Safety improvement initiatives in the Australian offshore petroleum industry

Executive summary

In 2012, the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) collected survey data from a number of facility operators regarding the types of safety performance improvement initiatives being implemented at the time. A modified version of the survey was readministered in 2017 in consultation with the Australian Petroleum Production and Exploration Association, the International Association of Drilling Contractors, and the International Marine Contractors Association.

The 2012 survey included a number of open-ended questions. Responses to these questions were collated and transformed into multiple-choice options in the 2017 survey to reduce completion time. Additionally, some of the questions pertaining to safety culture were removed as they fed into further research underway at the time. Finally, in addition to collecting data from facility operators with an active safety case, the 2017 iteration of the survey also gathered data from titleholders with an active well operations management plan.

This report provides an overview of the data collected from the 2017 survey, excluding all identifying information. This report does not provide any interpretive analysis or commentary; rather it is a summary of the data collected.

Invitations to participate in the survey were sent to 41 operators and titleholders. Complete responses were received from 32 (78%) of these, representing 85% of the facilities and 98% of the wells currently active in Australian Commonwealth waters. Ten (31%) of the dutyholders responding to the 2017 survey also responded to the 2012 survey.

The survey results show that key performance indicators (KPIs) were used to measure personal safety performance, with 97% of respondents reporting the use of lag indicators and 94% reporting the use of lead indicators. Key performance indicators were also used to measure process safety performance, with 84% of respondents reporting the use of lag and lead indicators. Provision of personal safety training was reported by 91% of respondents, while 78% noted provision of process safety training.

Safety leadership training was provided by 78% of respondents, with 50% reporting provision of safety leadership coaching. The use of safety culture/climate perception surveys was reported by 66% of respondents. Implementation of safety culture improvement strategies were reported by 53% of respondents, with a further 38% indicating that a plan is in place, either formally or informally, to introduce a safety culture improvement strategy in the near future. The use of error risk management initiatives was reported by 81% of respondents, while 100% reported the use of traditional safety improvement initiatives. Finally, 75% of respondents indicated their participation in various industry safety improvement fora.

1. Acknowledgements

NOPSEMA would like to acknowledge the following organisations for their contributions to this research:

- Atwood Australian Waters Drilling Pty Ltd
- Bhagwan Marine
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- Cooper Energy
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- EA Management AS
- Eni Australia Ltd
- ENSCO
- Esso Australia
- Floatel Australia
- FMC Australia
- Fugro TSM Pty Ltd
- Jadestone Energy Australia Pty Ltd
- MODEC Management Services Pte Ltd

- Noble Contracting
- Northern Oil and Gas Australia (NOGA)
- Ocean Installer
- POSH Fleet Services Pte Ltd
- PTTEP AA
- Quadrant Energy
- Sapura Energy
- SGH Energy Pty Ltd
- Shell Australia Pty Ltd
- SolstadFarstad
- Subsea 7 Australia Pty Ltd
- Tasmanian Gas Pipeline
- TechnipFMC
- Teekay Shipping (Australia) Pty Ltd
- Vermilion Oil and Gas Australia
- Woodside Energy

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2. Glossary

Term	Meaning
Duty holder	A collective term used to refer to entities upon which the legislation imposes duties.
Human factors	The ways in which the organisation, the job, and the individual interact to influence human reliability in hazardous event causation.
Operator	The entity which under the OPGGS(S) Regs is registered as the operator of the facility or proposed facility.
Safety culture	The shared basic assumptions, held by most members of an organisation, which create and reinforce group norms of thoughts, language and behaviour in relation to major accident event prevention.
Titleholder	The entity which under the OPGGS(RMA) Regs is registered as the titleholder of the well or well activity.

2.1. Abbreviations and Acronyms

Term	Meaning
HSE	Health Safety and Environment
HSR	Health and Safety Representative
KPI	Key Performance Indicator
OHS	Occupational Health and Safety
OPGGSA	Offshore Petroleum and Greenhouse Gas Storage Act 2006
OPGGS(RMA) Regs	Offshore Petroleum and Greenhouse Gas Storage (Resource Management and Administration) Regulations 2011
OPGGS(S) Regs	Offshore Petroleum and Greenhouse Gas Storage (Safety) Regulations 2009

3.   Data collection

The duty holder registers that NOPSEMA maintains were utilised to identify current facility operators and wells titleholders as at June 2017. Duty holder representatives were contacted via telephone or email, informed about the research project, and asked to participate. Representatives were emailed a hyperlink to the online survey (see Appendix 1), which contained further information about the purpose of the research, including assurances regarding confidentiality in data storage and reporting.

A total of 41 duty holders were invited to participate in the research. Responses were received from 34 of those duty holders; however two responses were incomplete, and were therefore removed from the final analysis. A total of 32 responses have been included in the analysis, providing a response rate of 78%. Responses were received from wells titleholders, operators of facilities capable of undertaking a range of activities (i.e. production, drilling, construction, and conveying petroleum fluids [pipelines]), and a variety of company sizes ranging from less than 50 employees, through to more than 2000 employees. Responses were received from duty holders responsible for 85% of the facilities and 98% of the wells active in Australian Commonwealth waters at the time. This is considered sufficient, for the purposes of this research, to demonstrate a representative sample.

4. Question responses

This section provides summary responses for each survey question, represented in graphical or tabular format. Open-ended responses are presented verbatim in tabular format. Comparative responses from the 2012 survey are included where available. Questions involving the collection of identifying information have been excluded from the report.

4.1. Company information

Company information was gathered in questions three through nine. Questions one and two collected identifying information and have been excluded from this report.

Dutyholder type

While the 2012 survey was limited to facility operators, the current iteration of the survey was expanded to include titleholders with active Well Operations Management Plans.

Figure 1 provides response distributions for question three – "What type of dutyholder is your company (as defined by the Offshore Petroleum and Greenhouse Gas Storage Act and Regulations)?"

Figure 1 - Dutyholder type

Dutyholder type

- Operator (safety case) — 59%
- Both — 38%
- Titleholder (well operations management plan) — 3%
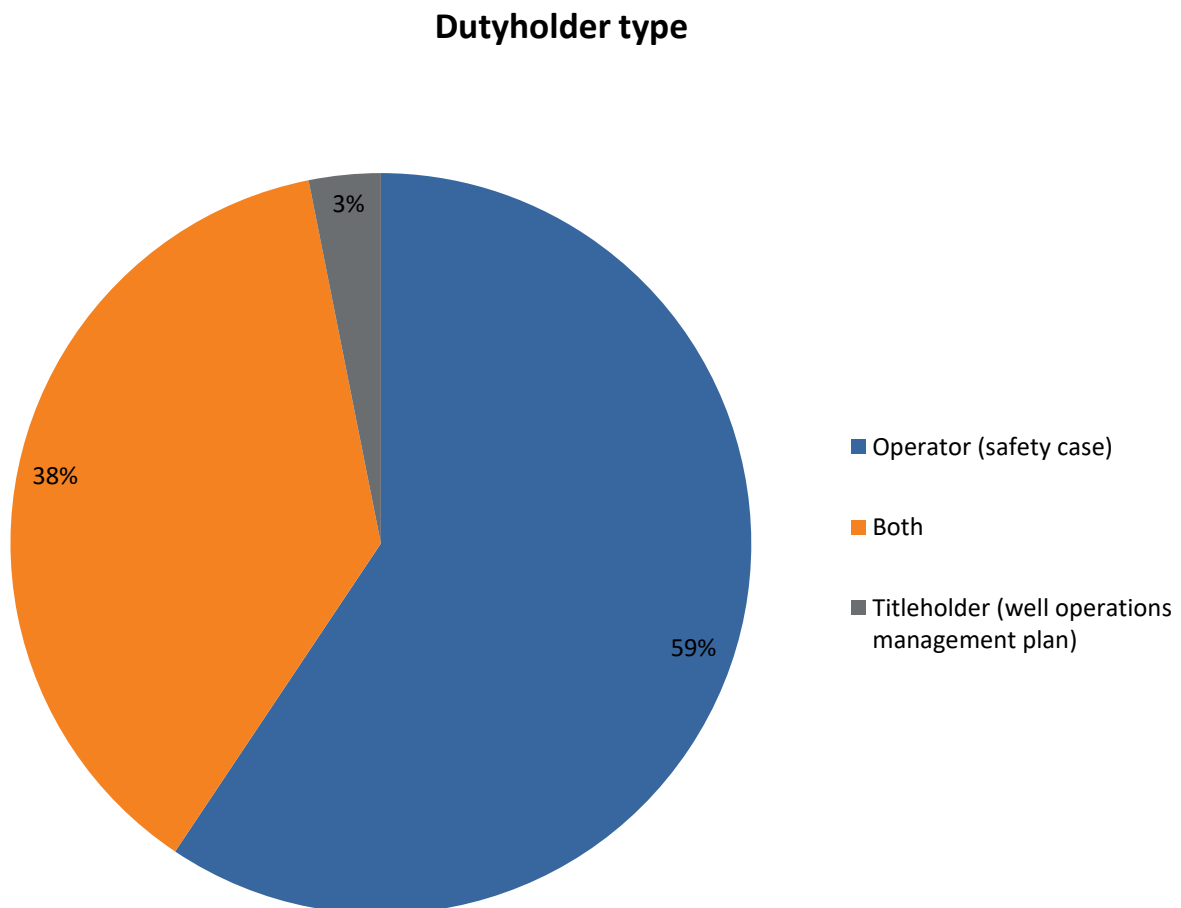
Number of employees

Figure 2 provides response distributions for question four – "How many employees work for your company within Australia, in divisions / business units directly related to offshore petroleum? Please include those located at facilities within state and Commonwealth waters."

Figure 2 – Number of offshore petroleum activity-related employees
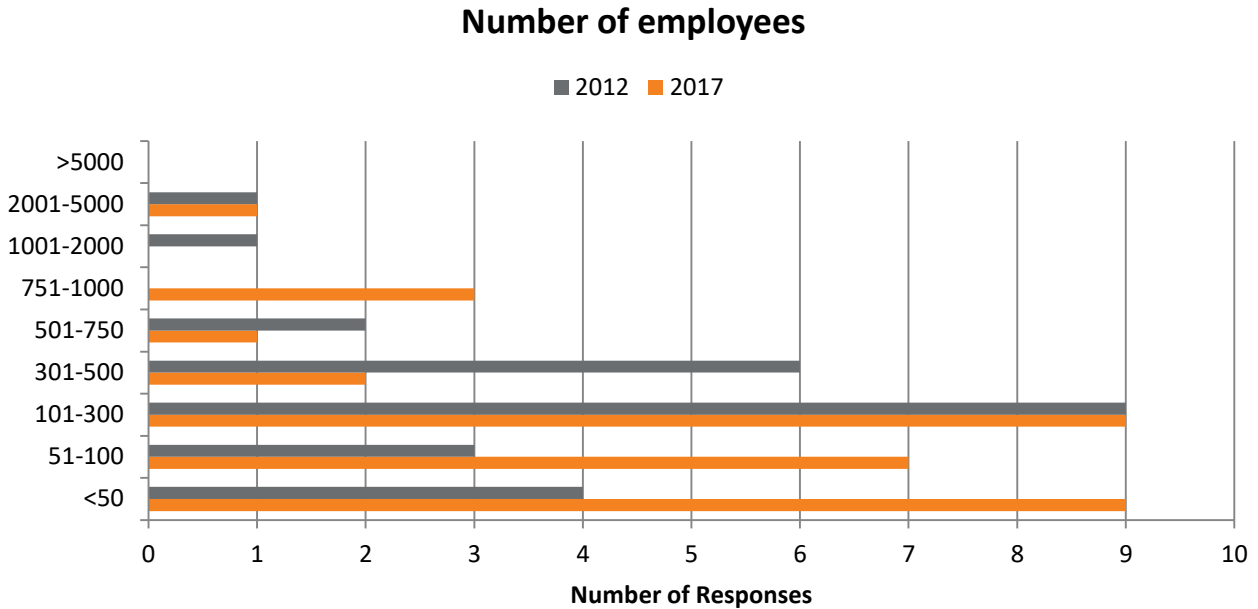
Offshore petroleum-related business locations

Figure 3 provides response distributions for question five – "At how many locations does your company operate within Australia, where work is directly related to offshore petroleum (including corporate support functions)? Please include corporate offices and individual facilities."

Figure 3 – Number of offshore petroleum activity-related business locations
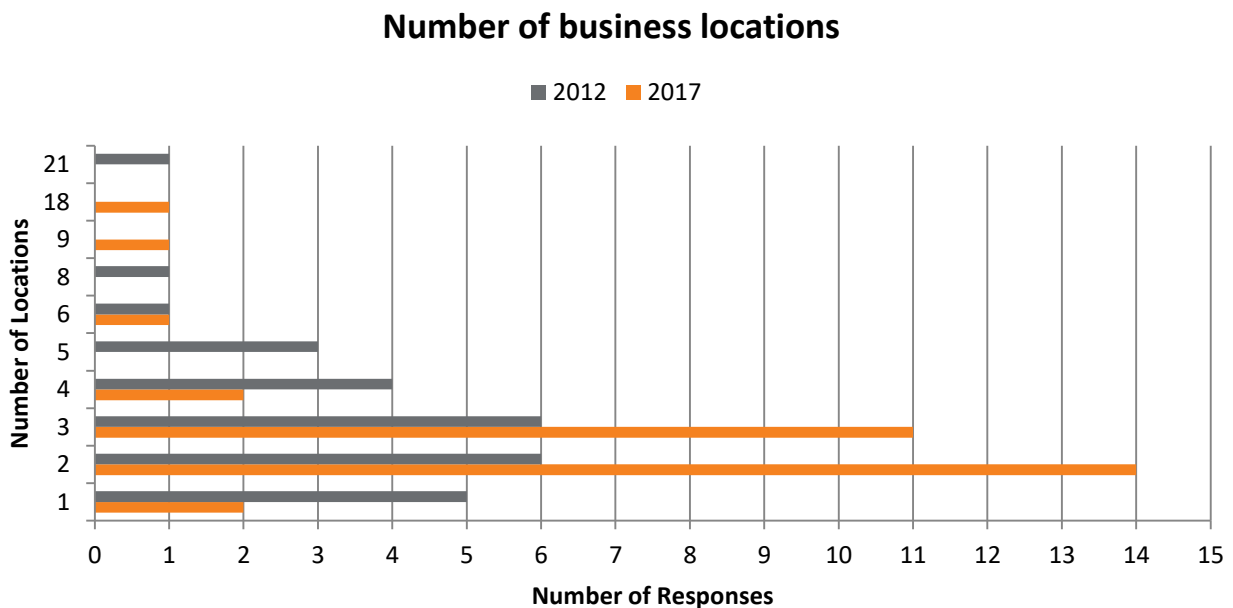
Offshore facility types

Table 1 provides response summaries for question six – "How many of each offshore facility type does your company operate within Australia?" Note that, for the purposes of the survey, a well was included as a facility type.

Table 1 – Number of offshore facility types

Facility type	2017	2012
Well	250	-
Pipeline	35	15
Multi-Service Vessel	22	17
Construction Vessel	16	2
Production Platform (no drilling)	14	3
Not Normally Manned Platform	10	12
Floating Production Storage and Offtake	10	5
Mobile Offshore Drilling Unit	6	8
Diving Support Vessel	4	-
Accommodation Vessel	3	0
Pipelay Vessel	2	5
Production Platform (with drilling)	1	1
Floating Storage and Offtake	1	1
Floating LNG	1	-

Note: these figures represent the data provided by the responders and is not necessarily a reflection of the number of facilities in the operator and titleholder registers.

Onshore workplaces

Table 2 provides response summaries for question seven – "How many of each onshore workplace type does your company operate within Australia?"

Table 2 – Number of onshore workplaces

Workplace type	2017	2012
Onshore Offices	55	47
Onshore Processing Plant	13	10
Other	3	-

Management system structure

Figure 4 provides response distributions for question eight – "Which of the following best describes your company's management system structure?"

Figure 4 – Management system structure

Management system structure
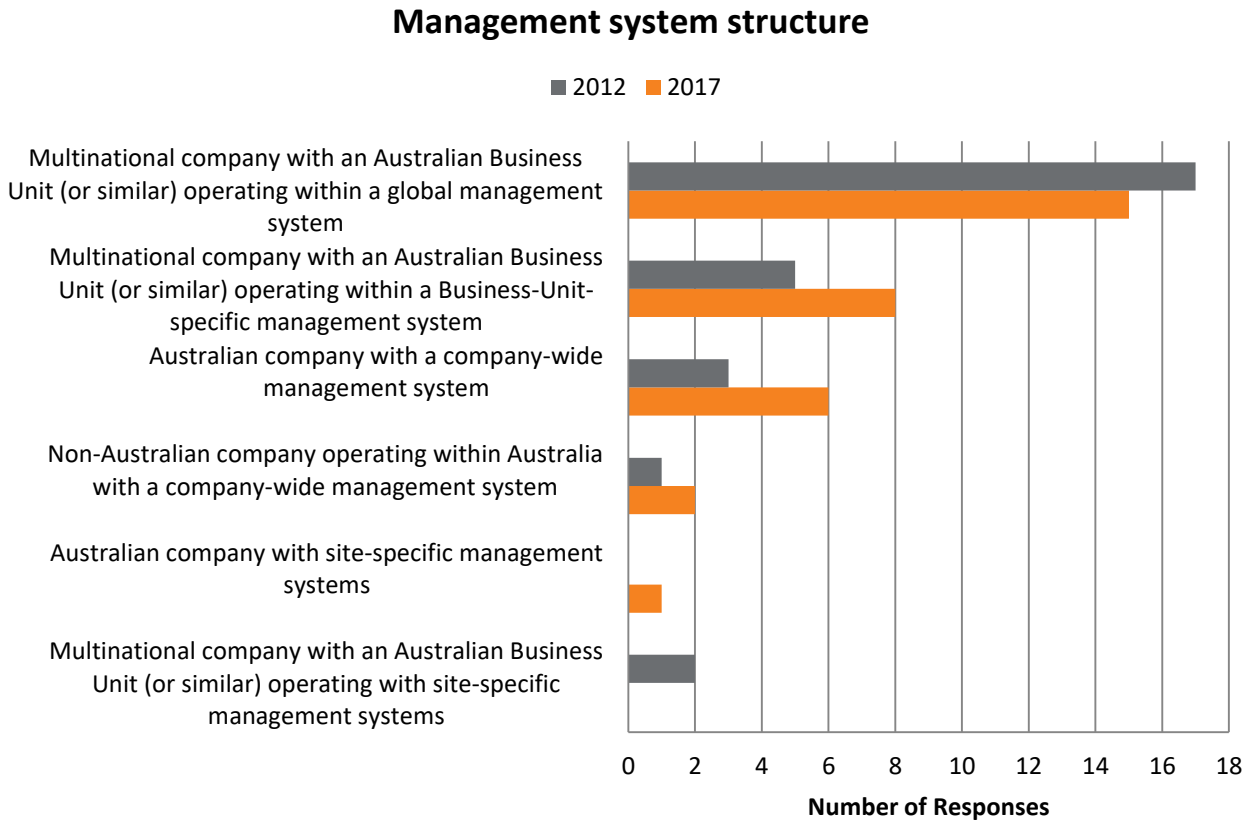
Occupational health and/or safety personnel

Figure 5 provides response distributions for question nine – "Which of the following best describes your company's safety/OHS personnel (excluding HSE Representatives / Committee members)?" In comparison with the 2012 survey, this question offered an additional response option of "a dedicated safety team/department/division".

Figure 5 – Occupational Health and/or safety personnel
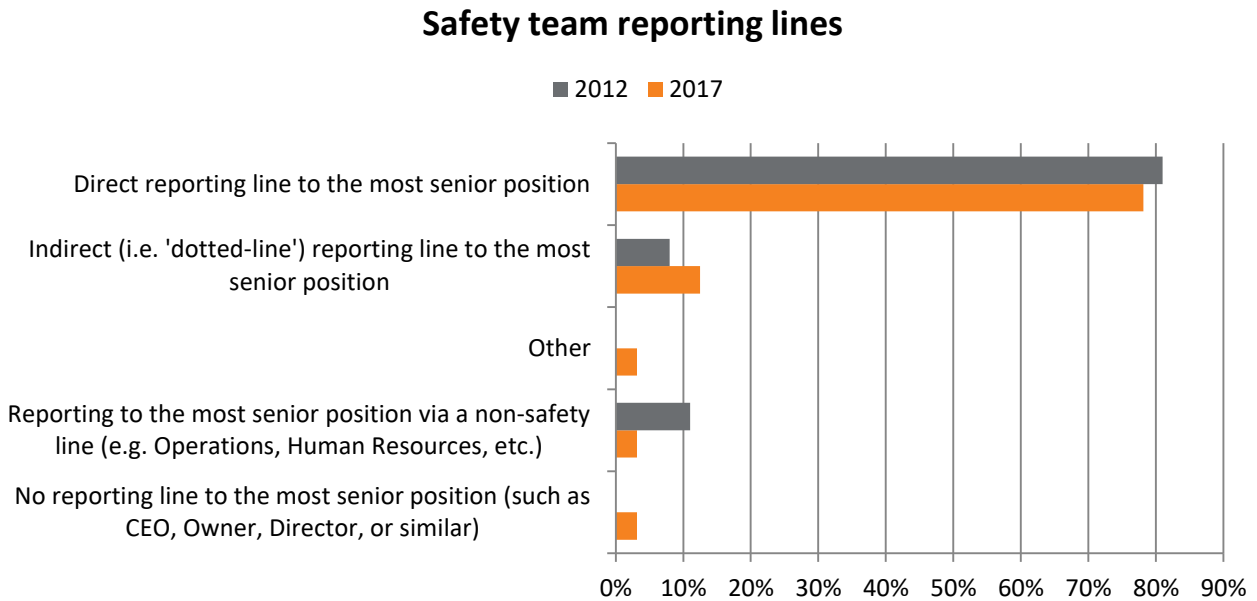
Safety personnel

4.2. Safety team information

Safety team information was collected in questions 10 through 13.

Reporting lines

Figure 6 provides response distributions for question 10 – "Which of the following best describes the reporting lines for your safety team/person?"

Figure 6 – Safety team reporting lines

Safety position seniority

Table 3 provides a response summary for question 11 – "What is the job title of the most senior safety position within your company?" This question was not included in the 2012 survey.

Table 3 – Safety position seniority

Title	Frequency
Manager	14
Vice President	4
Director	3
General Manager	3
Supervisor	1
Coordinator	1
CEO	1
Designated Person Ashore	1
Chief HSEQ officer	1
Regional Manager	1
Superintendent	1

Allocation of safety personnel

Table 4 provides a response summary for question 12 – "Please identify how many safety personnel are allocated to each location type." Note that increased numbers in this data set may be reflective of the larger number of facilities reported in Table 1.

Table 4 – Safety personnel per location

Location type	2017	2012
Corporate offices	268	160
Offshore	190	99
Office-based with ad-hoc site-based requirements	98	65
Other site-based locations	70	43
Office-based with regular site-based requirements	61	35

Health and Safety Representatives

Figure 7 provides response distributions for question 13 – "How many Health and Safety Representatives (HSRs) does your company have in place?" This question did not appear in the 2012 survey. This equates to an approximate average of four HSRs per normally manned facility.

Figure 7 – Number of HSRs

Number of HSRs
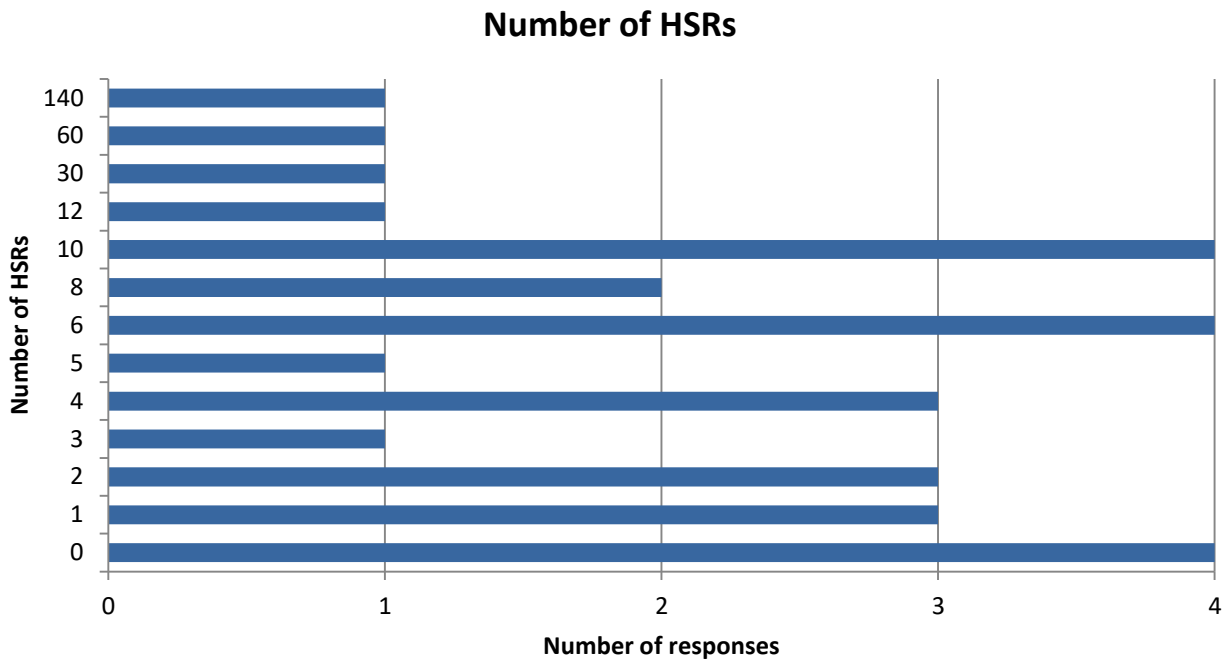
4.3. Personal safety improvement initiatives

Information about personal safety improvement initiatives was collected in questions 14 through 25. Personal safety was defined in the following terms:

'Personal safety' focuses on injuries such as slips, trips, falls, struck-by incidents, and strains. Personal safety programs place an emphasis on personal behaviours and the wearing of personal protective equipment.

Personal safety lag indicators

Figure 8 provides response distributions for question 14 – "Does your company use lag Key Performance Indicators (KPIs) to measure personal safety performance?"

This question was a modified version of the 2012 survey question which asked "Does your company use KPIs to measure safety performance?" to which 100% of participants responded yes.

Figure 8 – Use of personal safety lag KPIs

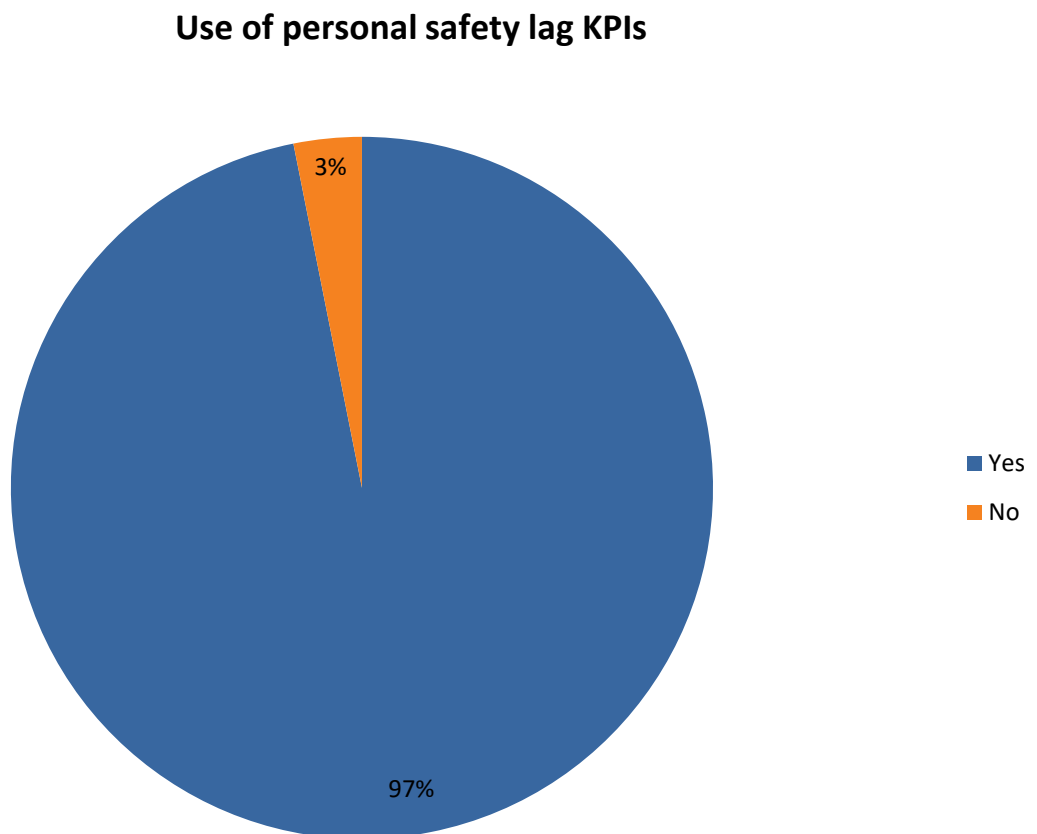## Use of personal safety lag KPIs

Figure 9 provides response distributions for question 15 – "Which of the following lag indicators are used to measure personal safety performance?" This question was limited to participants responding "yes" to question 14.

This question did not appear in the 2012 survey; rather the response options for this question were sourced from open-ended responses to the 2012 survey question "Please describe any lag indicators used to measure safety performance".

Figure 9 – Type of personal safety lag KPIs
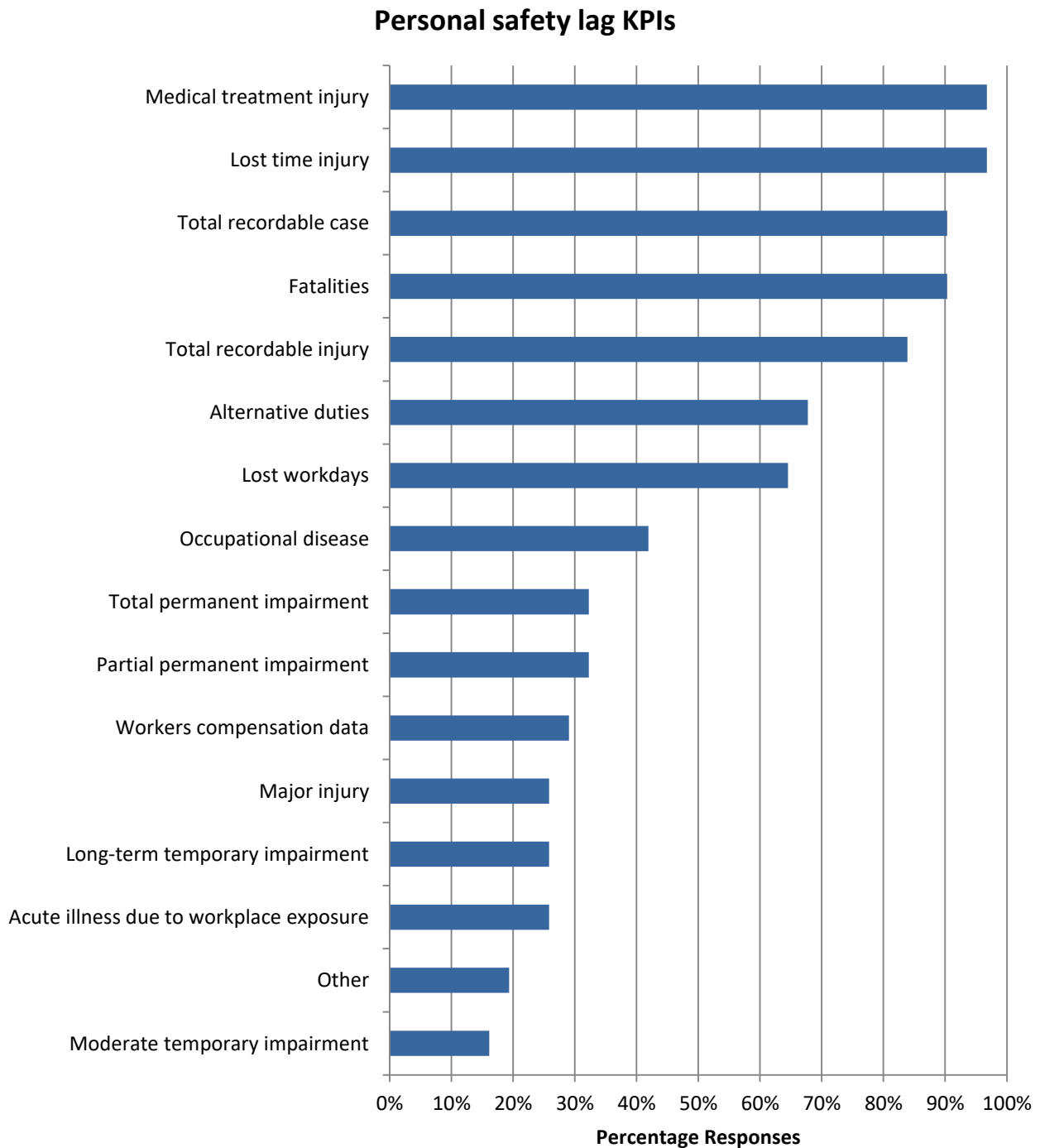
Personal safety lag KPIs

Figure 10 provides response distributions for question 16 – "Does your company set lag KPI targets for personal safety?" This question was limited to participants responding "yes" to question 14.

This question was a modified version of the 2012 survey question which asked "Does your organisation set KPI targets for injury and incident frequency rates?" to which 88% of participants responded yes, and 12% responded no.

Figure 10 – Use of personal safety lag KPI targets

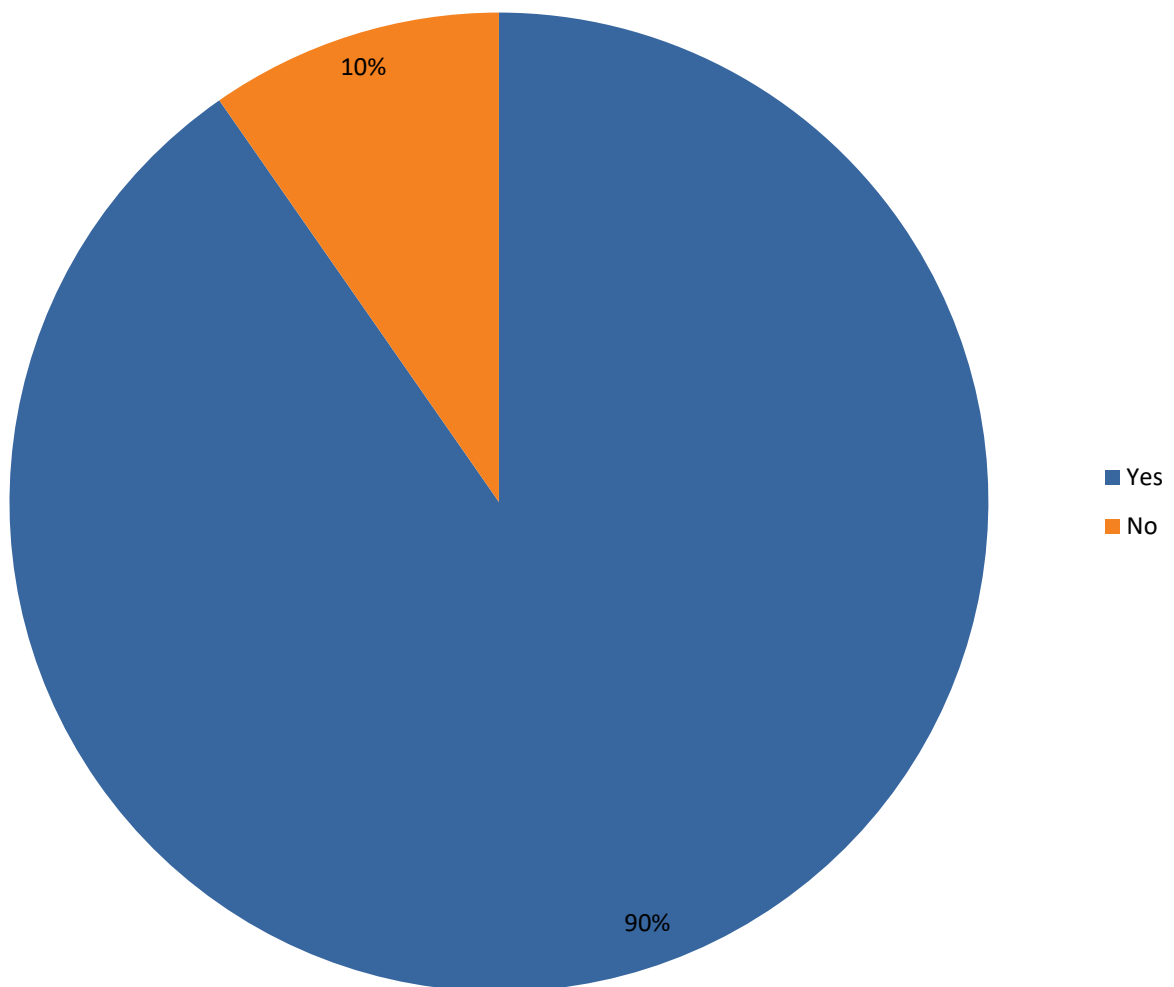**Use of personal safety lag KPI targets**

Figure 11 provides response distributions for question 17 – "Please identify the personal safety lag indicators with an associated KPI target." This question was limited to participants responding "yes" to question 16. This question did not appear in the 2012 survey.

Figure 11 – Type of personal safety lag KPI targets
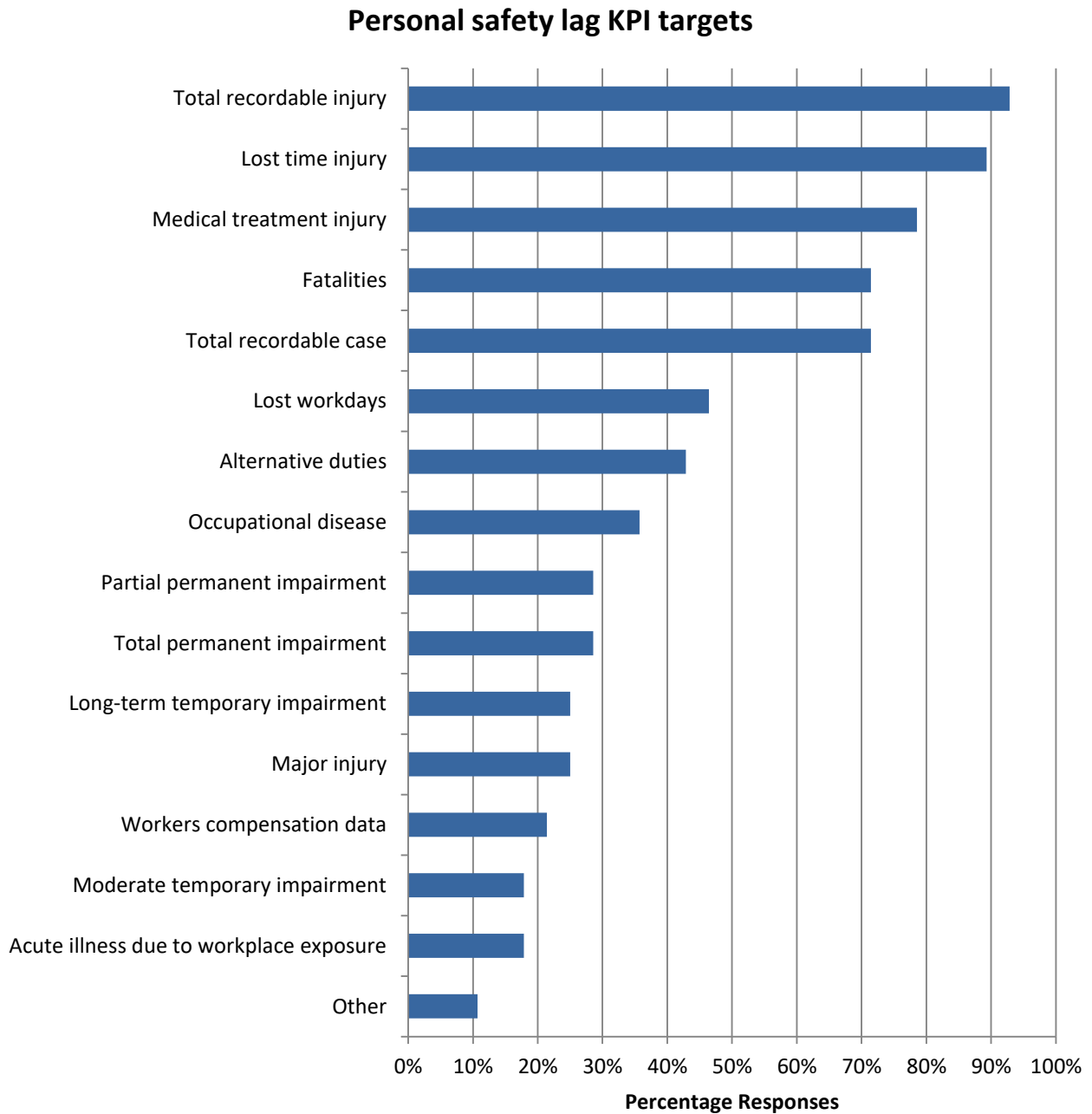
Personal safety lag KPI targets

Figure 12 provides response distributions for question 18 – "Please identify the strategies used to drive and reinforce achievement of personal safety lag KPI targets." This question was limited to participants responding "yes" to question 16.

This was a modified version of the 2012 survey question "please identify the strategies used to drive and reinforce achievement of KPIs for reduced injury and incident frequency rates", which provided the same set of response options.

Figure 12 – Reinforcement of personal safety lag KPI targets

Reinforcement of personal safety lag KPI targets
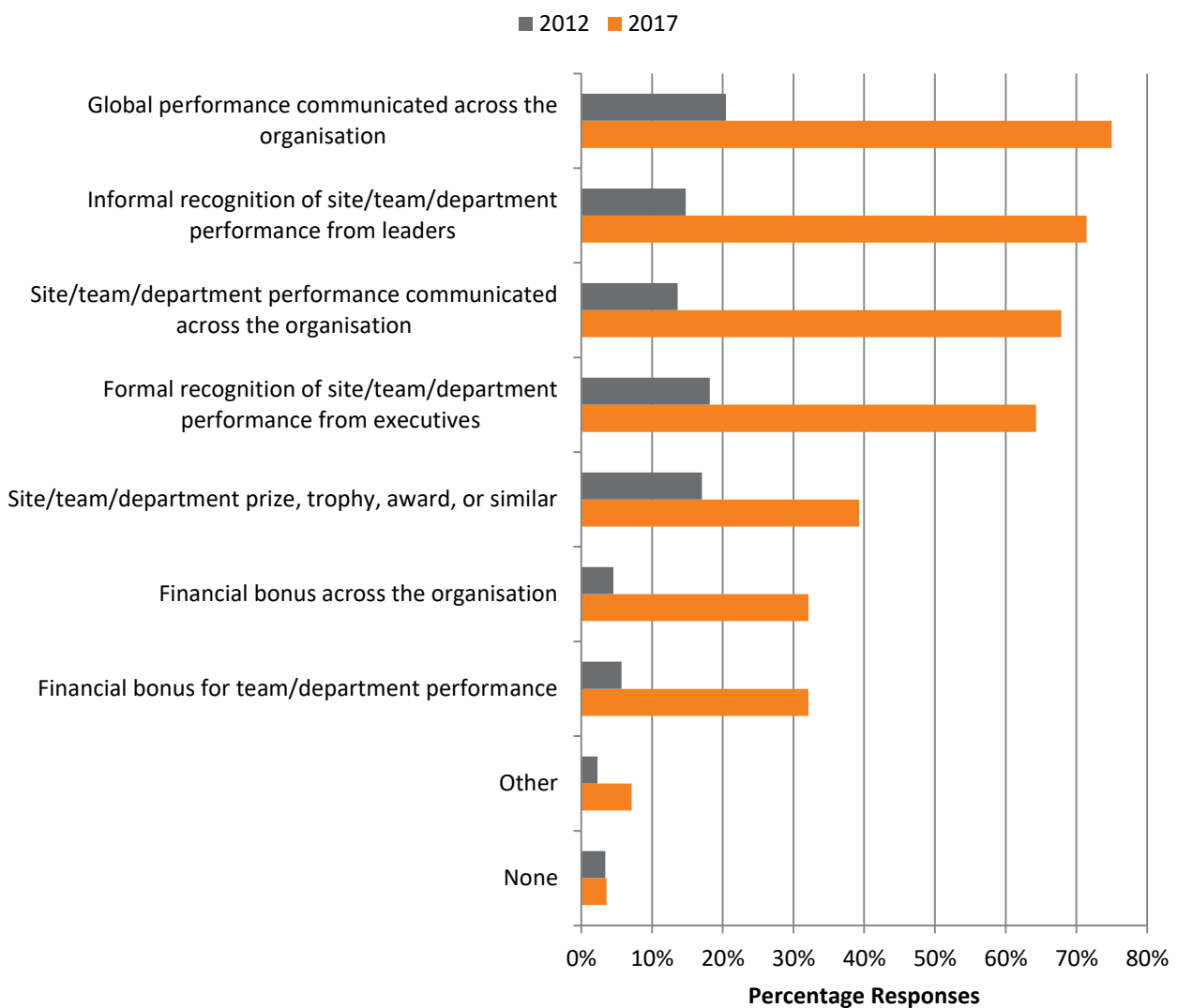
Personal safety lead indicators

Figure 13 provides response distributions for question 19 – "Does your organisation use lead KPIs to measure personal safety performance?" This question did not appear in the 2012 survey.

Figure 13 – Use of personal safety lead KPIs
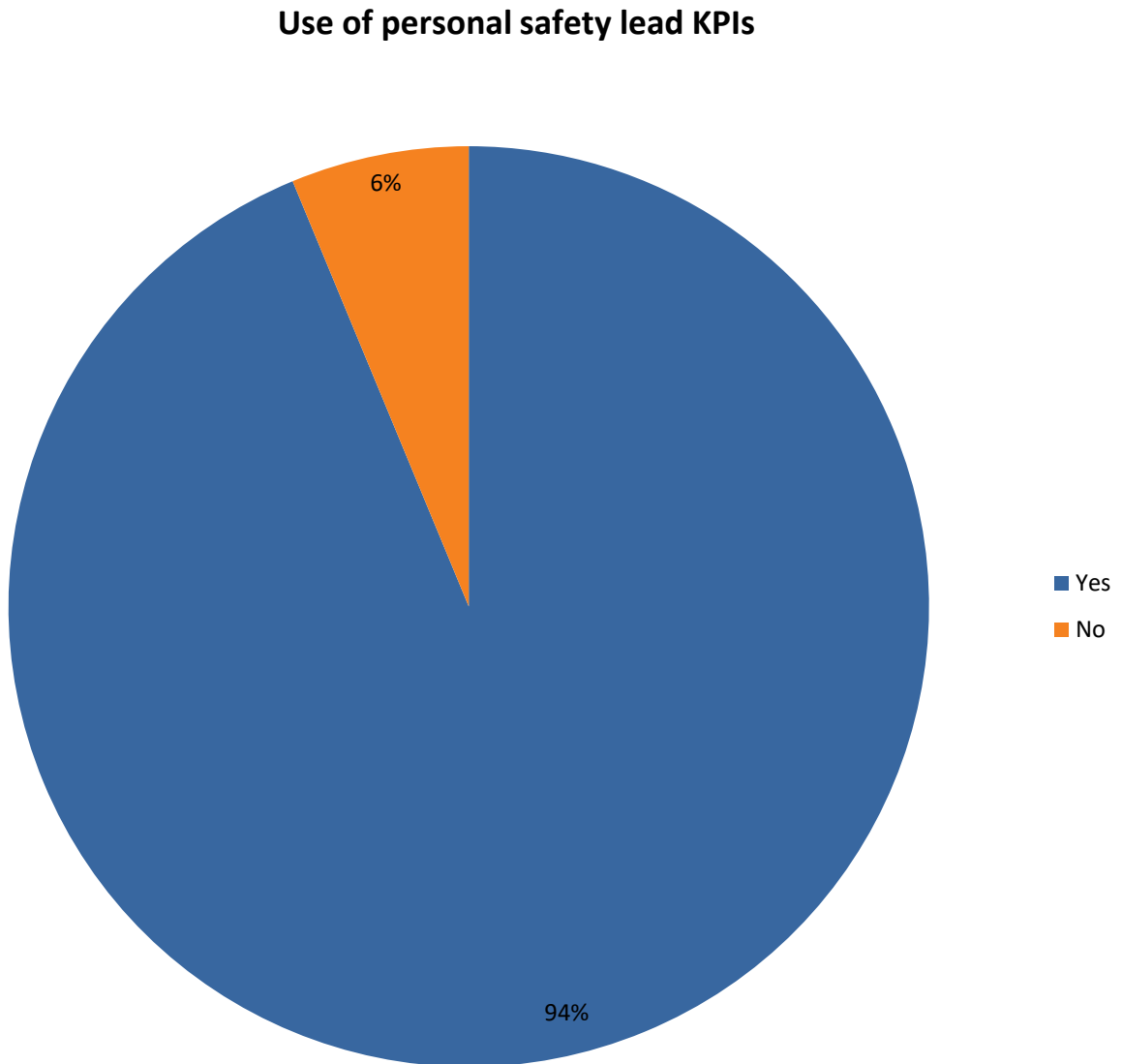
Use of personal safety lead KPIs

Figure 14 provides response distributions for question 20 – "Which of the following lead indicators are used to measure personal safety performance?" This question was limited to participants responding "yes" to question 19. This question did not appear in the 2012 survey.

Figure 14 – Type of personal safety lead KPIs
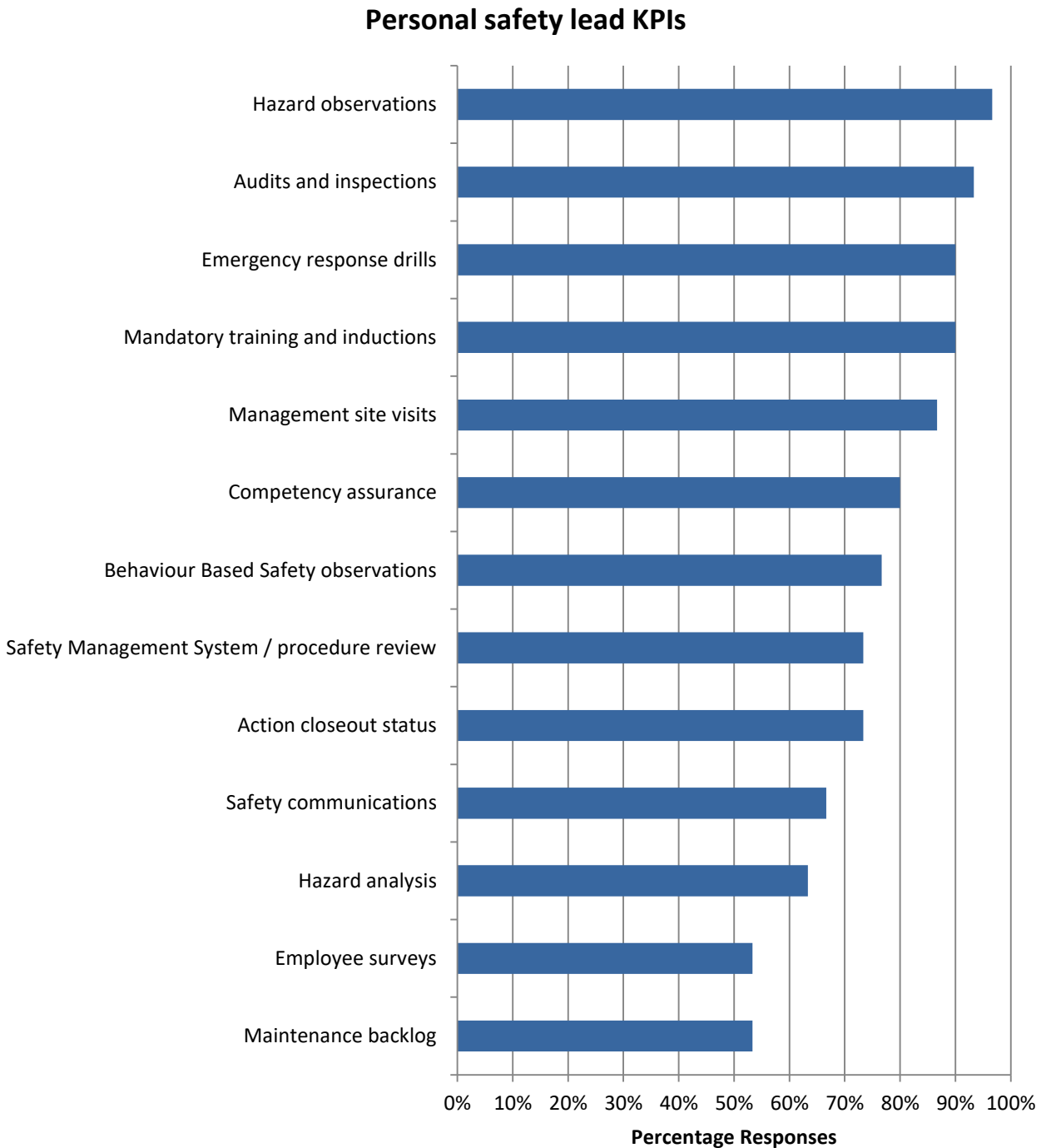
Personal safety lead KPIs

Figure 15 provides response distributions for question 21 – "Does your organisation set lead KPI targets for personal safety?" This question was limited to participants responding "yes" to question 19. This question did not appear in the 2012 survey.

Figure 15 – Use of personal safety lead KPI targets

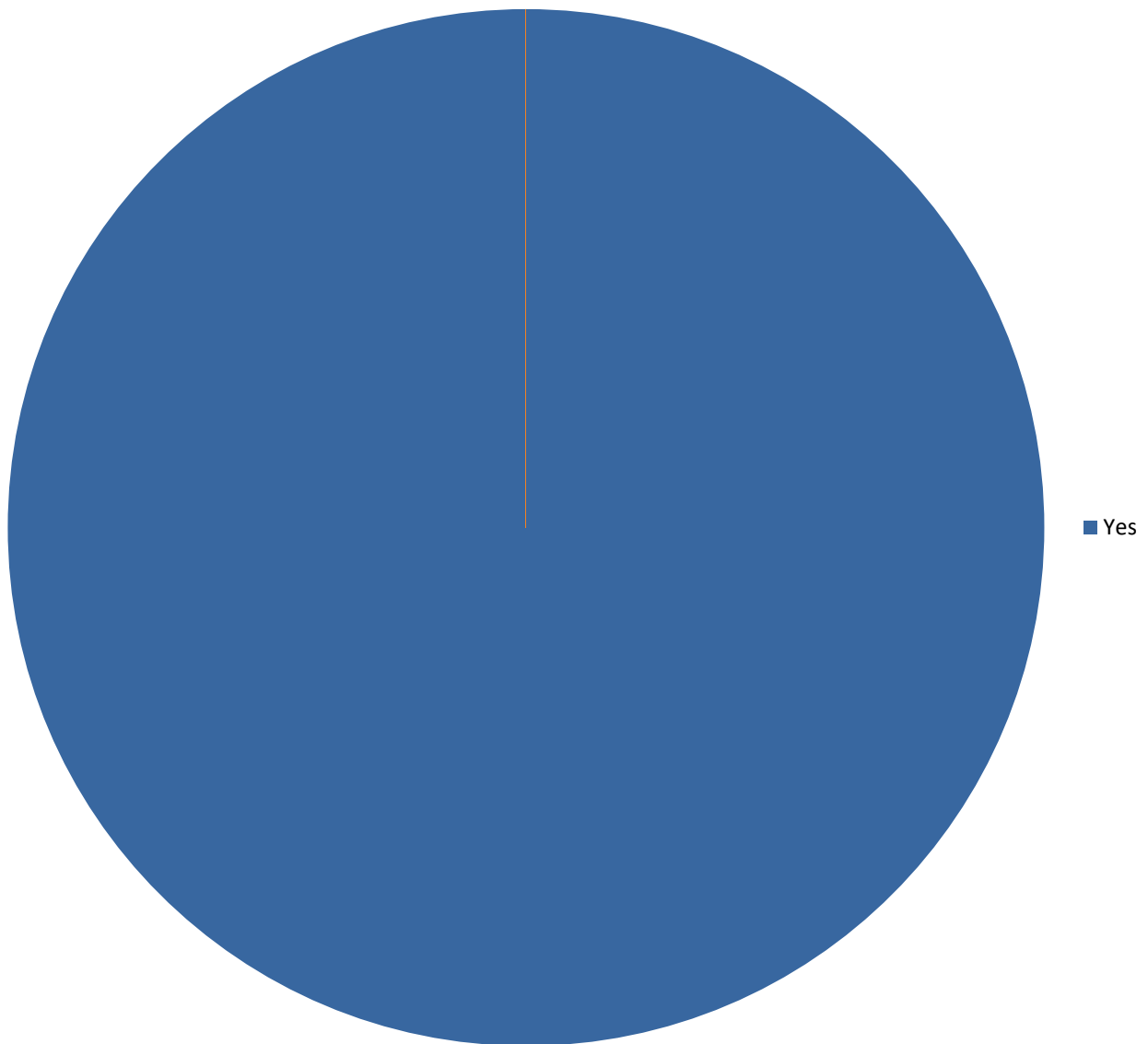## Use of personal safety lead KPI targets

■ Yes

Figure 16 provides response distributions for question 22 – "Please identify the personal safety lead indicators with an associated KPI target." This question was limited to participants responding "yes" to question 21. This question did not appear in the 2012 survey.

Figure 16 – Type of personal safety lead KPI targets

Personal safety lead KPI targets

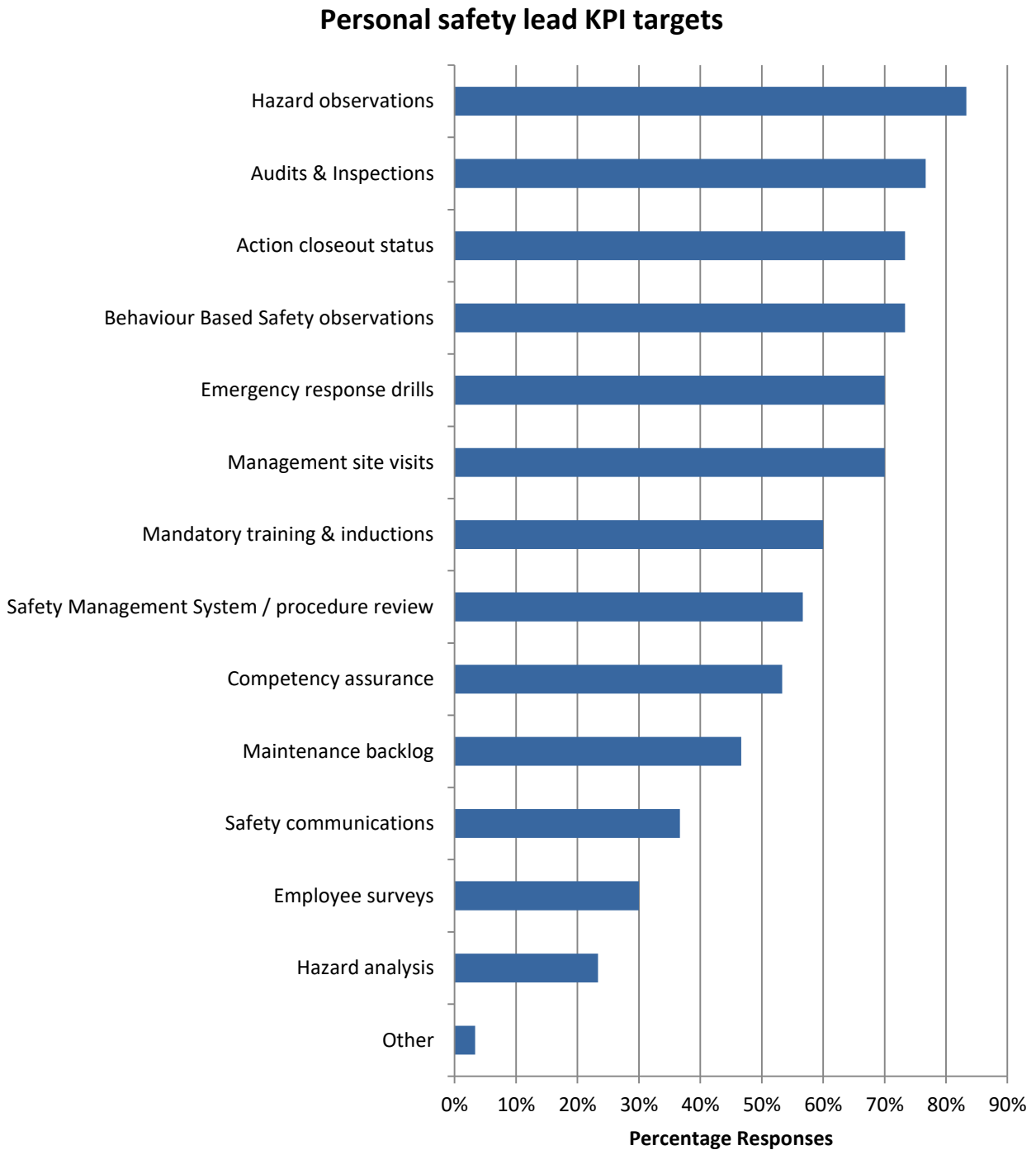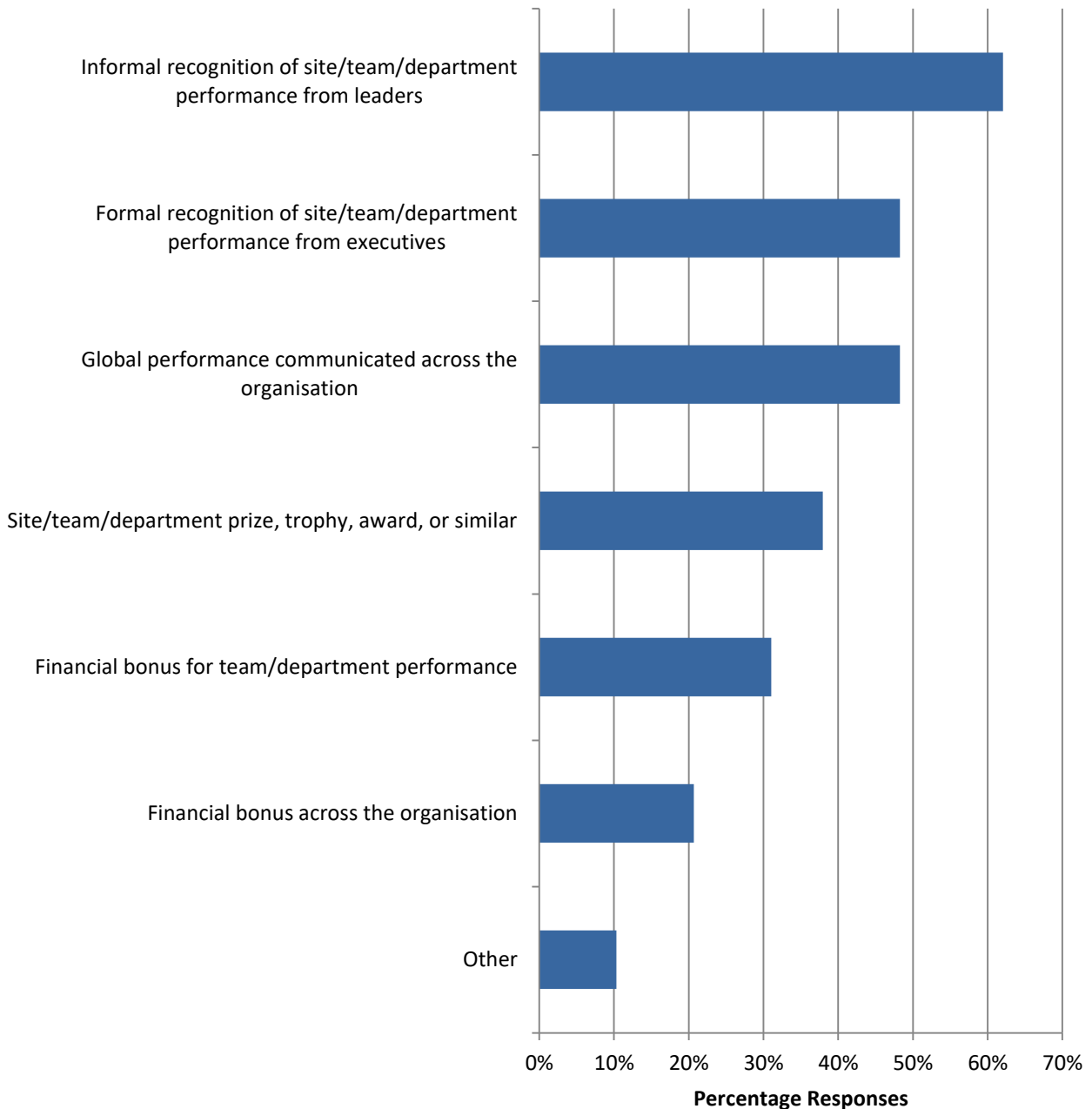Figure 17 provides response distributions for question 23 – "Please identify the strategies used to drive and reinforce achievement of personal safety lead KPI targets." This question was limited to participants responding "yes" to question 21. This question did not appear in the 2012 survey.

Figure 17 – Reinforcement of personal safety lead KPI targets

Reinforcement of personal safety lead KPI targets

Personal safety training

Figure 18 provides response distributions for question 24 – "Does your organisation provide training in personal safety as a way of improving safety performance?"

Figure 18 – Provision of personal safety training

Provision of personal safety training

■ 2012 ■ 2017
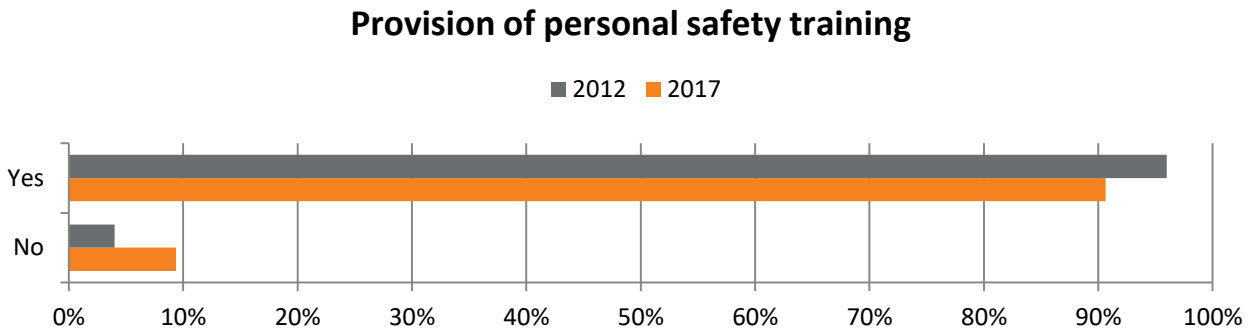
Figure 19 provides response distributions for question 25 – "Please identify the positions within your company receiving personal safety training." This question was limited to participants responding "yes" to question 24. The 2012 survey did not include response options for HSRs or targeted positions/tasks.

Figure 19 – Personal safety training recipients

Personal safety training recipients

■ 2012 ■ 2017

Percentage Responses
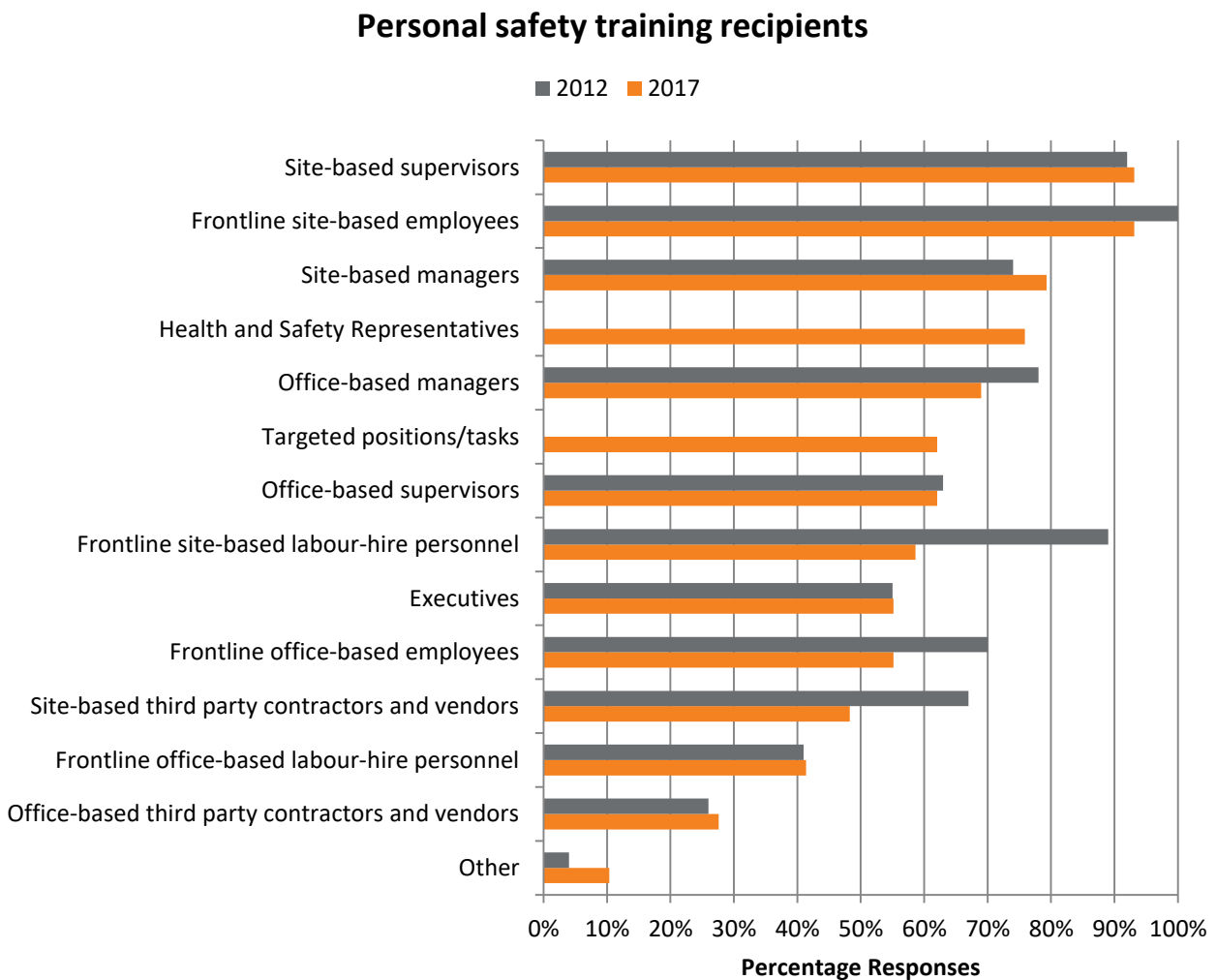
4.4. Process safety improvement initiatives

Information about process safety improvement initiatives was collected in questions 26 through 37. Process safety was defined in the following terms:

'Process safety' refers to the prevention of unintentional releases of hydrocarbons, chemicals, energy, or other potentially dangerous materials (including steam) during the course of facility processes and which can cause major accident events. Process safety involves, for example, the prevention of leaks, spills, equipment malfunction, over-pressures, over-temperatures, corrosion, metal fatigue and other similar conditions. Process safety programs focus on design of facilities, maintenance of equipment, alarms, effective control points, procedures and training.

Process safety lag indicators

Figure 20 provides response distributions for question 26 – "Does your company use lag KPIs to measure process safety performance?" This question did not appear in the 2012 survey.

Figure 20 – Use of process safety lag KPIs

Use of process safety lag KPIs

16%

84%

- Yes
- No

Figure 21 provides response distributions for question 27 – "Which of the following lag indicators are used to measure process safety performance?" This question was limited to participants responding "yes" to question 26. This question did not appear in the 2012 survey.

Figure 21 – Type of process safety lag KPIs

Process safety lag KPIs

Figure 22 provides response distributions for question 28 – "Does your organisation set lag KPI targets for process safety?" This question was limited to participants responding "yes" to question 26. This question did not appear in the 2012 survey.

Figure 22 – Use of process safety lag KPI targets

Use of process safety lag KPI targets

■ Yes

Figure 23 provides response distributions for question 29 – "Please identify the process safety lag indicators with an associated KPI target." This question was limited to participants responding "yes" to question 28. This question did not appear in the 2012 survey.

Figure 23 – Type of process safety lag KPI targets

Process safety lag KPI targets

Figure 24 provides response distributions for question 30 – "Please identify the strategies used to drive and reinforce achievement of process safety lag KPI targets." This question was limited to participants responding "yes" to question 28. This question did not appear in the 2012 survey.

Figure 24 – Reinforcement of process safety lag KPI targets

Reinforcement of process safety lag KPI targets

Process safety lead indicators

Figure 25 provides response distributions for question 31 – "Does your company use lead KPIs to measure process safety performance?" This question did not appear in the 2012 survey.

Figure 25 – Use of process safety lead KPIs
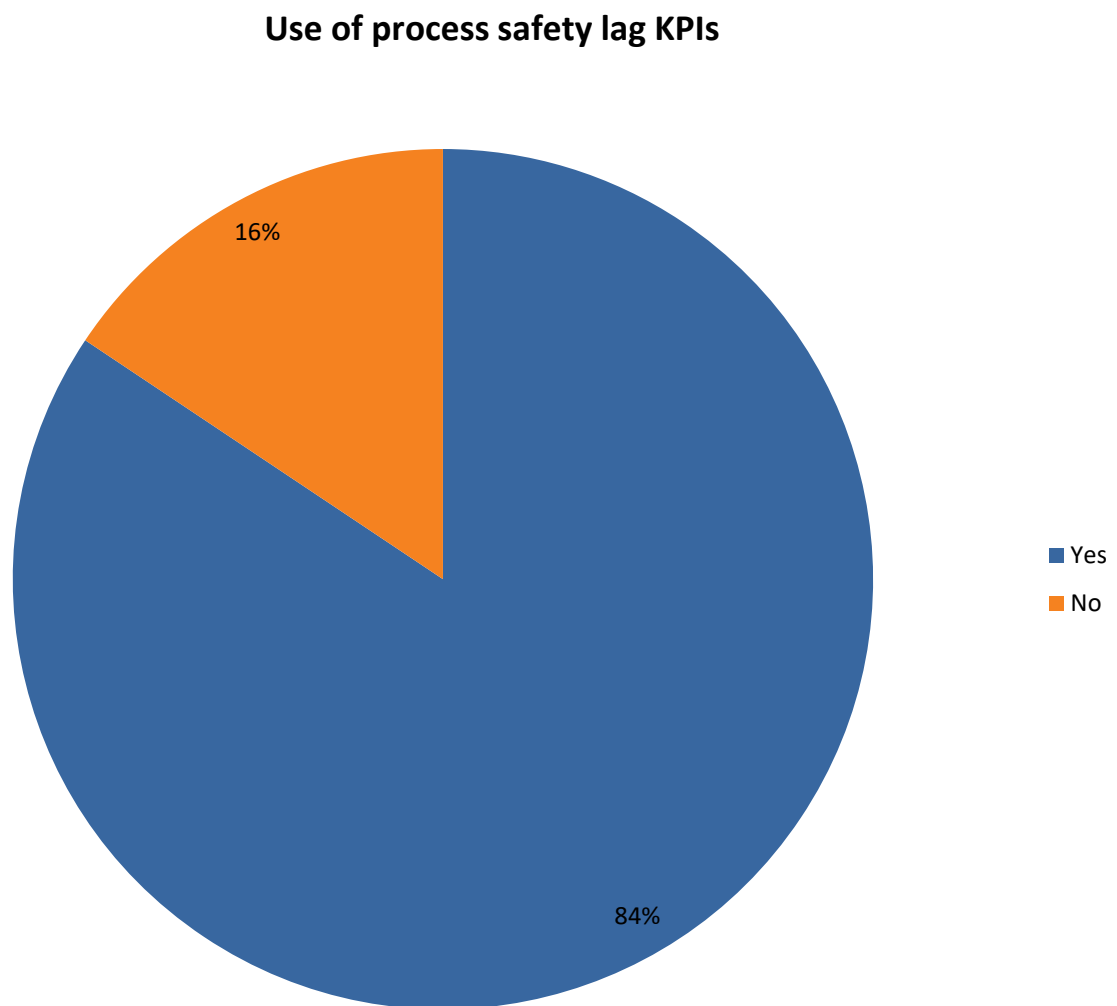
Use of process safety lead KPIs

16%

84%

- Yes
- No
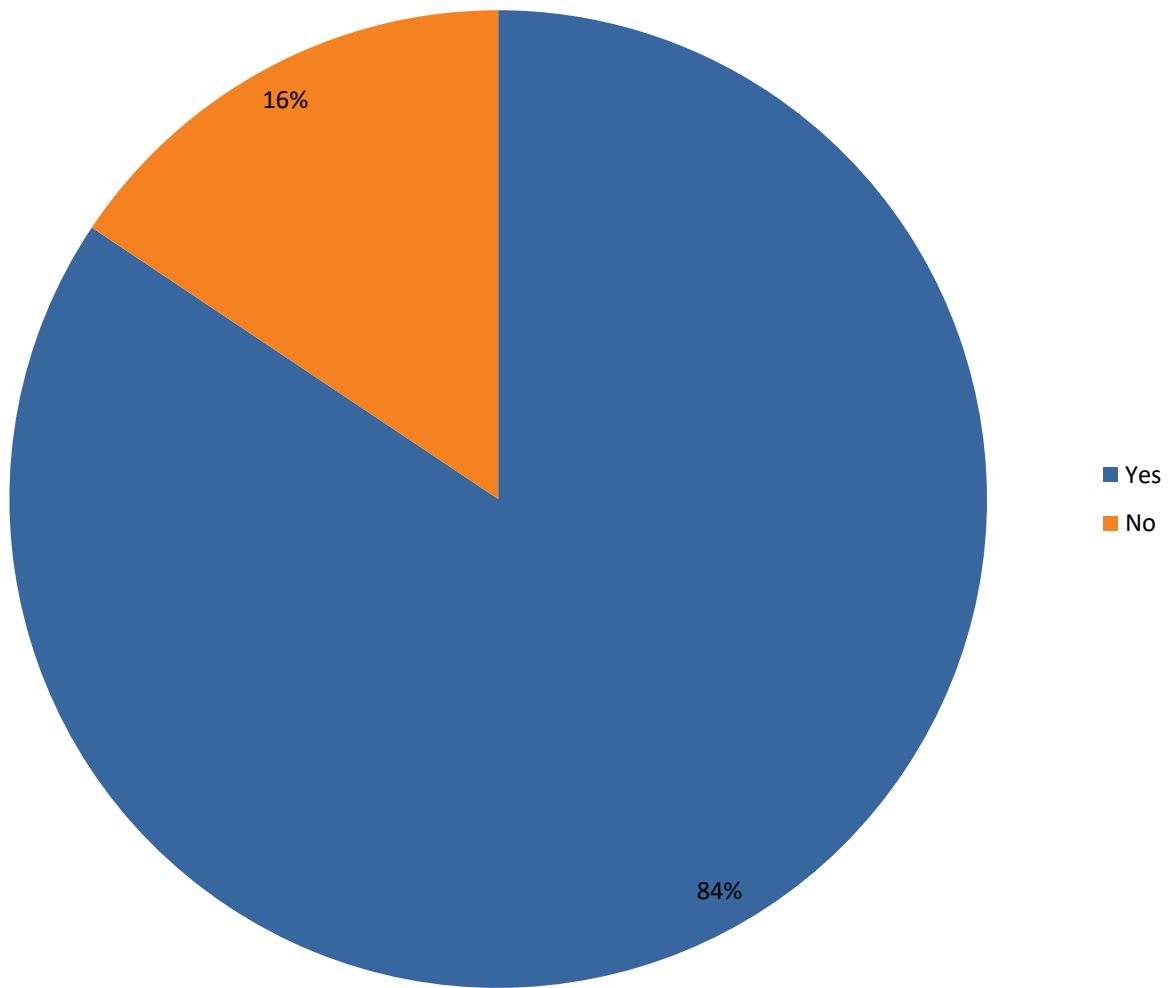
Figure 26 provides response distributions for question 32 – "Which of the following lead indicators are used to measure process safety performance?" This question was limited to participants responding "yes" to question 31. This question did not appear in the 2012 survey.
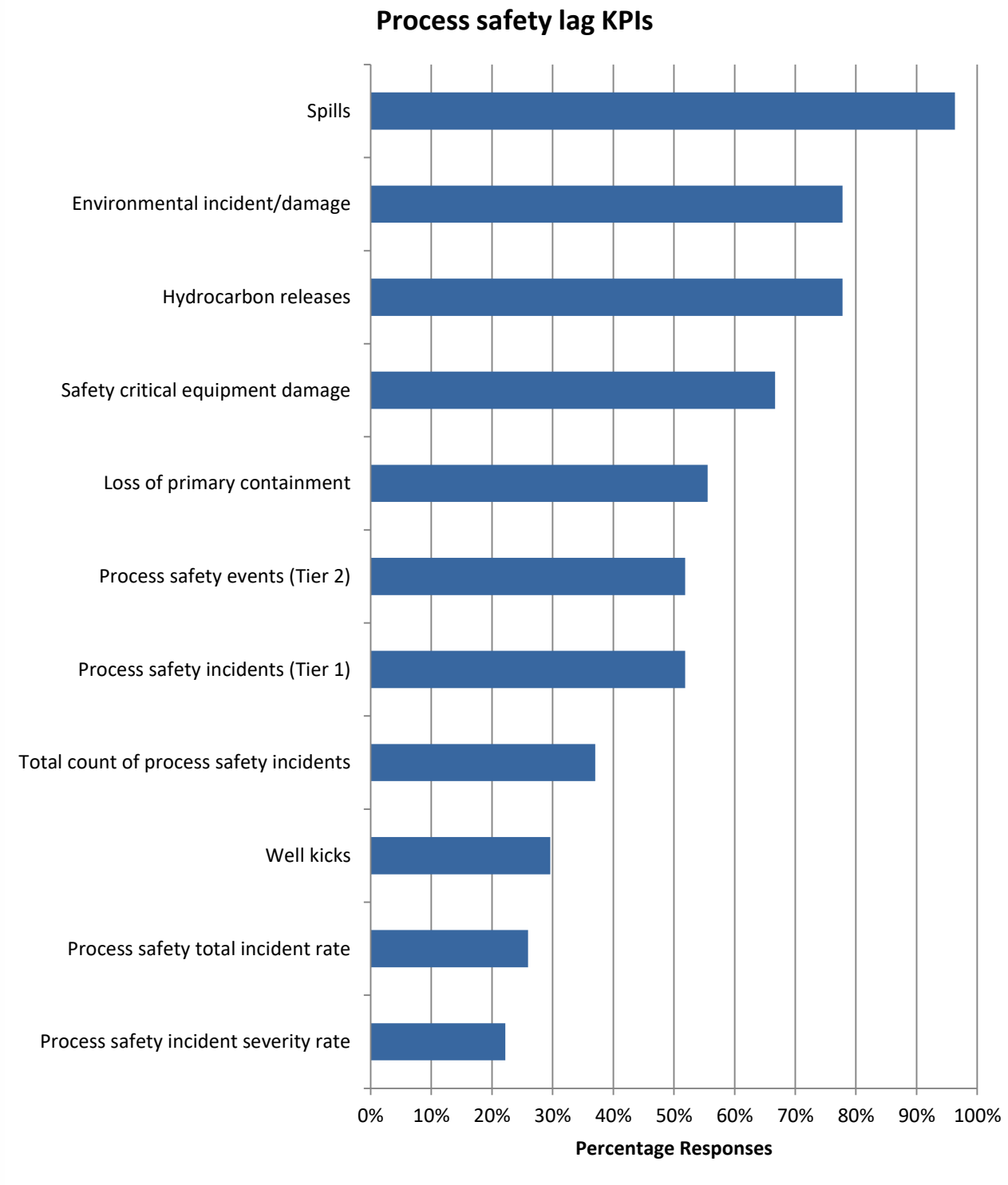
Figure 26 – Type of process safety lead KPIs

Process safety lead KPIs

Figure 27 provides response distributions for question 33 – "Does your company set lead KPI targets for process safety?" This question was limited to participants responding "yes" to question 31. This question did not appear in the 2012 survey.

Figure 27 – Use of process safety lead KPI targets
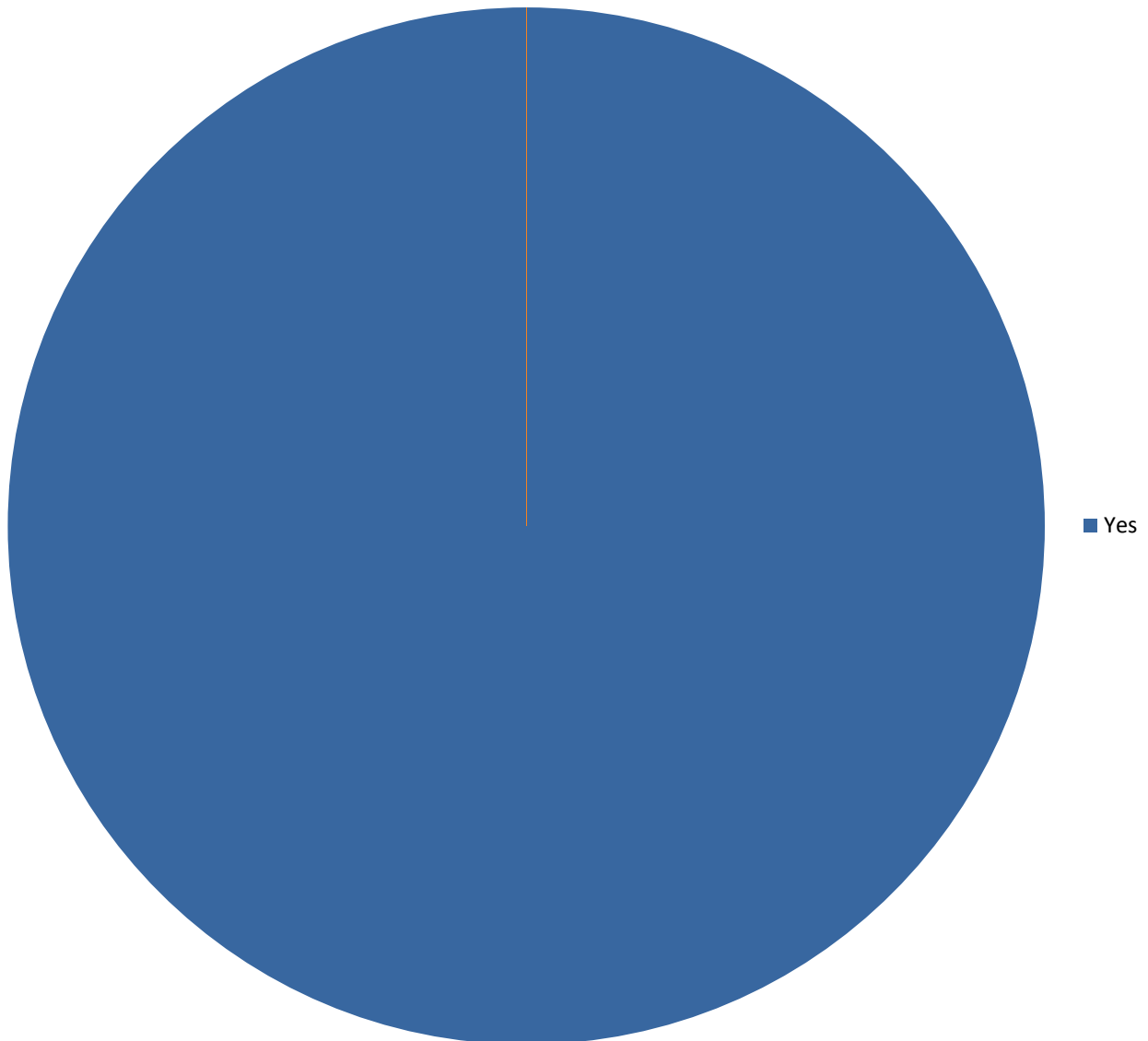
Use of process safety lead KPI targets
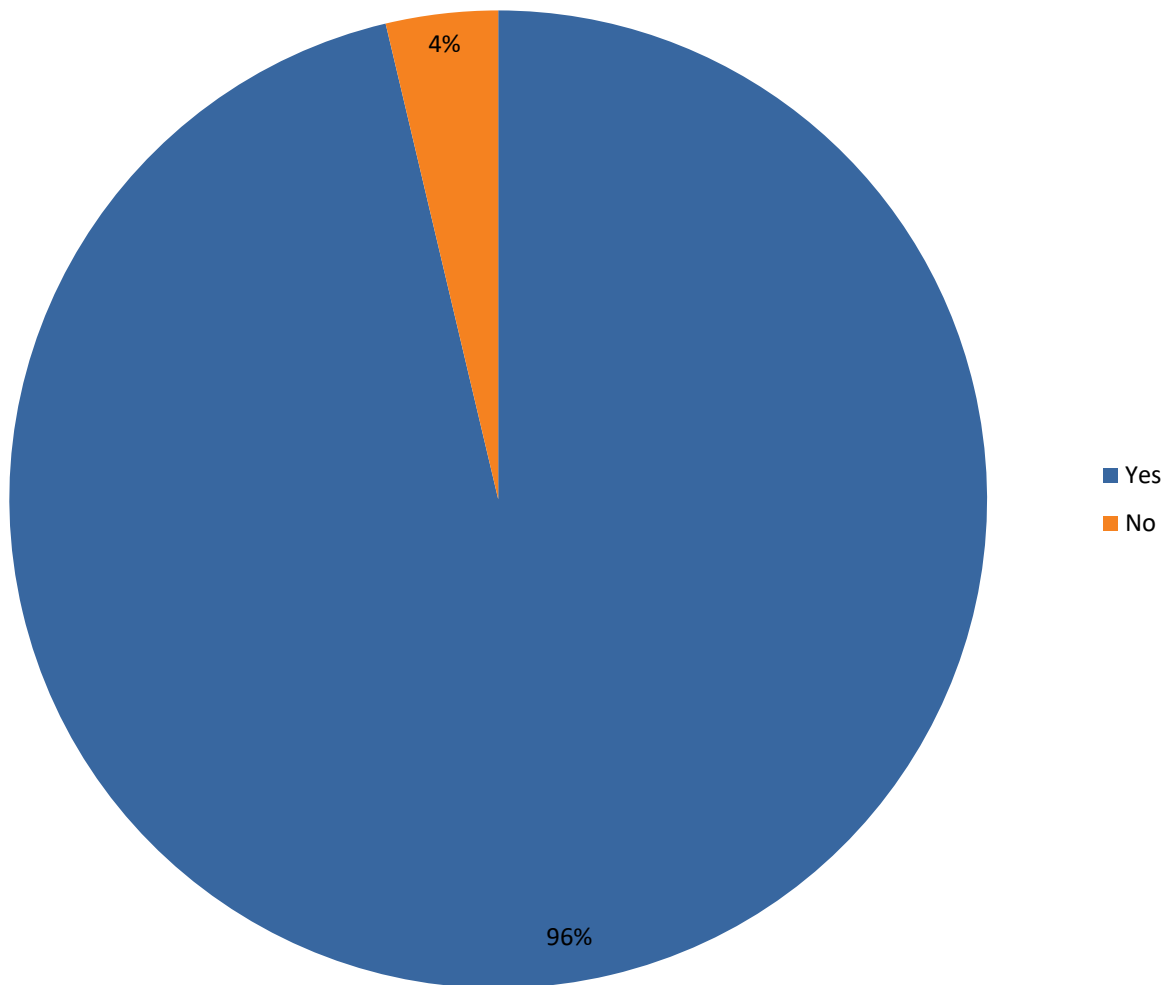
Figure 28 provides response distributions for question 34 – "Please identify the process safety lead indicators with an associated KPI target." This question was limited to participants responding "yes" to question 33. This question did not appear in the 2012 survey.

Figure 28 – Type of process safety lead KPI targets
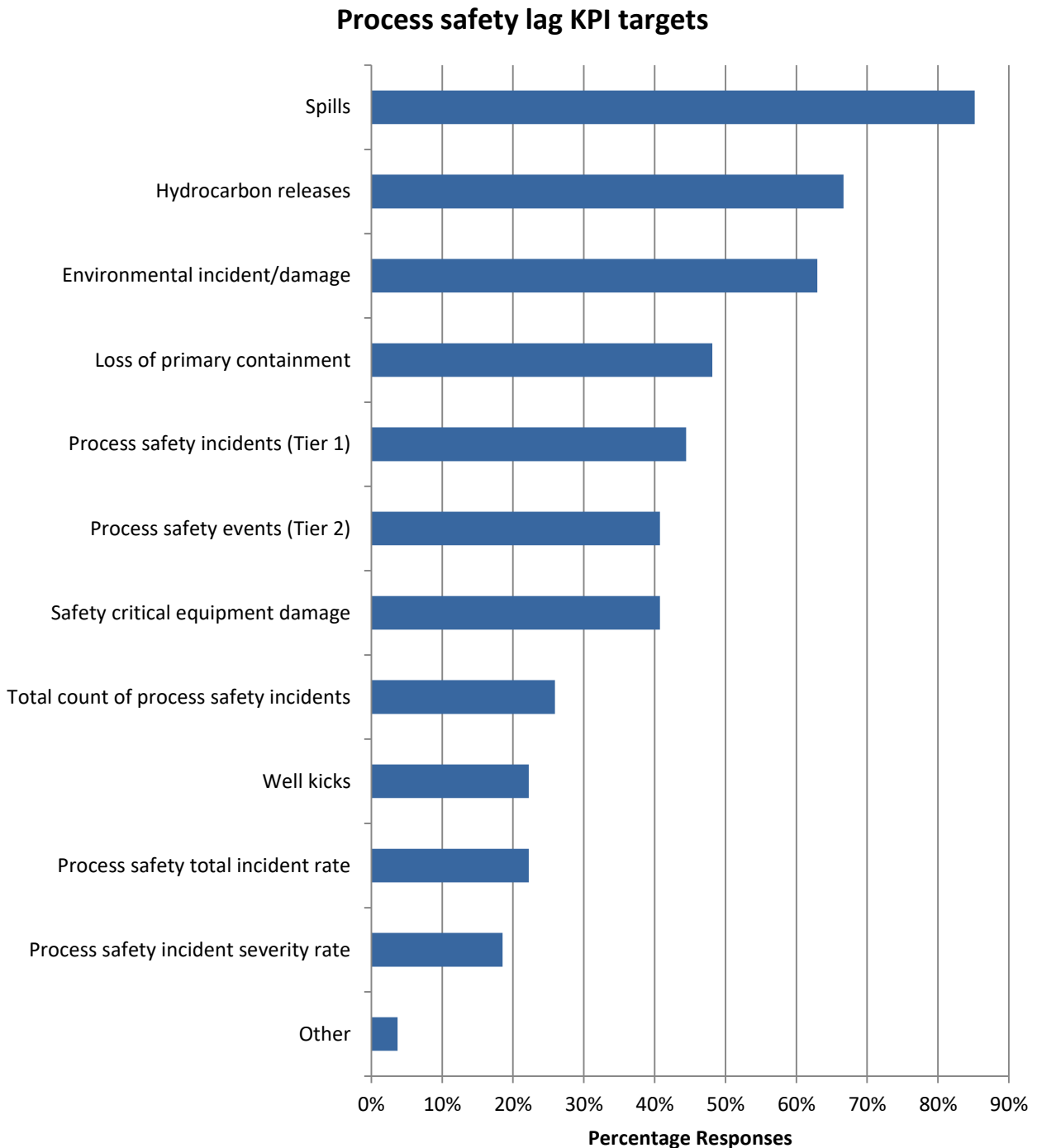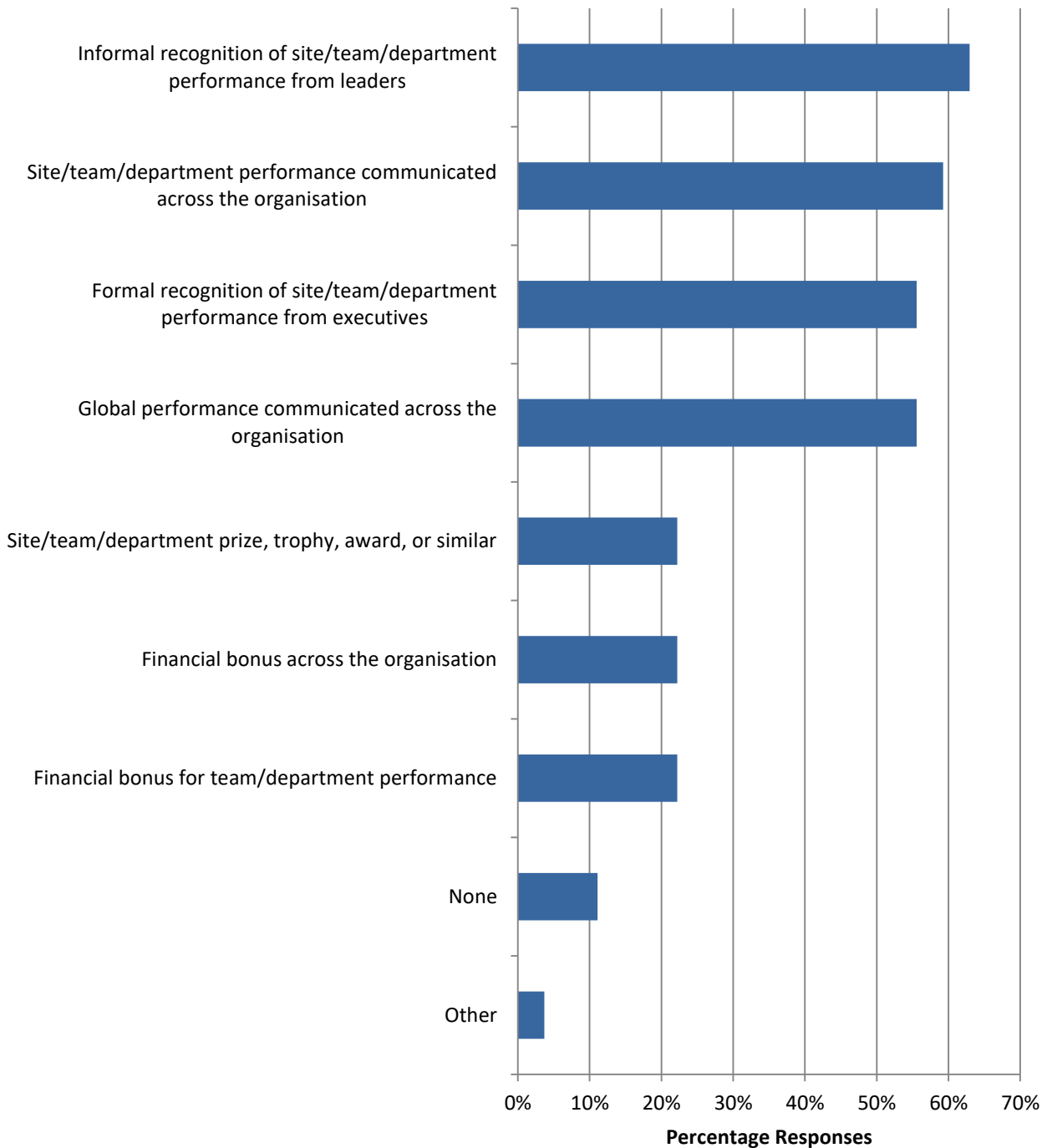
Process safety lead KPI targets
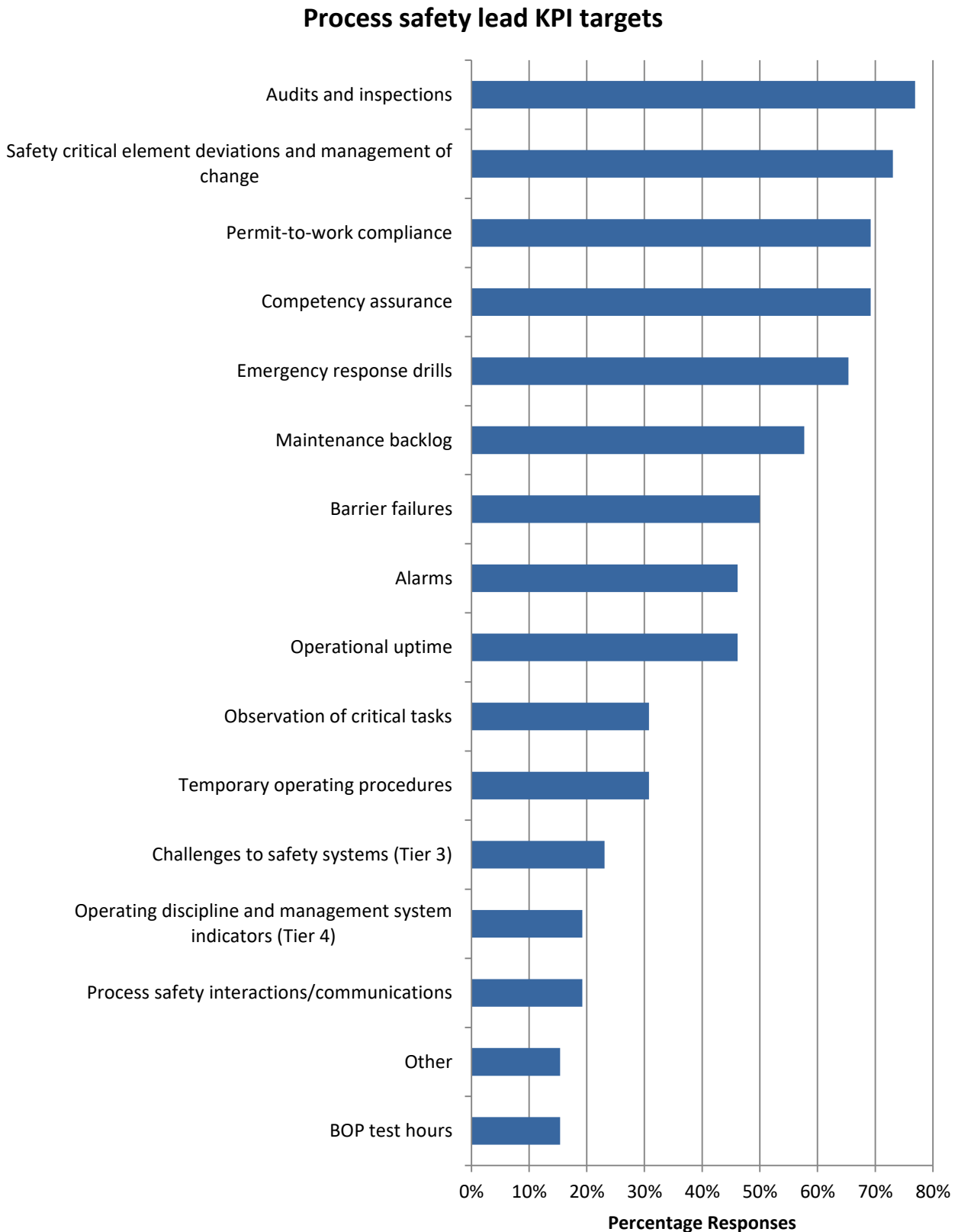
Figure 29 provides response distributions for question 35 – "Please identify the strategies used to drive and reinforce achievement of process safety lead KPI targets." This question was limited to participants responding "yes" to question 33. This question did not appear in the 2012 survey.
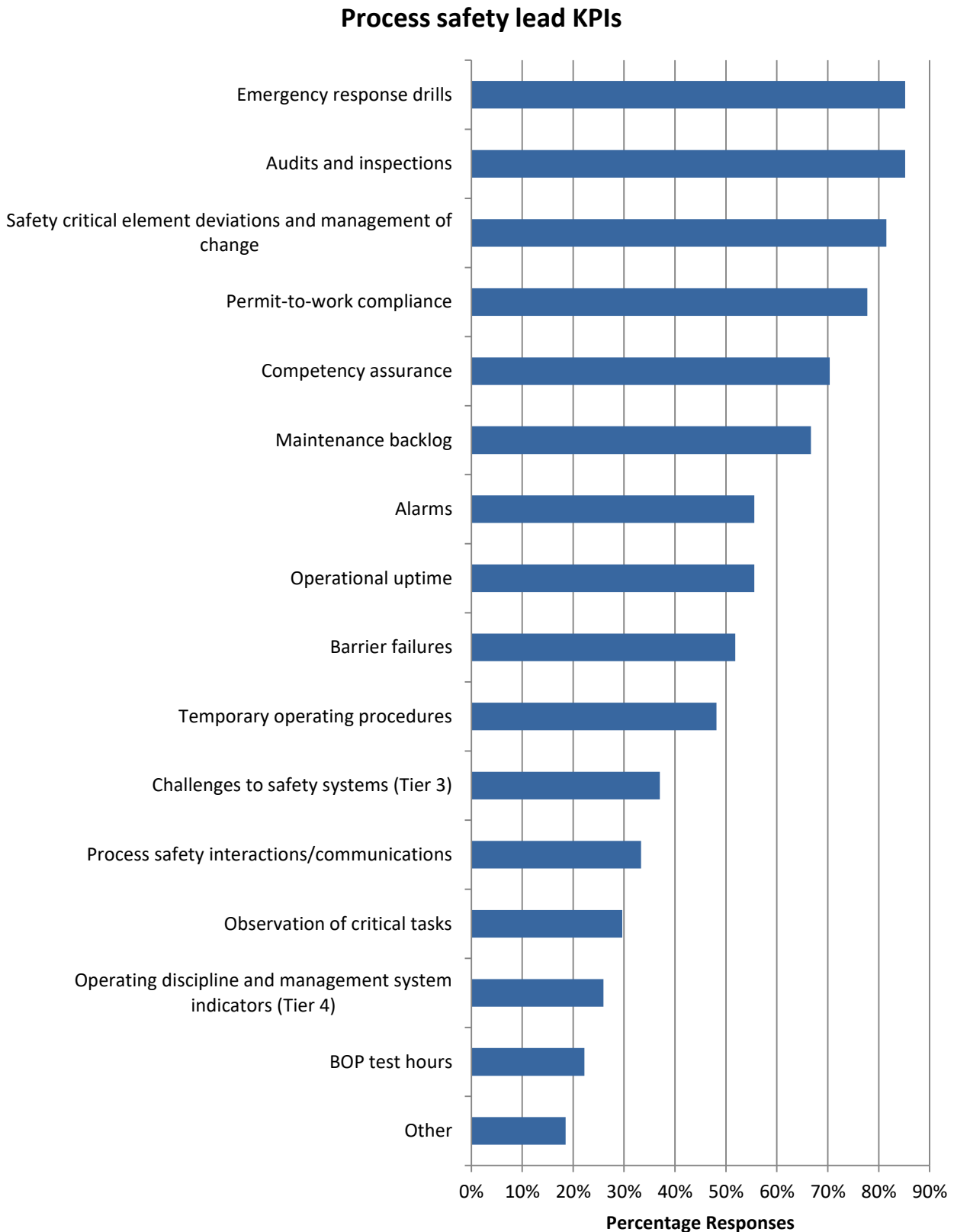
Figure 29 – Reinforcement of process safety lead KPI targets

Reinforcement of process safety lead KPI targets
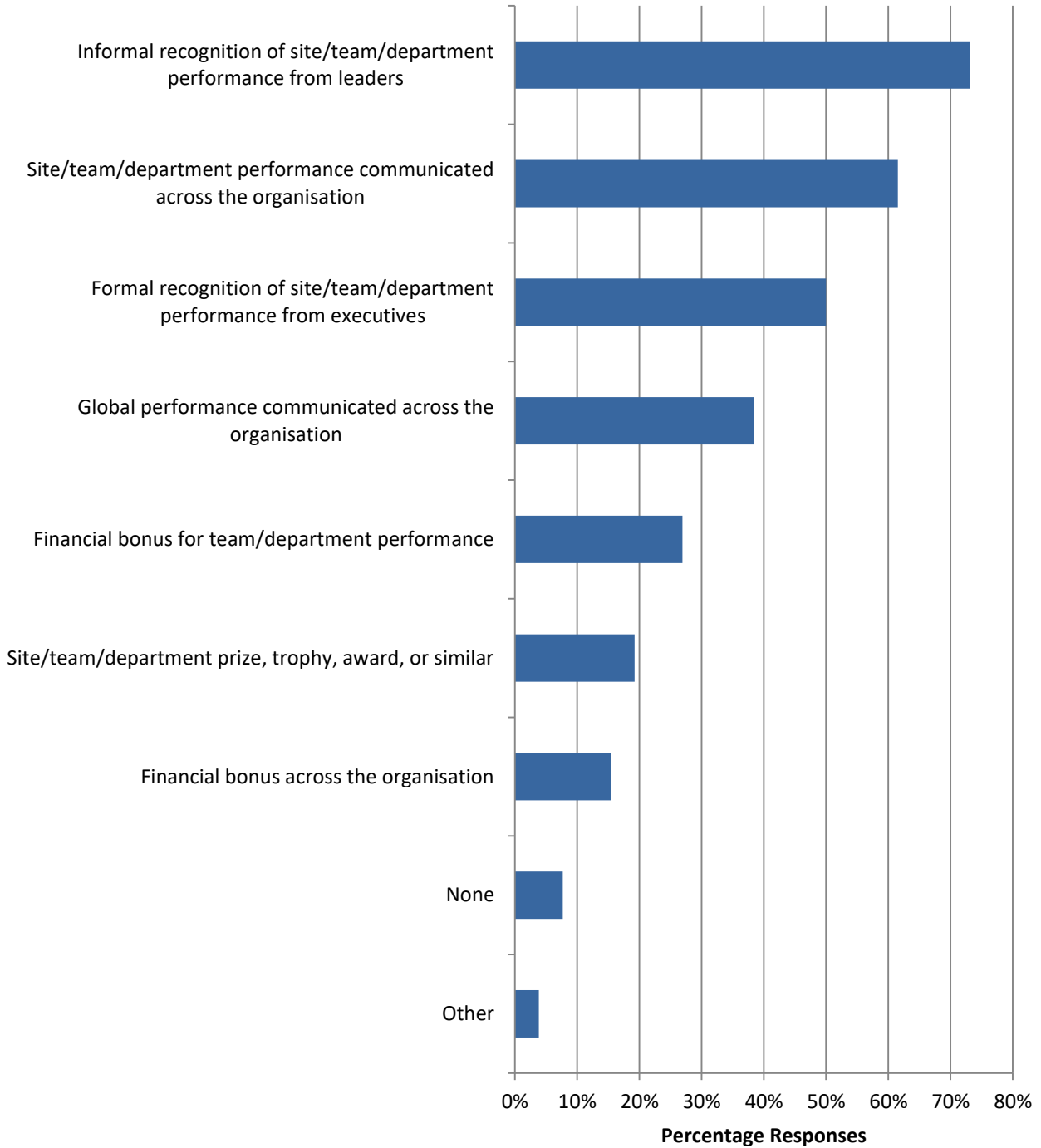
Process safety training

Figure 30 provides response distributions for question 36 – "Does your organisation provide training in process safety as a way of improving safety performance?"

Figure 30 – Provision of process safety training

Provision of process safety training

■ 2012 ■ 2017

Figure 31 provides response distributions for question 37 – "Please identify the positions within your company receiving process safety training." This question was limited to participants responding "yes" to question 36. The 2012 survey did not include response options for HSRs or targeted positions/tasks.

Figure 31 – Process safety training recipients

Process safety training recipients

■ 2012 ■ 2017
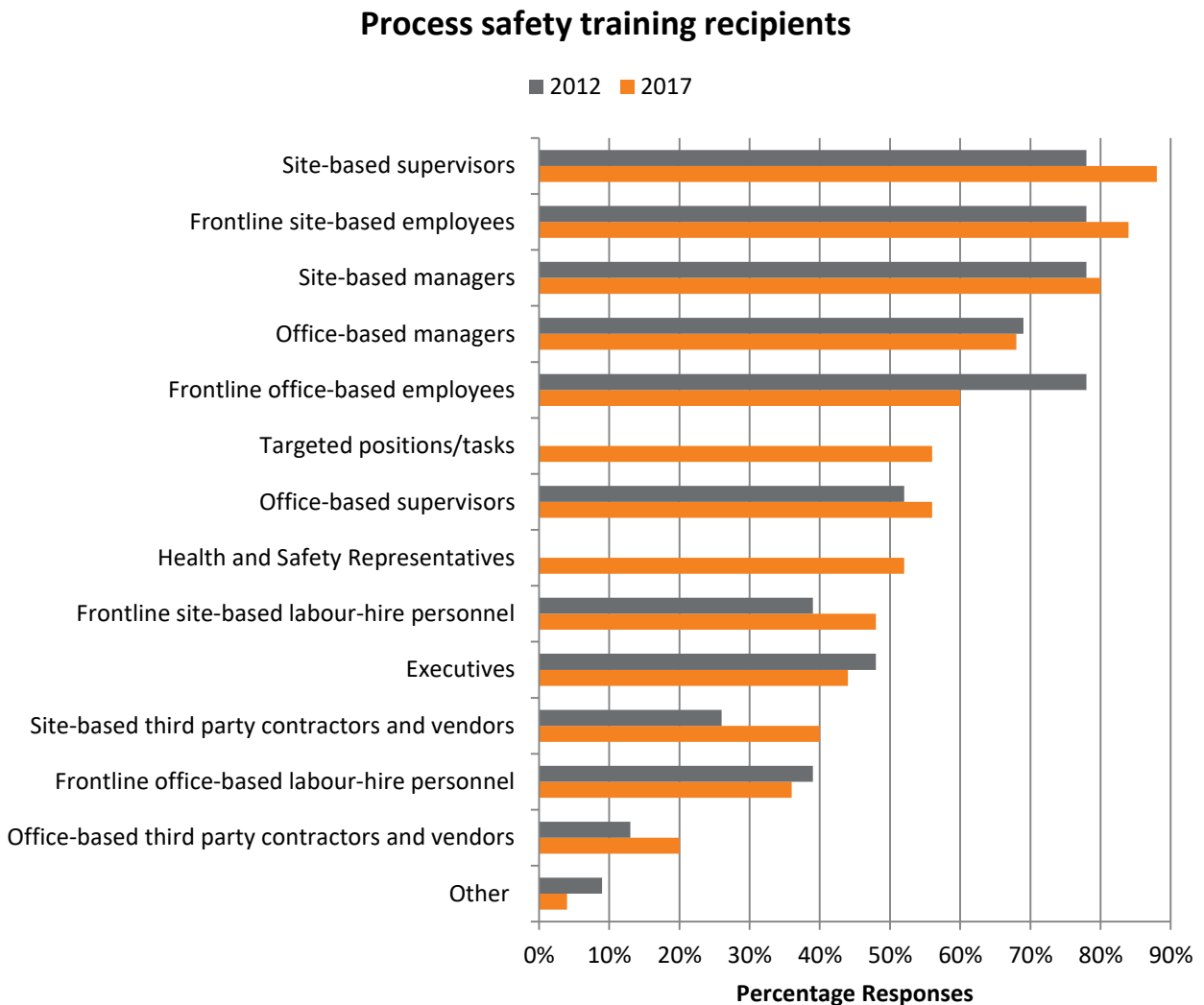
4.5. Safety leadership initiatives

Information about safety leadership initiatives was collected in questions 38 through 41.

Safety leadership training

Safety leadership training was defined as *the formal dissemination of relevant theoretical and practical information as a means of improving leader performance. It can encompass a range of settings including classroom, computer, workshop, or forum/seminar.*

Figure 32 provides response distributions for question 38 – "Does your organisation provide safety leadership training as a way of improving safety performance?"

Figure 32 – Provision of safety leadership training

Provision of safety leadership training

■ 2012 ■ 2017
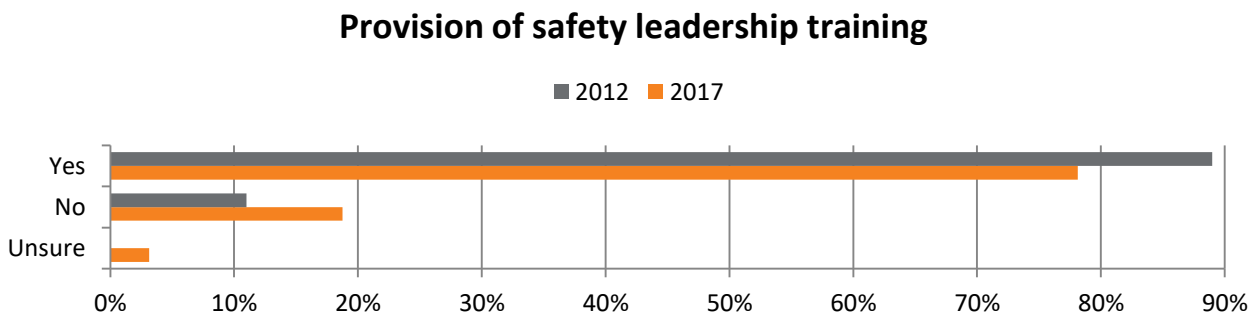
Figure 33 provides response distributions for question 39 – "Please identify the positions within your company receiving safety leadership training." This question was limited to participants responding "yes" to question 38. The 2012 survey did not include response options for HSRs.

Figure 33 – Safety leadership training recipients

Safety leadership training recipients

■ 2012 ■ 2017
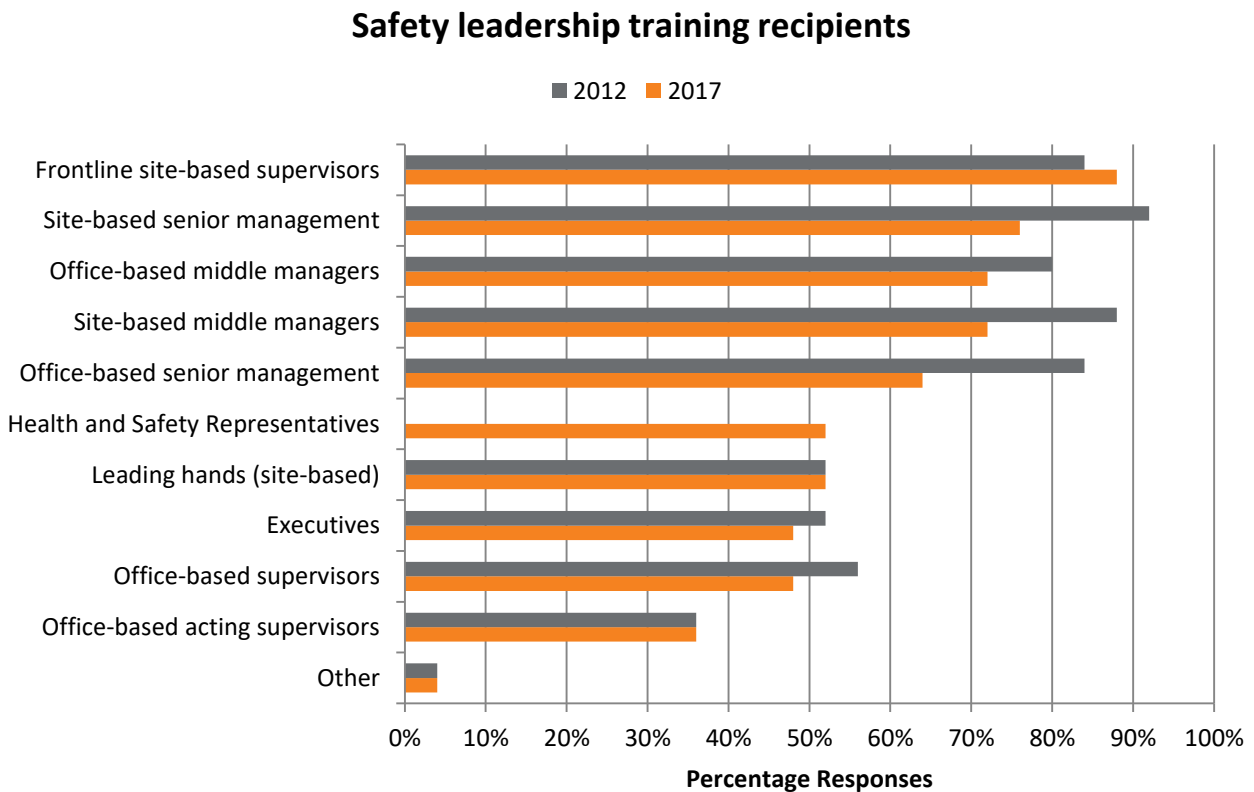
Safety leadership coaching

Safety leadership coaching was defined as *a one-on-one relationship between the coach and the leader, in which the coach uses a variety of behavioural methods to assist the leader in achieving an agreed set of goals.*

Figure 34 provides response distributions for question 40 – "Does your organisation provide safety leadership coaching as a way of improving safety performance?"

Figure 34 – Provision of safety leadership coaching

Provision of safety leadership coaching

■ 2012 ■ 2017
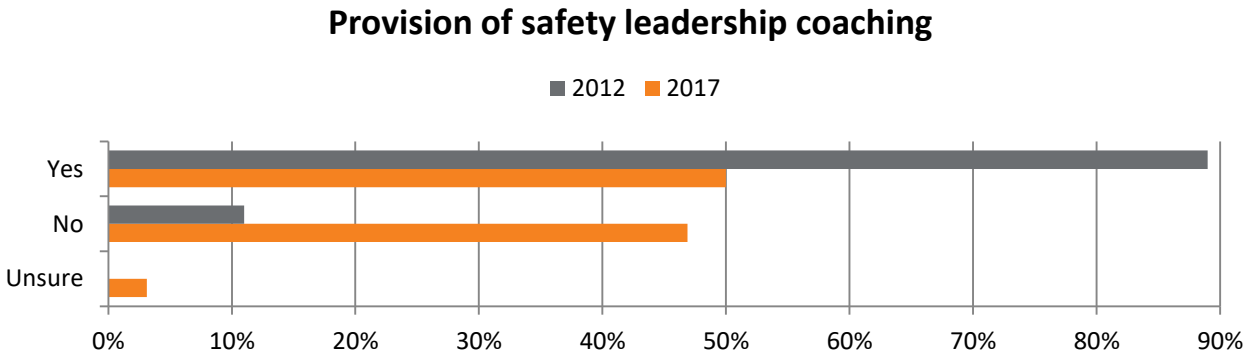
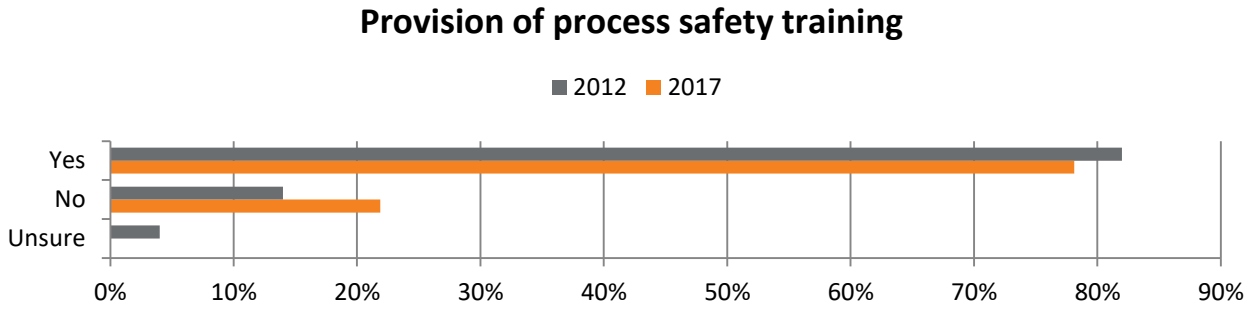Figure 35 provides response distributions for question 41 – "Please identify the positions within your company receiving safety leadership coaching." This question was limited to participants responding "yes" to question 40. The 2012 survey did not include response options for HSRs.

Figure 35 – Safety leadership coaching recipients

Safety leadership coaching recipients

■ 2012 ■ 2017

4.6. Safety perception surveys

Information about safety perception surveys was collected in questions 42 through 46.

Perception survey administration

Figure 36 provides response distributions for question 42 – "Does your organisation conduct safety culture/climate perception surveys?"

Figure 36 – Use of safety culture/climate perception surveys

Use of safety culture/climate perception surveys
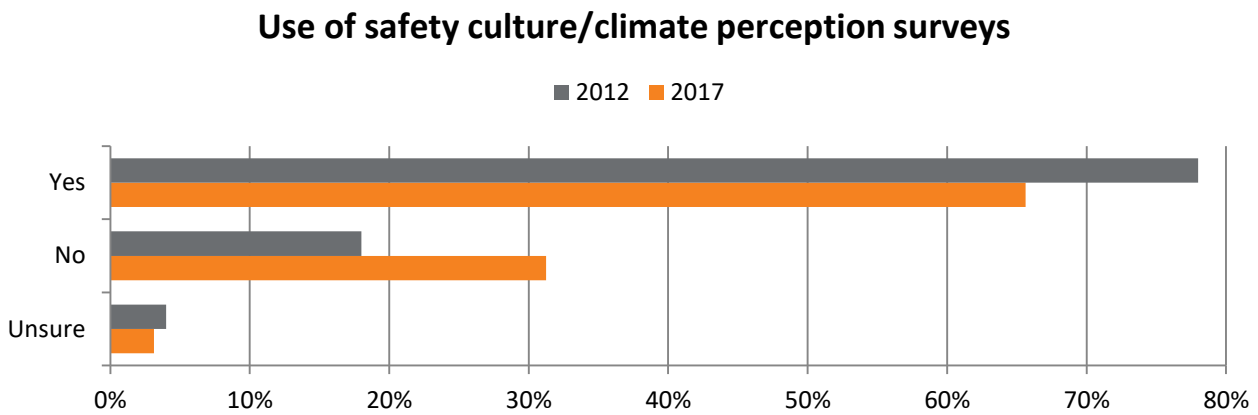
Figure 37 provides response distributions for question 43 – "How regularly is your perception survey administered?" This question was limited to participants responding "yes" to question 42.

Figure 37 – Survey administration frequency

Perception survey frequency
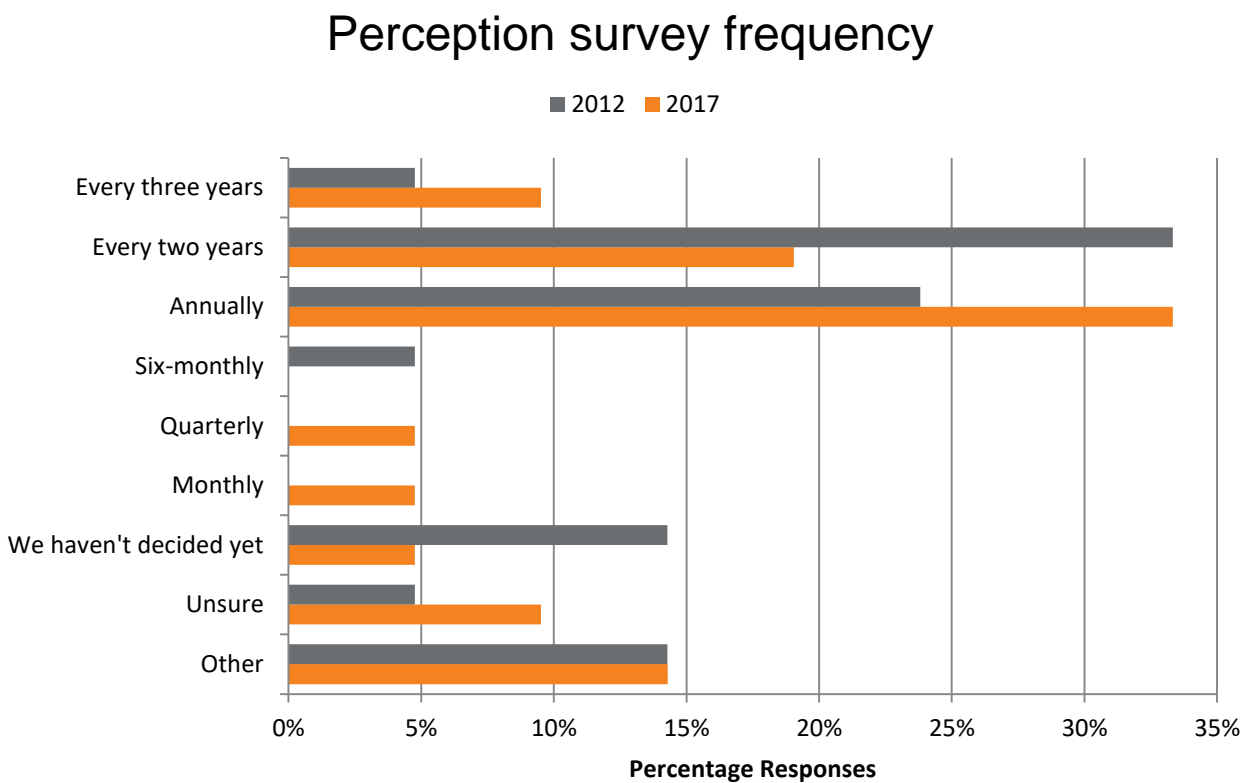
Perception survey results

Figure 38 provides response distributions for question 44 – "Are results provided to the workforce?" This question was limited to participants responding "yes" to question 42.

Figure 38 – Distribution of survey results

Distribution of results
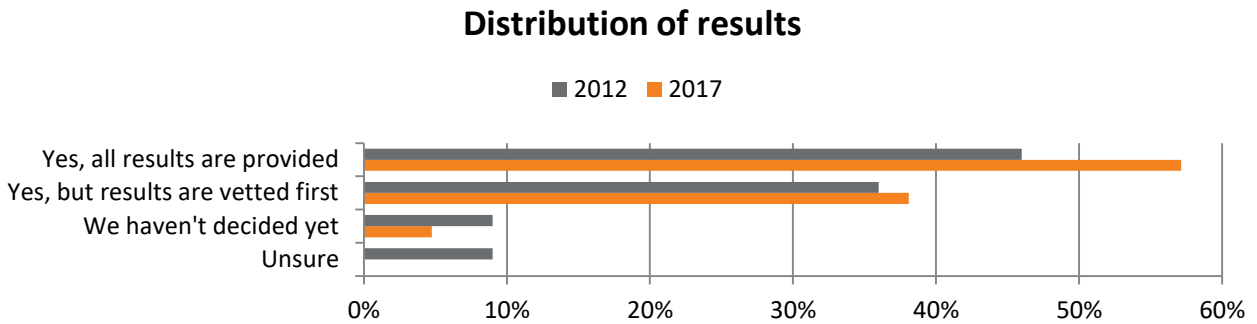
Figure 39 provides response distributions for question 45 – "How are perception survey results communicated to the workforce?" This question was limited to participants providing an affirmative response to question 44.

Figure 39 – Survey results communication processes

Perception survey feedback methods
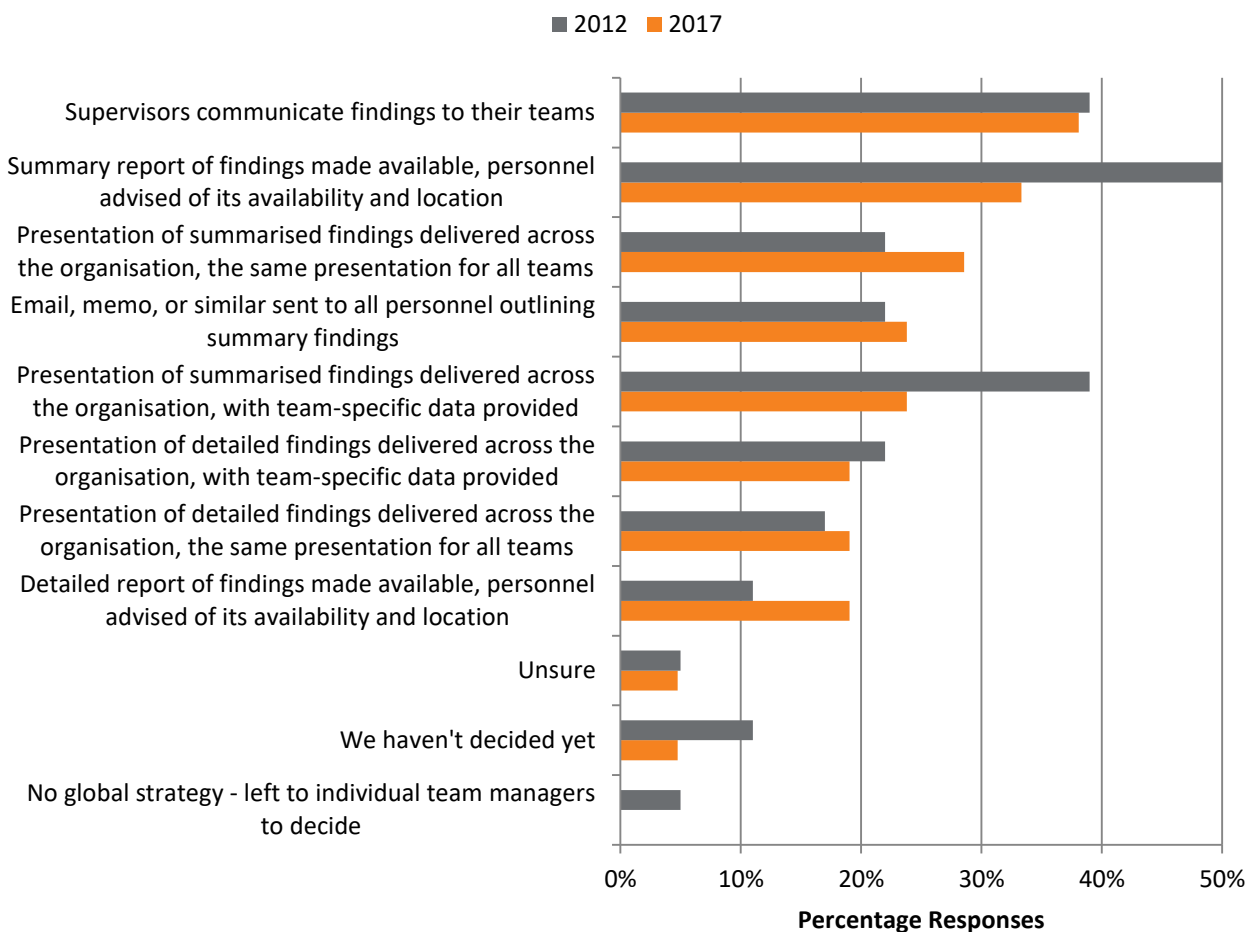
Figure 40 provides response distributions for question 46 – "What is done with the perception survey results?" This question was limited to participants responding "yes" to question 42.

Figure 40 – Post-survey actions

Post-survey actions

■ 2012 ■ 2017
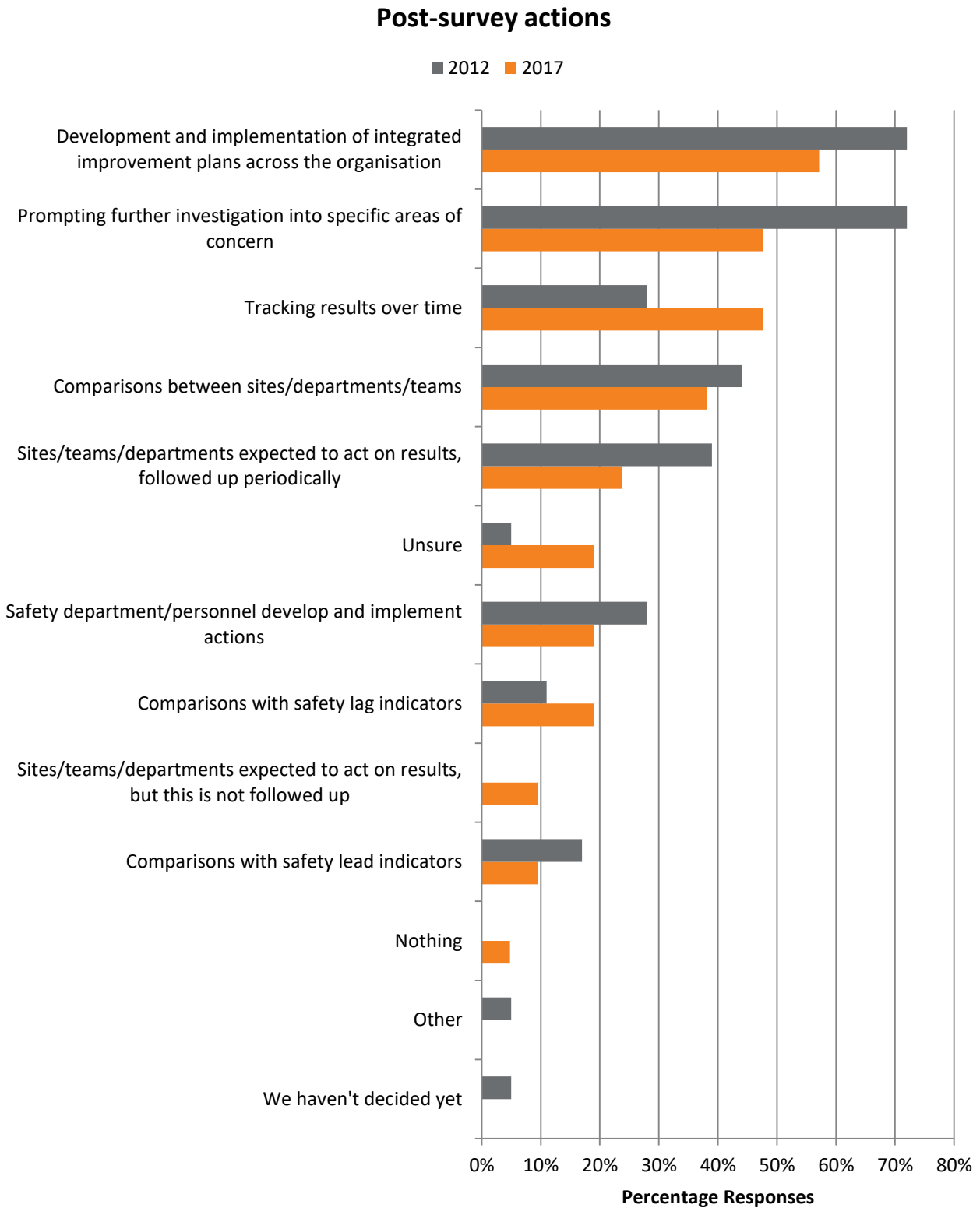
4.7. Safety culture initiatives

Information about safety culture initiatives was collected in questions 47 through 50.

Figure 41 provides response distributions for question 47 – "Has your organisation implemented a safety culture improvement strategy?"

Figure 41 – Safety culture improvement strategy
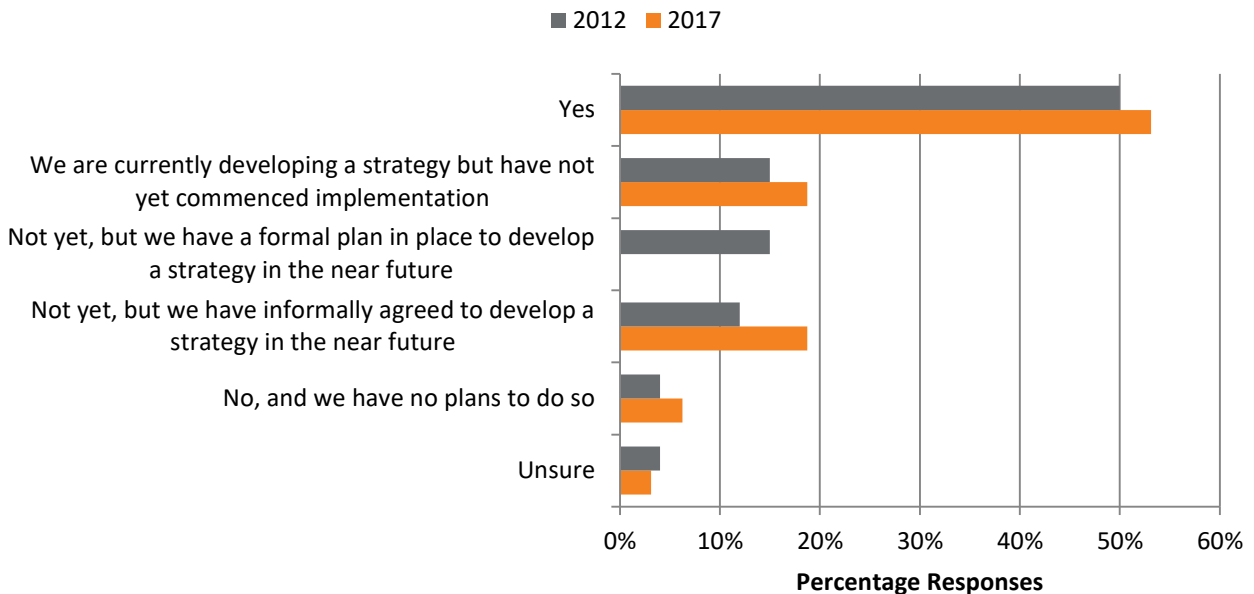
Figure 42 provides response distributions for question 48 – "What approach does the safety culture improvement strategy follow?" This question was limited to participants responding "yes" to question 47. This question did not appear in the 2012 survey.

Figure 42 – Safety culture improvement strategy approach
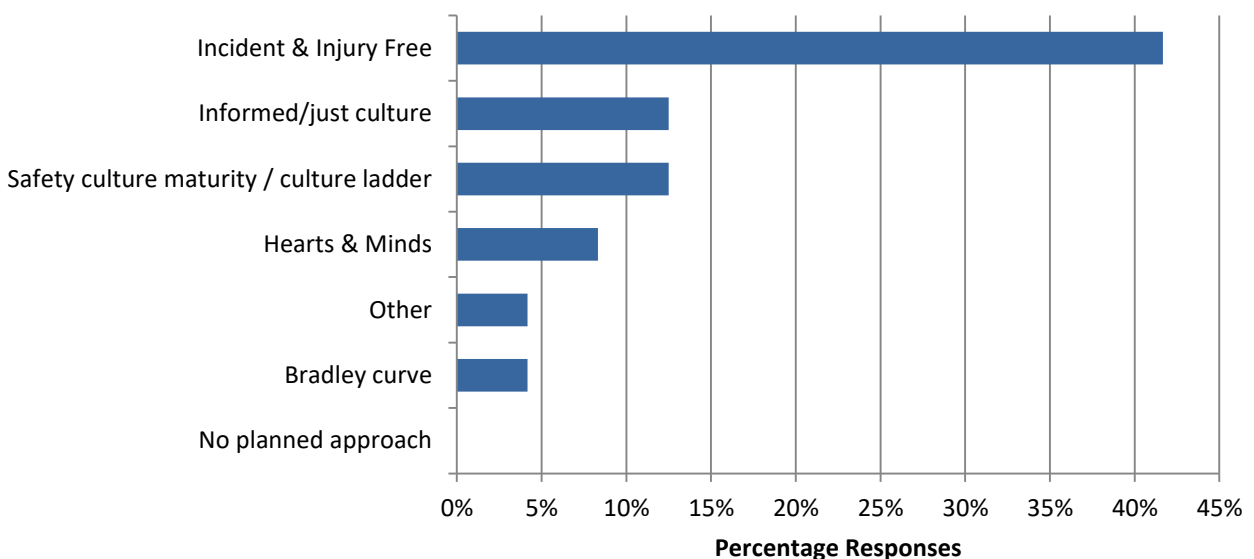
Figure 43 provides response distributions for question 49 – "What is the change target of the safety culture improvement strategy?" This question was limited to participants responding "yes" to question 47. This question did not appear in the 2012 survey.

Figure 43 – Safety culture improvement strategy change target

Safety culture change target
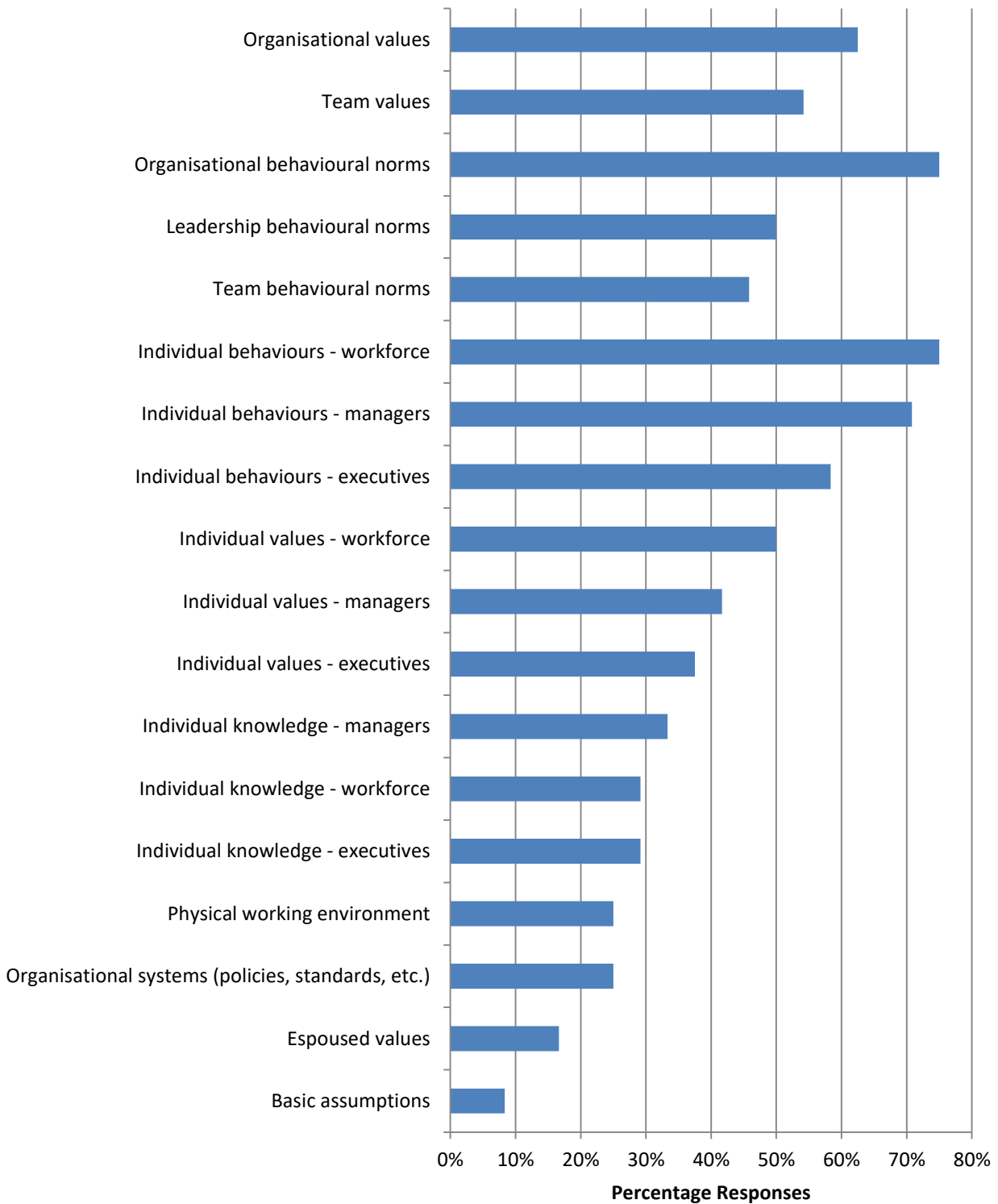
Table 5 provides responses for question 50 – "Please describe any methods used to track the success of the safety culture improvement strategy". This question was limited to participants responding "yes" to question 47. This question did not appear in the 2012 survey.

Table 5 – Safety culture indicators

Quantitative lead indicators
Regular scheduled meeting to discuss implementation, action items assigned, campaign specific indicators may also be used.
Completion and involvement
Leadership and Managers Walkabout
Dashboards, safety mate programme, hazard cards, audits
Communicated to workforce monthly, tracked continually
Action Tracking Register
Hazard Observation Cards (including Behaviour Based Safety feedback)
Lead and Lag indicators
Supervisors / managers assessed against leadership criteria
Number of IFO (Coaches or Participants)
Quantitative lag indicators
Surveys, Management By Walk Around
Completion and involvement
Total Recordable Injury Rate
Asset KPI's quarterly reviews, knowledge management
Reported to management quarterly, tracked continually
Total Recordable Injury Frequency, Lost Time Injuries, etc.
Observational analysis
Management visits
Annual targets identified across all HSE criteria and tracked
Number of Improvement Cards generated
Safety climate perception surveys
Surveys
Yes
Follow up surveys
Track responses to questions repeated throughout previous surveys
Pulse checks, focus groups
Climate survey
IFO survey results
Qualitative indicators
Based on previous results
Closure of actions
Safe cards
Quarterly reviews, annual reviews
KPIs for leading and lagging indicators
Communicated to workforce monthly, tracked continually
Willingness to use Stop Work Authority
Other
Log of Management of Change for Safety Management System

4.8. Further safety improvement initiatives

Information about further safety improvement initiatives was collected in questions 51 through 54.

Error risk management

Figure 44 provides response distributions for question 51 – "Which of the following error risk management initiatives have been utilised within your organisation over the last two years?" This question did not appear in the 2012 survey.

Figure 44 – Error risk management initiatives

Error risk management initiatives
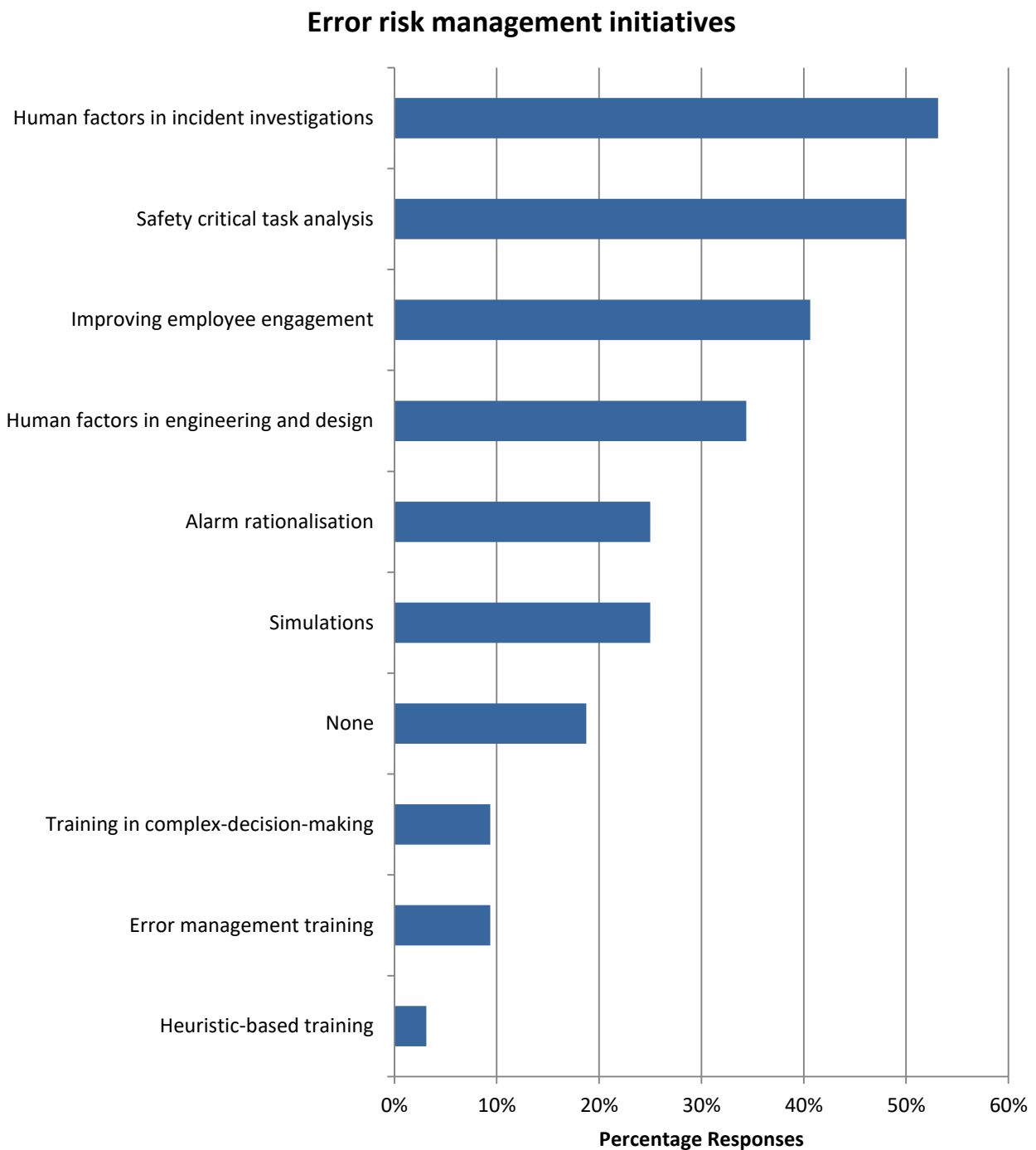
Traditional safety improvement

Figure 45 provides response distributions for question 52 – "Which of the following additional safety improvement initiatives have been utilised within your organisation over the last two years?" This was a modified version of the 2012 survey question with three additional response options added, as indicated by an absence of 2012 data.

Figure 45 – Traditional safety improvement initiatives

Traditional safety improvement initiatives
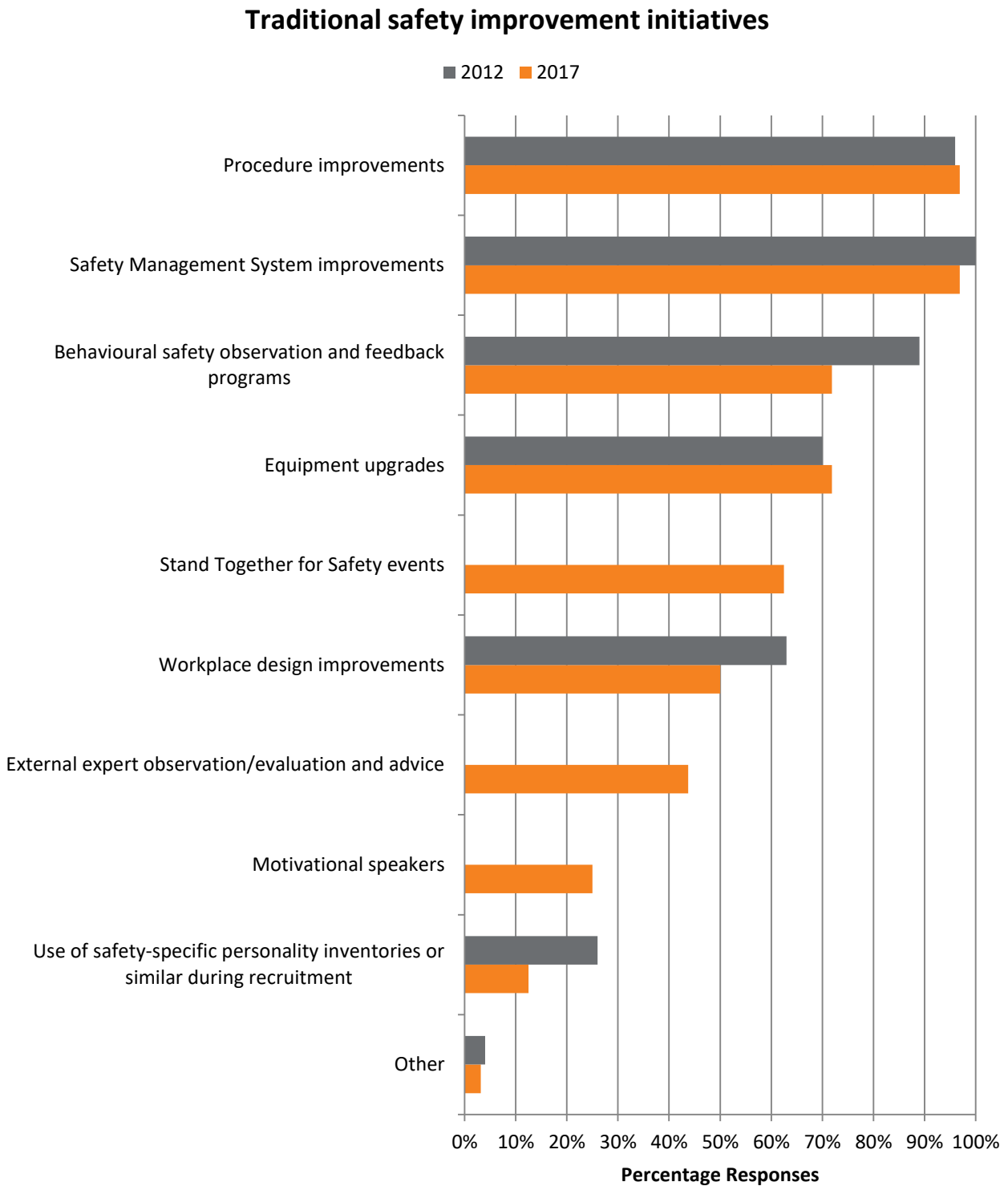
Industry safety fora

Figure 46 provides response distributions for question 53 – "In which of the following industry safety improvement fora does your organisation participate?" This question did not appear in the 2012 survey.

Figure 46 – Participation in industry safety improvement fora

Industry safety improvement fora

Further initiatives

Table 6 provides responses for question 54 – "Please describe any further safety improvement initiatives utilised within your organisation over the last two years, which have not been identified within this survey." This question did not appear in the 2012 survey.

Table 6 – Further initiatives

Responses
Fatal, Serious Injury prevention program.
Development and implementation of Company Golden Rules of Safety.
Many procedures in the Safety Management System are being rewritten into handbook format with words minimized to about 30% of what existing procedures contained. Adopting more of an airline style checklist booklet format that is far more user friendly for all.
Introduction of line-of-sight risk management framework and verification process.
Dropped Object Initiatives and Dropped Object Prevention Plans at all work sites.
Focus on 3rd party familiarisations prior to involvement in vessel mobilisations.

5.   Appendix 1 – Survey questions

Introduction and Information

In 2012 NOPSEMA collected survey data from facility operators regarding the types of safety performance improvement initiatives being implemented at the time. The survey data was gathered as part of a larger project exploring safety culture improvement initiatives in the Australian offshore petroleum industry.

It has now been five years since the original survey was administered. As part of NOPSEMA's promotion and advice functions, and through our powers to conduct research, we will re-administer a modified version of the survey.

Responses will be compared against the original survey findings to identify changes in safety management practices over time. A report of survey findings will be made available across the industry as a way of promoting best practice and innovation.

All responses will be treated with strict confidentiality. Anonymity will be assured through the reporting of aggregated data only. Survey responses will be used solely for the purposes described above, and will not result in compliance-related action.

As with any research, for results to be meaningful and useful they must be drawn from representative data. A larger response rate provides more reliable data, which means that conclusions can be made with greater confidence. Your participation is critical to the achievement of practical findings and recommendations to foster continuous improvement in safety performance across the industry.

The report of the original survey is published on NOPSEMA's webpage and is accessible via the following address: https://www.nopsema.gov.au/assets/Corporate/A279069.pdf

Please note that, while the 2012 survey prefaced a series of interviews about safety culture, this iteration of the survey is not designed as a lead-in to a larger research project.

If you would like further information about this survey, please contact Joelle Mitchell - joelle.mitchell@nopsema.gov.au

Contact Information

Personal and company identity information will not be reported or published in any format, and is requested for the purposes of data integrity assurance only. That is, to ensure that only one survey is completed per company. In the case of multiple responses from one company, NOPSEMA will contact you to identify which response is the appropriate one.

Please provide your preferred contact information (note above regarding use of this information).

On which company's behalf are you responding?
[Set response options provided]

What type of dutyholder is your company (as defined by the Offshore Petroleum and Greenhouse Gas Storage Act and Regulations)?

- o   Operator (safety case)   o   Titleholder (well operations management plan)   o   Both

Company Information

How many employees work for your company within Australia, in divisions / business units directly related to offshore petroleum? Please include those located at facilities within state and Commonwealth waters.

- o   <50
- o   51-100
- o   101-300
- o   301-500
- o   501-750

- o   751-1000
- o   1001-2000
- o   2001-5000
- o   >5000

At how many locations does your company operate within Australia, where work is directly related to offshore petroleum (including corporate support functions)? Please include corporate offices and individual facilities.

How many of each offshore facility type does your company operate within Australia? (select all that apply)

- o   Production Platform (with drilling)
- o   Production Platform (no drilling)
- o   Not Normally Manned Platform
- o   Pipeline
- o   Well
- o   Floating Production Storage and Offtake
- o   Floating Storage and Offtake

- o   Mobile Offshore Drilling Unit
- o   Dive Support Vessel
- o   Accommodation Vessel
- o   Multi-Service Vessel
- o   Construction Vessel
- o   Pipelaying Vessel
- o   Other (please specify)

How many of each onshore workplace type does your company operate within Australia? (select all that apply)

- o   Onshore Processing Plant   o   Onshore Offices   o   Other (please specify)

Which of the following best describes your company's management system structure?

- Multinational company with an Australian Business Unit (or similar) operating within a global management system
- Multinational company with an Australian Business Unit (or similar) operating within a Business-Unit-specific management system
- Multinational company with an Australian Business Unit (or similar) operating with site-specific management systems
- Australian company with a company-wide management system

- Australian company with site-specific management systems
- Non-Australian company operating within Australia with a company-wide management system
- Non-Australian company operating within Australia with site-specific management systems
- Other (please specify)

Which of the following best describes your company's safety / OHS personnel (excluding HSE Representatives / Committee Members)?

- No dedicated safety resource
- One part time safety resource
- One full time safety resource

- Two or more full time safety resources
- A dedicated safety team/department/division
- Other (please specify)

Safety Team Information

Which of the following best describes the reporting lines for your safety team/person?

- No reporting line to the most senior position (such as CEO, Owner, Director, or similar)
- Reporting to the most senior position via a non-safety line (e.g. Operations, Human Resources, etc.)

- Direct reporting line to the most senior position
- Indirect (i.e. 'dotted-line') reporting line to the most senior position
- Other (please specify)

What is the job title of the most senior safety position within your company?

Please identify how many safety personnel are allocated to each location type: (please enter a number for all applicable location types)

- Corporate offices
- Offshore
- Other site-based locations

- Office-based with regular site-based requirements
- Office-based with ad-hoc site-based requirements

How many Health and Safety Representatives (HSRs) does your company have in place?

Safety Improvement Initiatives – Personal Safety

The following questions will focus on personal safety improvement initiatives.

Definition: 'Personal Safety' focuses on injuries such as slips, trips, falls, struck-by incidents and strains. Personal safety programs place an emphasis on personal behaviours and the wearing of personal protective equipment.

Personal Safety Lag Indicators

Does your company use lag Key Performance Indicators (KPIs) to measure personal safety performance?

o Yes   o No   o Unsure

Which of the following lag indicators are used to measure personal safety performance? (select all that apply)

o Total recordable case   o Lost workdays
o Total recordable injury   o Fatalities
o Lost time injury   o Total permanent impairment
o Medical treatment injury   o Partial permanent impairment
o Alternative duties   o Long-term temporary impairment
o Major injury   o Moderate temporary impairment
o Occupational disease   o Workers compensation data
o Acute illness due to workplace exposure o Other (please specify)

Does your organisation set lag KPI targets for personal safety?

o Yes   o No   o Unsure

Please identify the personal safety lag indicators with an associated KPI target (select all that apply).

o Total recordable case   o Lost workdays
o Total recordable injury   o Fatalities
o Lost time injury   o Total permanent impairment
o Medical treatment injury   o Partial permanent impairment
o Alternative duties   o Long-term temporary impairment
o Major injury   o Moderate temporary impairment
o Occupational disease   o Workers compensation data
o Acute illness due to workplace exposure o Other (please specify)

Please identify the strategies used to drive and reinforce achievement of personal safety lag KPI targets (select all that apply).

o Financial bonus for team/department performance
o Financial bonus across the organisation
o Site/team/department prize, trophy, award, or similar
o Global performance communicated across the organisation
o Site/team/department performance communicated across the organisation

o Formal recognition of site/team/department performance from executives
o Informal recognition of site/team/department performance from leaders
o None
o Other (please specify)

Personal Safety Lead Indicators

Does your company use lead KPIs to measure personal safety performance?

o Yes   o No   o Unsure

Which of the following lead indicators are used to measure personal safety performance? (select all that apply)

o Behaviour Based Safety observations
o Hazard observations
o Hazard analysis
o Competency assurance
o Mandatory training & inductions
o Audits & Inspections
o Action closeout status

o Safety communications
o Maintenance backlog
o Management site visits
o Safety Management System/procedure review
o Employee surveys
o Emergency response drills
o Other (please specify)

Does your organisation set lead KPI targets for personal safety?

o Yes   o No   o Unsure

Please identify the personal safety lead indicators with an associated KPI target (select all that apply).

o Behaviour Based Safety observations
o Hazard observations
o Hazard analysis
o Competency assurance
o Mandatory training & inductions
o Audits & Inspections
o Action closeout status

o Safety communications
o Maintenance backlog
o Management site visits
o Safety Management System/procedure review
o Employee surveys
o Emergency response drills
o Other (please specify)

Please identify the strategies used to drive and reinforce achievement of personal safety lead KPI targets (select all that apply).

o Financial bonus for team/department performance
o Financial bonus across the organisation
o Site/team/department prize, trophy, award, or similar
o Global performance communicated across the organisation

o Site/team/department performance communicated across the organisation
o Formal recognition of site/team/department performance from executives
o Informal recognition of site/team/department performance from leaders
o None
o Other (please specify)

Personal Safety Training

Does your organisation provide training in personal safety as a way of improving safety performance?

- o Yes
- o No
- o Unsure

Please identify the positions within your company receiving personal safety training (select all that apply).

- o Frontline site-based employees
- o Frontline site-based labour-hire personnel
- o Health and Safety Representatives
- o Site-based supervisors
- o Site-based managers
- o Frontline office-based employees
- o Frontline office-based labour-hire personnel
- o Office-based supervisors
- o Office-based managers
- o Executives
- o Site-based third party contractors and vendors
- o Office-based third party contractors and vendors
- o Targeted positions/tasks
- o Other (please specify)

Safety Improvement Initiatives – Process Safety

The following questions will focus on process safety improvement initiatives.

Definition: 'Process Safety' refers to the prevention of unintentional releases of hydrocarbons, chemicals, energy, or other potentially dangerous materials (including steam) during the course of facility processes and which can cause major accident events. Process safety involves, for example, the prevention of leaks, spills, equipment malfunction, over-pressures, over-temperatures, corrosion, metal fatigue and other similar conditions. Process safety programs focus on design of facilities, maintenance of equipment, alarms, effective control points, procedures and training.

Process Safety Lag Indicators

Does your company use lag KPIs to measure process safety performance?

o   Yes   o   No   o   Unsure

Which of the following lag indicators are used to measure process safety performance? (select all that apply)

o   Hydrocarbon releases   o   Process safety events (Tier 2)
o   Spills   o   Total count of process safety incidents
o   Safety critical equipment damage   o   Process safety total incident rate
o   Environmental incident/damage   o   Process safety incident severity rate
o   Loss of primary containment   o   Well kicks
o   Process safety incidents (Tier 1)   o   Other (please specify)

Does your organisation set lag KPI targets for process safety?

o   Yes   o   No   o   Unsure

Please identify the process safety lag indicators with an associated KPI target (select all that apply).

o   Hydrocarbon releases   o   Process safety events (Tier 2)
o   Spills   o   Total count of process safety incidents
o   Safety critical equipment damage   o   Process safety total incident rate
o   Environmental incident/damage   o   Process safety incident severity rate
o   Loss of primary containment   o   Well kicks
o   Process safety incidents (Tier 1)   o   Other (please specify)

Please identify the strategies used to drive and reinforce achievement of process safety lag KPI targets (select all that apply).

o   Financial bonus for team/department performance   o   Formal recognition of site/team/department performance from executives
o   Financial bonus across the organisation   o   Informal recognition of site/team/department performance from leaders
o   Site/team/department prize, trophy, award, or similar   o   None
o   Global performance communicated across the organisation   o   Other (please specify)
o   Site/team/department performance communicated across the organisation

Process Safety Lead Indicators

Does your company use lead Key Performance Indicators (KPIs) to measure process safety performance?

o   Yes   o   No   o   Unsure

Which of the following lead indicators are used to measure process safety performance? (select all that apply)

- o   Competency assurance
- o   Safety critical element deviations & Management of Change
- o   Barrier failures
- o   Maintenance backlog
- o   Temporary operating procedures
- o   Blowout Preventer test hours
- o   Operational uptime
- o   Permit-to-work compliance

- o   Audits and inspections
- o   Emergency response drills
- o   Observation of critical tasks
- o   Alarms
- o   Process safety interactions / communications
- o   Challenges to safety systems (Tier 3)
- o   Operating discipline and management system indicators (Tier 4)
- o   Other (please specify)

Does your organisation set lead KPI targets for process safety?

o   Yes   o   No   o   Unsure

Please identify the process safety lead indicators with an associated KPI target (select all that apply).

- o   Competency assurance
- o   Safety critical element deviations & Management of Change
- o   Barrier failures
- o   Maintenance backlog
- o   Temporary operating procedures
- o   Blowout Preventer test hours
- o   Operational uptime
- o   Permit-to-work compliance

- o   Audits and inspections
- o   Emergency response drills
- o   Observation of critical tasks
- o   Alarms
- o   Process safety interactions / communications
- o   Challenges to safety systems (Tier 3)
- o   Operating discipline and management system indicators (Tier 4)
- o   Other (please specify)

Please identify the strategies used to drive and reinforce achievement of process safety lead KPI targets (select all that apply).

- o   Financial bonus for team/department performance
- o   Financial bonus across the organisation
- o   Site/team/department prize, trophy, award, or similar
- o   Global performance communicated across the organisation
- o   Site/team/department performance communicated across the organisation

- o   Formal recognition of site/team/department performance from executives
- o   Informal recognition of site/team/department performance from leaders
- o   None
- o   Other (please specify)

Process Safety Training

Does your organisation provide training in process safety as a way of improving safety performance?

- o Yes
- o No
- o Unsure

Please identify the positions within your company receiving process safety training (select all that apply).

- o Frontline site-based employees
- o Frontline site-based labour-hire personnel
- o Health and Safety Representatives
- o Site-based supervisors
- o Site-based managers
- o Frontline office-based employees
- o Frontline office-based labour-hire personnel
- o Office-based supervisors
- o Office-based managers
- o Executives
- o Site-based third party contractors and vendors
- o Targeted positions/tasks
- o Office-based third party contractors and vendors
- o Other (please specify)

Safety Improvement Initiatives – Safety Leadership

Does your organisation provide safety leadership training as a way of improving safety performance?

- o Yes
- o No
- o Unsure

Please identify the positions within your company receiving safety leadership training (select all that apply).

- o Leading hands (site-based)
- o Health and Safety Representatives
- o Frontline site-based supervisors
- o Site-based middle managers
- o Site-based senior management
- o Office-based acting supervisors
- o Office-based supervisors
- o Office-based middle managers
- o Office-based senior management
- o Executives
- o Other (please specify)

Does your organisation provide safety leadership coaching as a way of improving safety performance?

- o Yes
- o No
- o Unsure

Please identify the positions within your company receiving safety leadership coaching (select all that apply).

- o Leading hands (site-based)
- o Health and Safety Representatives
- o Frontline site-based supervisors
- o Site-based middle managers
- o Site-based senior management
- o Office-based acting supervisors
- o Office-based supervisors
- o Office-based middle managers
- o Office-based senior management
- o Executives
- o Other (please specify)

Safety Improvement Initiatives – Safety Culture/Climate Perception Survey

Does your organisation conduct safety culture/climate perception surveys?

o   Yes   o   No   o   Unsure

How regularly is your perception survey administered?

o   We haven't decided yet   o   Annually
o   Monthly   o   Every two years
o   Quarterly   o   Every three years
o   Six-monthly   o   Unsure
                                    o   Other (please specify)

Are results provided to the workforce?

o   Yes, all results are provided   o   No, results are not provided to the workforce
o   Yes, but results are vetted first   o   We haven't decided yet
                                         o   Unsure

How are perception survey results communicated to the workforce? (select all that apply)

o   Detailed report of findings made available, personnel advised of its availability and location
o   Presentation of summarised findings delivered across the organisation, with team-specific data provided
o   Summary report of findings made available, personnel advised of its availability and location
o   Email, memo, or similar sent to all personnel outlining summary findings
o   Presentation of detailed findings delivered across the organisation, the same presentation for all teams
o   Supervisors communicate findings to their teams
o   Presentation of detailed findings delivered across the organisation, with team-specific data provided
o   No global strategy - left to individual team managers to decide
o   We haven't decided yet
o   Presentation of summarised findings delivered across the organisation, the same presentation for all teams
o   Unsure
o   Other (please specify

What is done with the perception survey results? (select all that apply)

o   Nothing
o   Sites/teams/departments expected to act on results, but this is not followed up
o   Tracking results over time
o   Comparisons between sites/departments/teams
o   Sites/teams/departments expected to act on results, followed up periodically
o   Comparisons with safety lag indicators
o   Comparisons with safety lead indicators
o   Safety department/personnel develop and implement actions
o   Prompting further investigation into specific areas of concern
o   Disciplinary action against individuals/departments/sites/teams
o   Development and implementation of integrated improvement plans across the organisation
o   We haven't decided yet
o   Unsure
o   Other (please specify)

Safety Improvement Initiatives – Safety Culture

Has your organisation implemented a safety culture improvement strategy?

- o   Yes
- o   We are currently developing a strategy but have not yet commenced implementation
- o   Not yet, but we have a formal plan in place to develop a strategy in the near future
- o   Not yet, but we have informally agreed to develop a strategy in the near future
- o   No, and we have no plans to do so
- o   Unsure

What approach does the safety culture improvement strategy follow?

- o   Safety culture maturity / culture ladder
- o   Bradley curve
- o   Hearts & Minds
- o   Incident & injury free
- o   Informed/just culture
- o   Bespoke
- o   No planned approach
- o   Other (please specify)

What is the change target of the safety culture improvement strategy? (select all that apply)

- o   Individual Behaviours – Executives
- o   Individual Behaviours – Managers
- o   Individual Behaviours – Workforce
- o   Organisational behavioural norms
- o   Team behavioural norms
- o   Leadership behavioural norms
- o   Individual Knowledge – Executives
- o   Individual Knowledge – Managers
- o   Individual Knowledge – Workforce
- o   Organisational systems (policies, standards, etc.)
- o   Individual Values – Executives
- o   Individual Values – Managers
- o   Individual Values – Workforce
- o   Organisational values
- o   Team values
- o   Physical working environment
- o   Basic assumptions
- o   Espoused values
- o   Artefacts
- o   Other (please specify)

Please describe any methods used to track the success of the safety culture improvement strategy

- o   Quantitative lead indicators
- o   Quantitative lag indicators
- o   Safety climate perception surveys
- o   Qualitative indicators
- o   Other

Further Safety Improvement Initiatives

Which of the following error risk management initiatives have been utilised within your organisation over the last two years? (select all that apply)

- o Human factors in engineering and design
- o Safety critical task analysis
- o Error management training
- o Training in complex decision-making
- o Heuristic-based training
- o Simulations

- o Human factors in incident investigations
- o Alarm rationalisation
- o Employee engagement
- o None
- o Other (please specify)

Which of the following additional safety improvement initiatives have been utilised within your organisation over the last two years? (select all that apply)

- o Safety Management System improvements
- o Procedure improvements
- o Workplace design improvements
- o Equipment upgrades
- o Use of safety-specific personality inventories or similar during recruitment
- o Behavioural safety observation and feedback programs

- o Stand Together for Safety events
- o Motivational speakers
- o External expert observation/evaluation and advice
- o None
- o Other (please specify)

In which of the following industry safety improvement fora does your organisation participate? (select all that apply)

- o APPEA CEO Forum
- o APPEA HSE Committee
- o IChemE Safety Interest Group
- o IChemE Safety Centre
- o DrillSafe

- o MarineSafe
- o Offshore Project Safe
- o SafeOps
- o None
- o Other (please specify)

Please describe any further safety improvement initiatives utilised within your organisation over the last two years, which have not been identified within this survey.

Survey Completed!

Thank you for taking the time to complete this survey.

Initial survey results will be published in aggregated and anonymous format on NOPSEMA's web page.

NOPSEMA would like to acknowledge your contribution to the survey via a list of participating companies published on the first page of the report. Company names will not be associated with responses to any survey questions. An example of the format of this list can be found on page 2 of the previous survey report (https://www.nopsema.gov.au/assets/Corporate/A279069.pdf).

To allow NOPSEMA to correctly acknowledge your participation, please provide the company name as it should appear below.

Upon completion of data collection and analysis, a final report will be published. To receive an alert at the time of publication, please provide your email address below.