was too far out. We reprogrammed the alarm system so the alarm actually goes off. And we now have staff checking that the refrigeration system is working, every morning and every evening.”*

*[Large food/beverage manufacturer/processor]*

Most businesses have a positive relationship with their verifiers/auditors – particularly larger businesses. Businesses who have experienced a recent incident are more likely to seek advice, tips and best-practice from the verifier – as are medium to large manufacturers. However, small businesses are less likely to act on recommendations or ask for advice.



*Relationship with verifiers*



**88%** agree, or strongly agree, that they act on all recommendations made by verifiers. This is more common among:

- Businesses with 50 or more staff (97% vs. 87% of smaller businesses)
- Businesses with a turnover higher than \$1.5m (93% vs. 86% of businesses with a smaller turnover).
- Note that businesses with less than 10 staff are slightly *less* likely to act on recommendations (86%).

**79%** agree, or strongly agree, that they ask verifiers for advice, tips, or best practice. This is more common among:

- Medium to large manufacturers (85% vs. 78% of other businesses)
- Businesses that have encountered a serious food safety incident in the past two years (88% vs. 77% who have not had an incident)
- Note that businesses with less than 10 staff are slightly *less* likely to ask for advice (77%).

In the qualitative interviews large businesses described a wide, and strict, set of audit regimes – some of which are specific to their industry or product.



Larger businesses are subject to a wide variety of auditors and audit processes – from both domestic and international entities. These include, local governing bodies, marketing boards, accreditation organisations and customers. For example, local council, landlords, MPI, ISO, marketing boards (e.g. Pip Fruit NZ, Zespri), international distributors/retailers (e.g. BRC - British Retail Consortium).

Many larger businesses conduct multiple audits – including implementing their own internal audits. For some, this allows a ‘practice run’ for external audits. Others see a key benefit of ensuring they keep up to date with industry changes.

*“We do a six monthly internal audit, as well as a 12 monthly external audit. It keeps us up to date. There's so many changes in the food industry, things changing for one month to another.”*

*[Large food/beverage wholesale/distributor]*

Stringent external audits and demanding standards are required when selling to large business-customers and export markets.

*“If you have an exporter’s license you can’t fly under the radar.”* *[Large seafood wholesaler]*

*“We belong to the Sustainable Winery NZ Group which is necessary if you're exporting or playing any part in the industry. Their annual audit brings us up to date with any chemicals and food safety issues that are being monitored, such as dried goods that come in. It's all thoroughly reviewed in the build-up to their audit. We also have a Wine Standards Management Plan that we follow and the food safety side of it is probably more stringent than the Sustainable Winery NZ Group's plan.”* *[Large winemaker]*

The relationship between businesses and verifiers is improved when a business is open to input and when the auditor has industry-relevant best-practice to share. These businesses view auditors as ‘educators’ (rather than ‘enforcers’).



#### The relationship is enhanced when...

- There is a sense that the auditors and the business are working together to achieve the same goal. Audits can be an important opportunity to learn and improve. Many businesses recognise the value of external auditors in order to learn about best-practice (particularly if the auditor has relevant industry experience to share).

*“I think MPI is really good, and part of their role is the auditing function. They're very reasonable and approachable. They offer advice when we ask, and don't turn it around and use it against us. They help us through.”* [Large food manufacturer]

*“I see them as friend not foe.”* [Medium horticulture]

*“It's a great opportunity to ask them about best practice... what they've seen, how things are being done... they've been exposed to a number of organisations just like ours.”*

[Medium food manufacturing/processing business]

*“There's always something new that comes up, that we hadn't seen. It's great to have a new set of eyes.”*

[Large food manufacturer/processor]

- The auditors have an understanding of the realities of being in business, and that some aspects are a work in progress.

*“They (MPI) have a good balance between the industry operating in a good way and the practical application with operators. They know that as a business, we're growing and improving. If some things are not ideal, they're not too tough. They know we're moving in the right direction.”*

[Large food manufacturer]

- The timing of the audit has a minimal impact on the business.

*“We know when they're turning up. The time of the year he comes, is reasonably quiet.”*

[Small food manufacturer/processor]

However, some businesses criticise auditors for applying incorrect codes, pedantry and not understanding the industry properly. They view auditors as ‘enforcers’ and they admit that their tendency is to temporarily adjust their behaviour when the auditor is on-site.



Criticism of the auditing process, tends to focus on individual auditors and their perceived (lack of) industry knowledge.

*“Greater clarification on the actual standard. Auditors will reference a specific ruling, but it’s not appropriate to our industry.*

*We’re not ready to eat, we’re ready to heat. They shouldn’t impose different category standards on us.”*

*[Large food/beverage manufacturer/processor]*

Businesses express frustrations with auditors who appear to be overly pedantic or seek to apply incorrect codes.

*“Some auditors seem pedantic about things... especially if they don’t understand the baking industry.”*

*[Large food/beverage wholesaler/distributor]*

Those who perceive the verifier in an enforcement role, often experience a greater change in behaviour when an auditor is onsite. However, this is motivated by a desire to pass the audit and move on (rather than make long-term changes). The auditor can even instil a sense of ‘fear’ – particularly if the audit is conducted as part of an important customer contract.

*“Yes it [behaviour] changes. It’s spick and span, they’ve wiped their nose, they’re looking fine.”* [Large food/beverage wholesaler/distributor]

*“If the lady is coming to town, the staff is cleaning this, is cleaning that, is cleaning the whole department, turning it upside down... I asked, what’s going on? It’s the first time I see them move that fast!”* [Large retailer – frontline staff]

*“Yes behaviour does change [when auditors are onsite]. There’s a move towards better practice... The reason why isn’t as good everyday, there’s a lack of enforcement and the focus is more around volume and less about cleaning and hygiene practices.”* [Large food manufacturer]

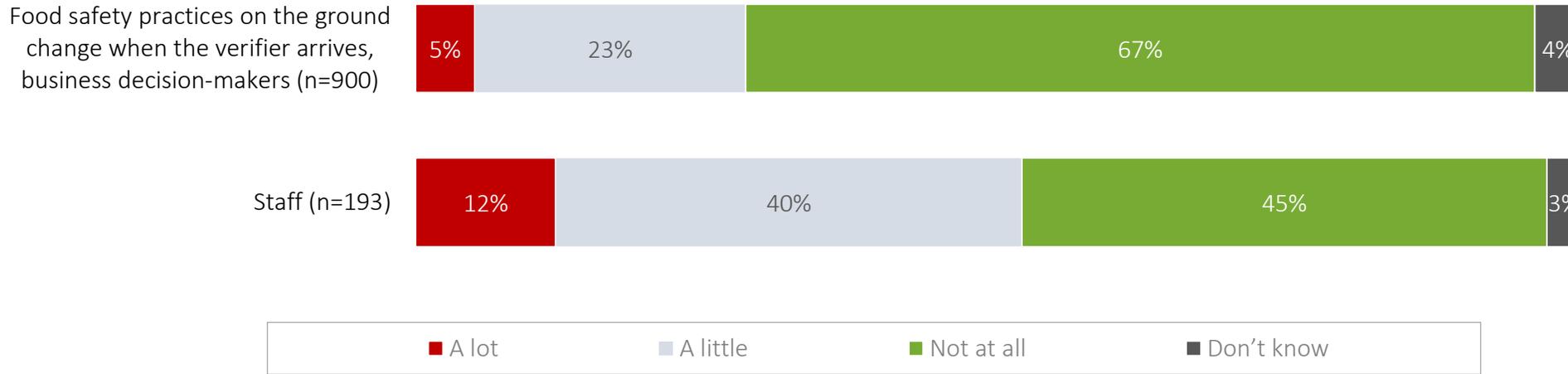
*“Yes, behaviour does change... there’s a bit of fear factor when the auditor is onsite... it’s like the police coming around. The guys are a lot more quiet. They pay extra attention to what’s going on around them, they’re very conscious to make their areas look better.”* [Large food/beverage manufacturer/processor]

*“We only maintain food safety until the BRC audits, then people stop – it is not a 24 hour every day practice - changing culture is hard.”* [Middle-manager in a medium horticulture business].

The survey indicates that almost 3 in 10 businesses admit that *practices on the ground change when a verifier arrives*. Very large businesses (with over 100 staff) are more likely to say this – probably because they have more staff to supervise – including more casual/temporary staff (discussed at slide 86).



*Whether practices change when verifier arrives (views from decision-makers and staff)*



% happens ('a lot' or 'a little')

28

52

**28%** of business decision-makers say this happens 'a little' or 'a lot'

**52%** of staff in the survey say this happens 'a little' or 'a lot' (this did not significantly vary between supervisors and frontline staff).

More common among:

- Businesses with 100+ staff (53%)
- Note that there are no differences in the views of supervisors vs. frontline staff for this question.

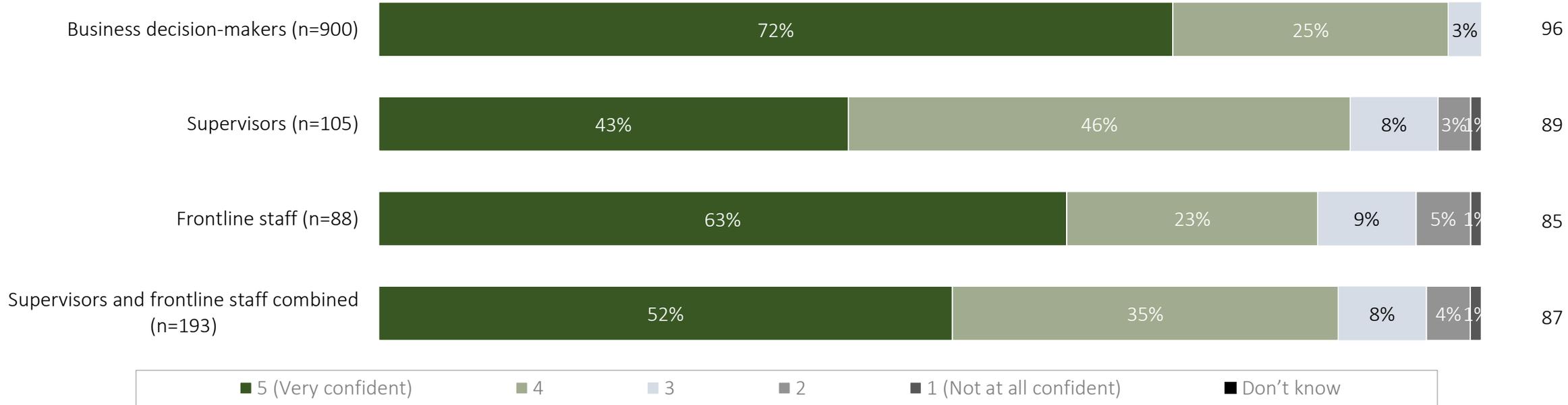
# Confidence



Almost all (96%) businesses are confident that there is a strong commitment to food safety throughout their business. However, large businesses are less likely to be 'very confident'. 9 in 10 staff are confident (which is broadly similar to business decision-makers), although supervisors are less likely than frontline staff (and decision-makers) to be 'very confident'.



*Overall confidence that there is 'a strong commitment to food safety throughout the business' (views from business decision-makers and staff)*

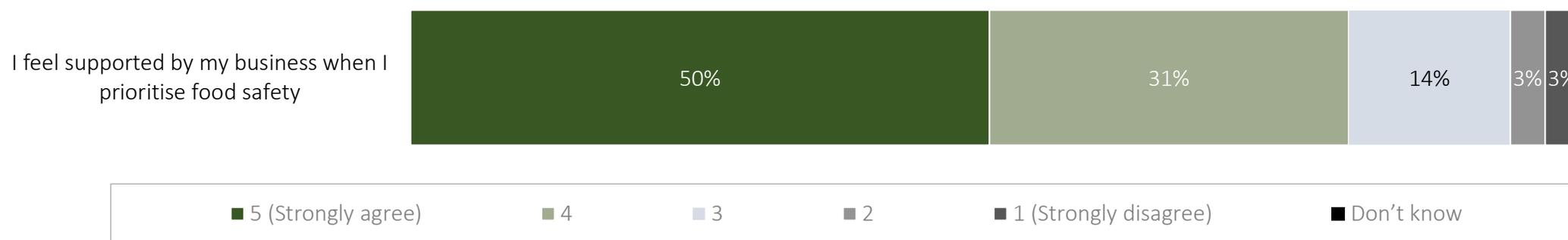


**72%** of business decision-makers are 'very confident'. This is higher among small businesses (with 1-9 staff) (75% - compared with 66% of businesses with 10-49 staff, and 57% of businesses with 50+ staff).



Staff were asked a further question about confidence in their business: *do they feel supported when they prioritise food safety?* Most staff say they do feel supported.

### Feelings of support among staff



**81%** agree with this statement – it did not vary between frontline staff and supervisors.



Decision-makers' confidence in food safety in their business is mostly driven by the level of trust they have in their staff.

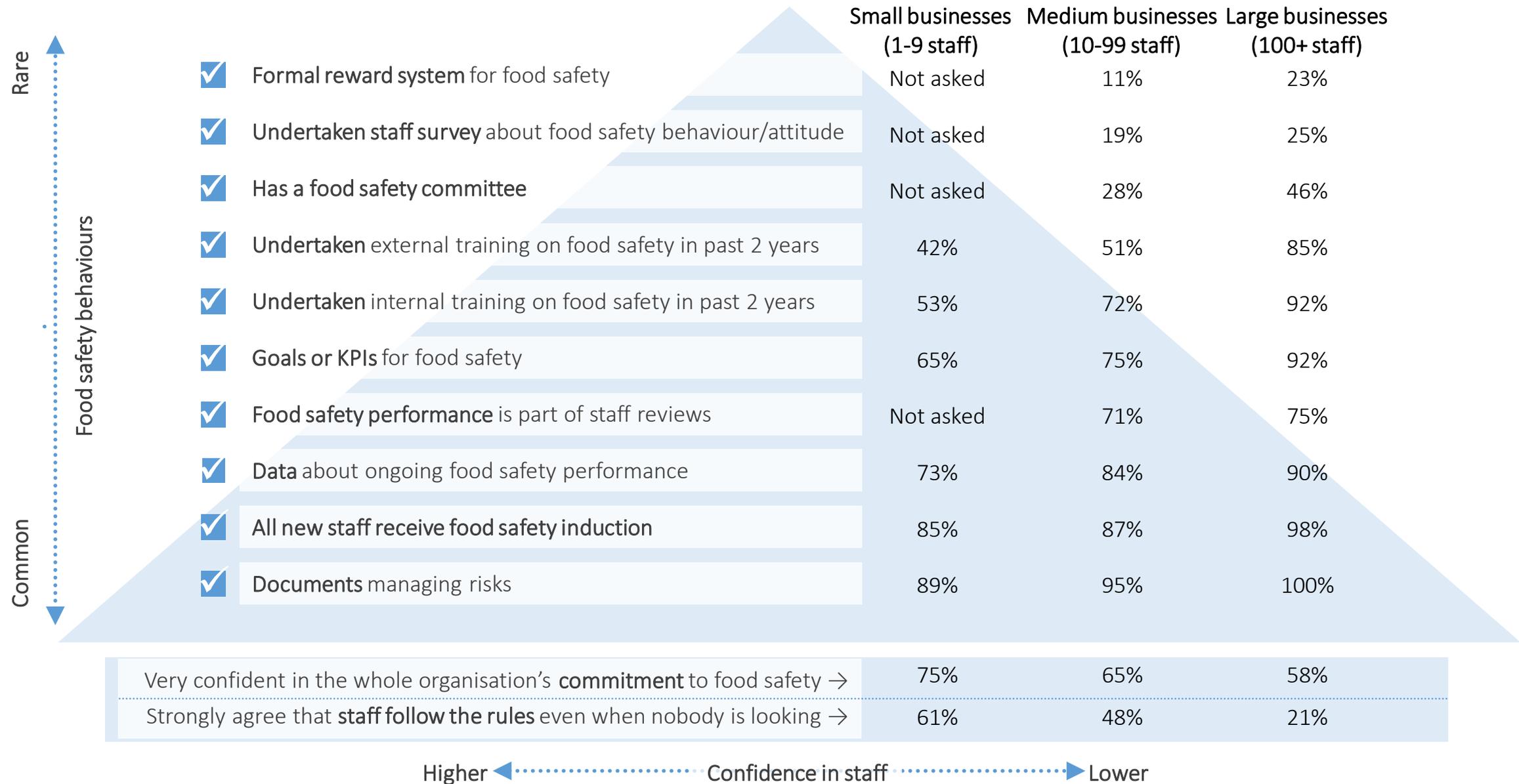
*Top correlations associated with confidence that there is 'a strong commitment to food safety throughout the business' (if decision-makers strongly agree with these statements then they tend to have strong confidence and vice-versa)*

- 1** Even if nobody was looking staff would follow all the food safety rules  
(correlation coefficient with confidence = 0.448\*)
- 2** Staff are clear that what they do impacts the safety of food  
(correlation coefficient with confidence = 0.415\*)
- 3** Managers visibly shows support for food safety - they 'walk the talk'  
(correlation coefficient with confidence = 0.399\*)
- 4** Staff find it easy to understand the food safety information provided to them  
(correlation coefficient with confidence = 0.395\*)
- 5** There is a clear allocation of roles and responsibilities for food safety in your business  
(correlation coefficient with confidence = 0.382\*)

\* In social sciences a moderate correlation coefficient (suggesting a link between two variables) is around 0.3 (whereas 0.5 is considered a strong coefficient).

# The interplay between behaviour and confidence

10 behavioural proxies (drawn from findings throughout this report) indicate that large businesses invest more in food safety behaviours (including some of the rarer behaviours such as formal reward systems). Despite this investment, large businesses have significantly lower levels of trust in their staff and lower confidence in their organisation's commitment to food safety. It is the opposite case for small businesses (i.e. less formal processes but higher confidence in their staff).



# Link between compliance and food safety culture



We had insufficient compliance data to determine correlations between compliance and food safety culture – however, the survey contains a proxy for compliance which is: ‘self-reported serious food safety incidents’.

- In total we interviewed only 35 businesses that had an MPI rating of ‘poor’, ‘medium’ or ‘good’ compliance. **This low number of businesses with an MPI compliance rating is insufficient to be able to determine correlations with food safety culture.**
- However, the survey itself contained three questions about serious food safety incidents. These included:
  1. **Whether the business had experienced a food product recall in the past two years.**
  2. **Whether the business had experienced a complaint about food safety which caused disruption to their business in the past two years.**
  3. **Whether the business had been told that their food safety audit outcome was unacceptable in the past two years.**
- These three questions, particularly the one about unacceptable food safety audit outcomes, are arguably a ‘proxy for compliance’. This is supported by evidence of a link between the survey questions and the compliance data obtained from MPI. As described on slide 90, 16% of the survey sample had experienced one or more of the three incidents in the past two years. Among businesses rated as ‘poor’ or ‘average’ in the MPI compliance data, this increases to 34%, whereas it is only 13% for businesses rated as having ‘good’ compliance by MPI.
- Because we had limited compliance data from MPI, we explored the link between ‘compliance’ (using the three survey questions described above) and ‘culture’ (using some of the key food safety culture variables from the survey). The findings are described overleaf.

The table below shows the average scores (out of 5) for a number of key measures in the survey including *confidence in commitment to food safety* and the key variables associated with that (such as *staff following the rules*). The table is broken down into those who ‘self-reported’ a serious food safety incident in the past 2 years and those who did not (the majority). Conclusions are below the table, and described in more detail on the next slide.

*Table demonstrating no significant differences on key food safety culture variables between those who have experienced a serious incident vs. those who have not.*

Statement about food safety culture	Businesses that have experienced a serious food safety incident in the past two years (n=191) Average score (out of 5, where 5 is strongly-agree)	Businesses that have NOT experienced a serious food safety incident in the past two years (n=709) Average score (out of 5, where 5 is strongly-agree)
How confident are you that there is a strong commitment to food safety throughout your business?	4.6	4.7
Even if nobody was looking, staff would follow all the food safety rules	4.3	4.5
Food safety is a shared responsibility (its not just a management role)	4.8	4.8
Staff are clear that what they do impacts the safety of food	4.8	4.8
Food safety rules and procedures are regularly reviewed with staff	4.4	4.4
Managers give clear feedback about the food safety performance of their staff	4.4	4.8

### Conclusions:

1. We had a proxy for compliance in the survey
2. There is no link between that proxy and some of the key components of food safety culture
3. To fully determine correlation between food safety compliance and food safety culture would require a much larger dataset (which contained compliance data for each business)

We conclude that there is no obvious correlation between food safety culture and compliance.

The table on the previous slide shows that, for some key measures of food safety culture, there is very little difference between businesses that have experienced an incident and those who have not. The former are slightly more negative about their staff and managers, but differences are minimal. This limited evidence suggests that there is **not a clear correlation between compliance and food safety culture** (albeit we have measured 'compliance' using a self-reported measure of 'food safety incidents' which is more akin to 'performance' than compliance with a particular regulatory regime).

We suspect that there are other important background factors influencing lower than average compliance and/or food safety performance. Larger businesses, particularly if they are manufacturers, are likely to be high volume producers and as such are more likely than low volume producers to experience one of the food safety incidents described in the survey. This type of business may also be sufficiently resourced to be able to identify, and resolve, food safety issues – including making further investments in staff training. This situation would result in a business which scores well on food safety culture (because it is investing in solutions) but also scores poorly on food safety performance (which makes correlations less clear cut).

To fully answer the question 'is there a correlation between food safety culture and compliance' requires large datasets with extensive compliance data and culture data. Statistical modelling across a large sample size could attempt to control for the types of businesses that are more or less likely to experience incidents or face non-compliance issues because of their size/volume/business-demographic\*. After applying this control, the correlation between food safety performance (measured in terms of incidents), food safety non-compliance, and food safety culture could be re-examined to shed more light on correlations. However, based upon this research, we would not expect to see a large correlation between food safety culture and food safety compliance.

# Appendix: profile of survey respondents

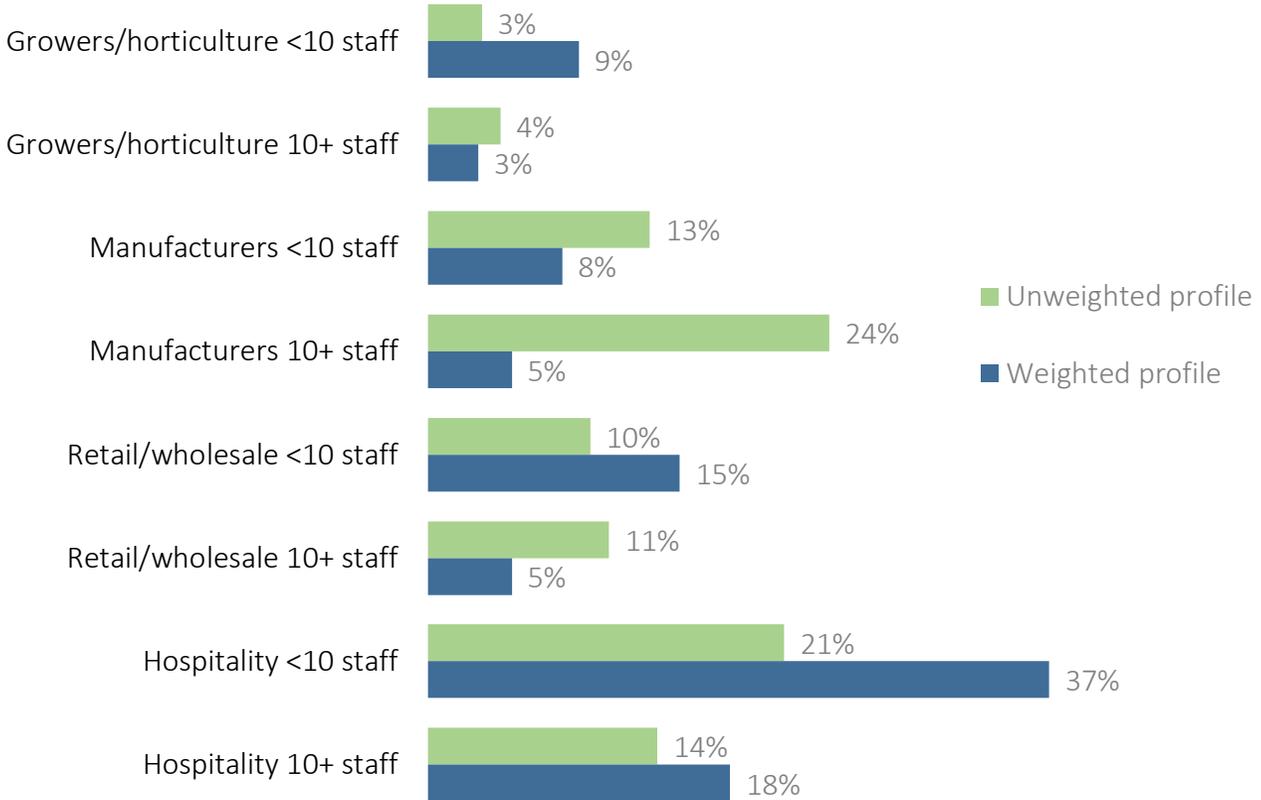


# Unweighted vs. weighted telephone survey profile by high level industry sector and size

(note that although we interviewed a lot of decision-makers in large manufacturers – the hospitality sector is up-weighted when results are combined to represent ‘all food businesses’).

- In a random sample, the survey would include a lot of small hospitality businesses (because there are a lot of them in New Zealand). However, in this survey we deliberately structured the sample to obtain a broadly even spread of interviews across industry groups (we particularly targeted large food manufactures/processors). We also deliberately structured the sample to include a reasonable number of large businesses (in terms of number of employees). This approach to sampling allows us to analyse the findings by industry and size.
- However, the findings for ‘all respondents’ have been weighted so that they represent the *total food industry* (based upon Statistics New Zealand business demography data). This means that small cafes and restaurants do represent a sizeable proportion of the total weighted population (please see the profile chart on the right hand side of this slide for more details).

*Proportion of sample by broad industry grouping and number of employees*



# Staff survey profile

It should be noted that this is not a representative survey of frontline staff and supervisors (see slide 20 for details of the methodology used). The staff sample is skewed towards large manufacturers. This should be taken into account when reading the results from the staff survey.

*Staff survey profile (note: no weighting applied to staff survey)*

