



for the Built Environment



ABC 2021 Workforce Development Survey

May 2021

External

Table of Contents

- Management Summary – p. 3
- Key Findings
 - Workforce Development – p.13
 - Development Practices – p.18
 - Safety Education – p. 27
- Appendix
 - Contractor Survey Demographics – p. 37



for the Built Environment



Management Summary

Methodology

- ABC distributed the survey to the membership list beginning on Jan. 5, 2021, and the survey was closed on Feb. 12, 2020.
- After removing duplicate and incomplete responses, the sample response rate was 8% of all ABC contractor members. The large sample size and the distribution of responses across categories was sufficient for FMI to be confident in modeling the total investment of ABC contractor members.
- FMI's model of total workforce development and education investment was built from 21 distinct categories based on contractor type and annual revenue. Using survey data on total workforce development and education budgets, FMI cleaned and corrected data related to per person spending within each education type. FMI assigned each contractor category a typical number of employees educated and per-person investment for each education type (leadership, safety, trade/craft).
- FMI multiplied the number of employees educated by the amount spent per employee to calculate the investment per firm in each of the categories. The amount per firm was multiplied by the number of ABC member contractors in each of those categories, based on ABC and survey data.
- The final sum (\$1.3 billion) is intended as a conservative estimate of total workforce education investment made by ABC member contractors, as the largest ABC member contractors were assumed to have revenues no greater than \$2 billion.

ABC member contractors invested \$1.3 billion in workforce development in 2020 to educate more than 500,000 employees.

- ABC contractors invested an average of 8.4% of payroll on workforce development compared to 7.9% in 2019.
- Safety education accounts for the greatest share (71%) of total workforce investment and has the highest per-person investment (\$2,369).
- The percentage of contractors reporting a severe labor shortage declined 3% between 2019 and 2020, while those reporting a moderate labor shortage increased 5%.
- Compared to 2019, general and construction management contractors have increased their share of the total workforce development investment, growing to 58% in 2020 from 21% in 2019.
- Women in management/supervisory roles ticked up to 17% in 2020 from 16% in 2019.
- **The COVID-19 pandemic has elevated the focus on education, safety and total human health.**

ABC member contractors invest an average of \$94,495 annually on workforce development and education.

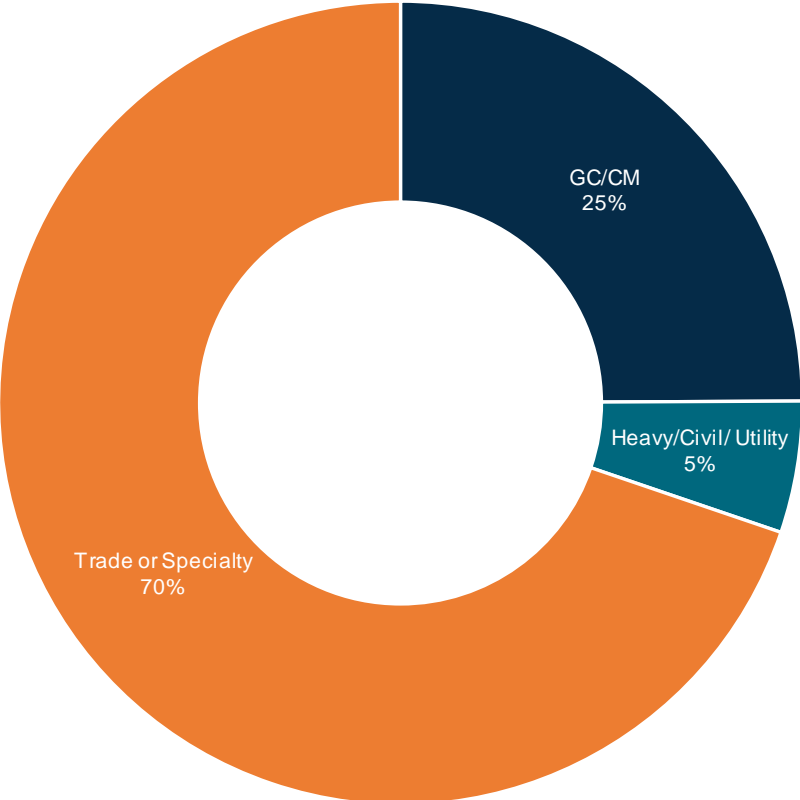
	GC/CM	Heavy/Civil/Utility	Trade or Specialty	Overall
ABC members by type (number of firms)	3,462	680	9,766	13,908
Total education investment (\$)	\$789,969,546	\$57,180,520	\$511,523,548	\$1,358,673,614
Number of personnel educated in each course type	Leadership: 25,965 Safety: 121,170 Craft/trade: 27,696	Leadership: 2,040 Safety: 23,800 Craft/trade: 13,600	Leadership: 29,298 Safety: 175,788 Craft/trade: 97,660	Leadership: 57,303 Safety: 320,758 Craft/trade: 138,956
Per-person investment (\$)	Leadership: \$1,477 Safety: \$2,721 Craft/trade: \$1,533	Leadership: \$1,629 Safety: \$1,782 Craft/trade: \$953	Leadership: \$1,358 Safety: \$2,341 Craft/trade: \$1,930	Leadership: \$1,405 Safety: \$2,369 Craft/trade: \$1,779
Student distribution by role	Senior leader: 6% Project manager: 13% Field manager: 24% Craft/trade: 57%	Senior leader: 3% Project manager: 6% Field manager: 12% Craft/trade: 79%	Senior leader: 5% Project manager: 6% Field manager: 7% Craft/trade: 82%	Senior leader: 5% Project manager: 6% Field manager: 8% Craft/trade: 81%

While the number of personnel educated by ABC member contractors dropped significantly in 2020, general and construction management contractors more than doubled their education investment from 2019.

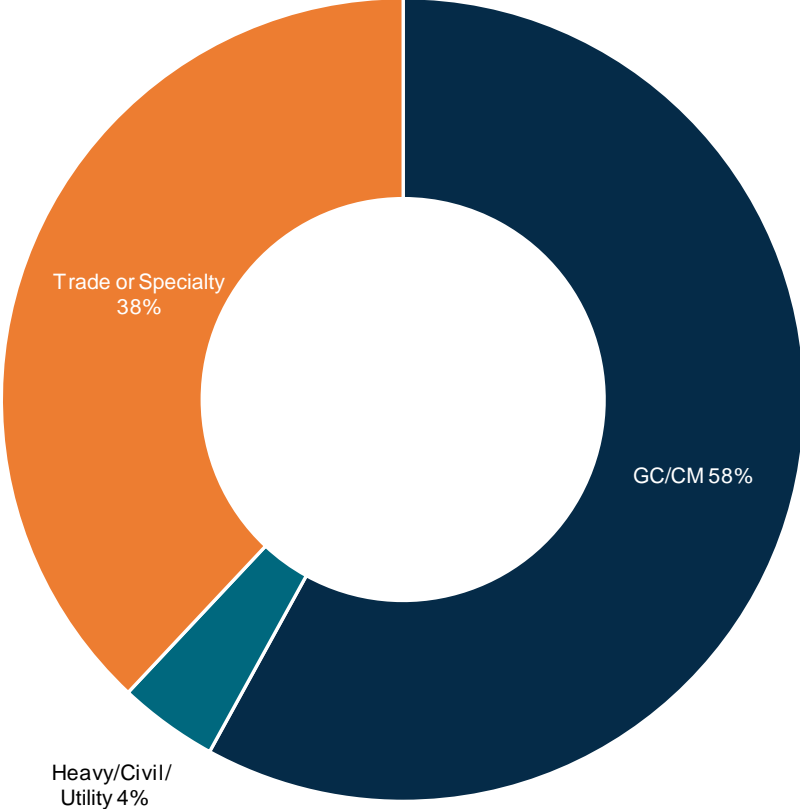
		2020	2019
Number of Personnel Educated	Leadership	57,303	106,024
	Safety	320,758	645,474
	Craft/Trade	138,956	337,623
	Total	517,017	1,089,121
Average Investment Per Person	Leadership	\$1,405	\$1,432
	Safety	\$2,369	\$1,104
	Craft/Trade	\$1,779	\$1,904
Total Investment by Contractor Type	GC/CM	\$789,969,546	\$320,529,891
	Heavy/Civil/Utility	\$57,180,520	\$125,384,271
	Trade of Specialty	\$511,523,548	\$1,061,632,836
	Total	\$1,358,673,614	\$1,507,546,997
Average Investment by Contractor Type	GC/CM	\$228,183	\$126,492
	Heavy/Civil/Utility	\$84,089	\$172,231
	Trade or Specialty	\$52,378	\$101,611

Compared to 2019, general and construction management contractors have significantly increased their investment in workforce development and education.

Estimated ABC membership by contractor type

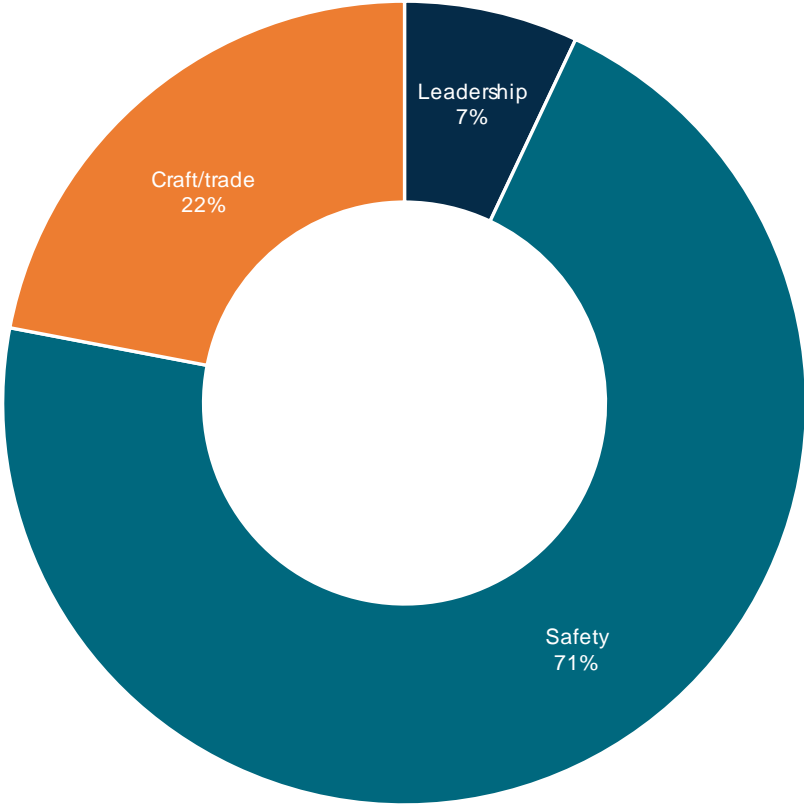


Total educating investment by contractor type

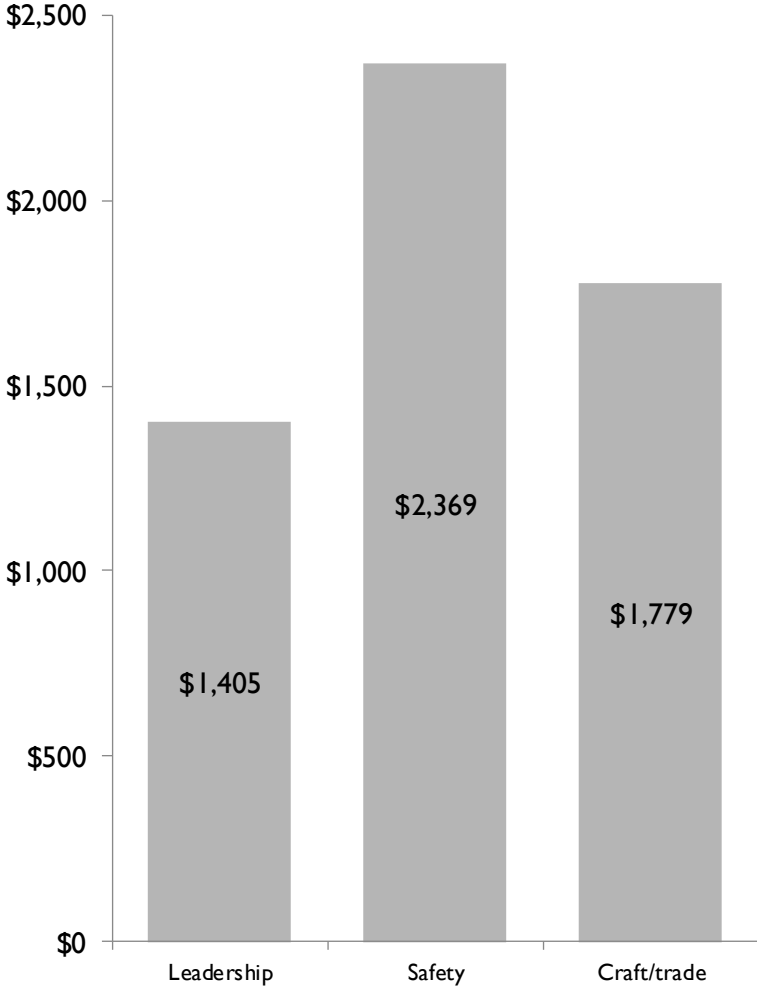


Safety education accounts for the greatest share (71%) of total workforce investment.

Educating investment by educating type

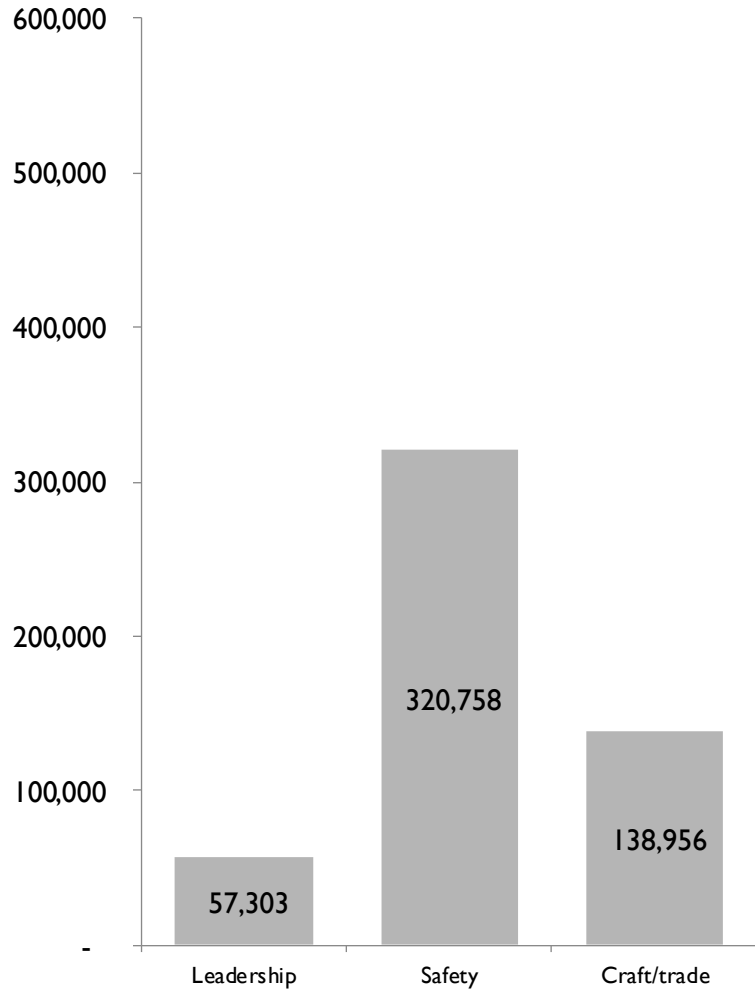


Educating investment per person by educating type

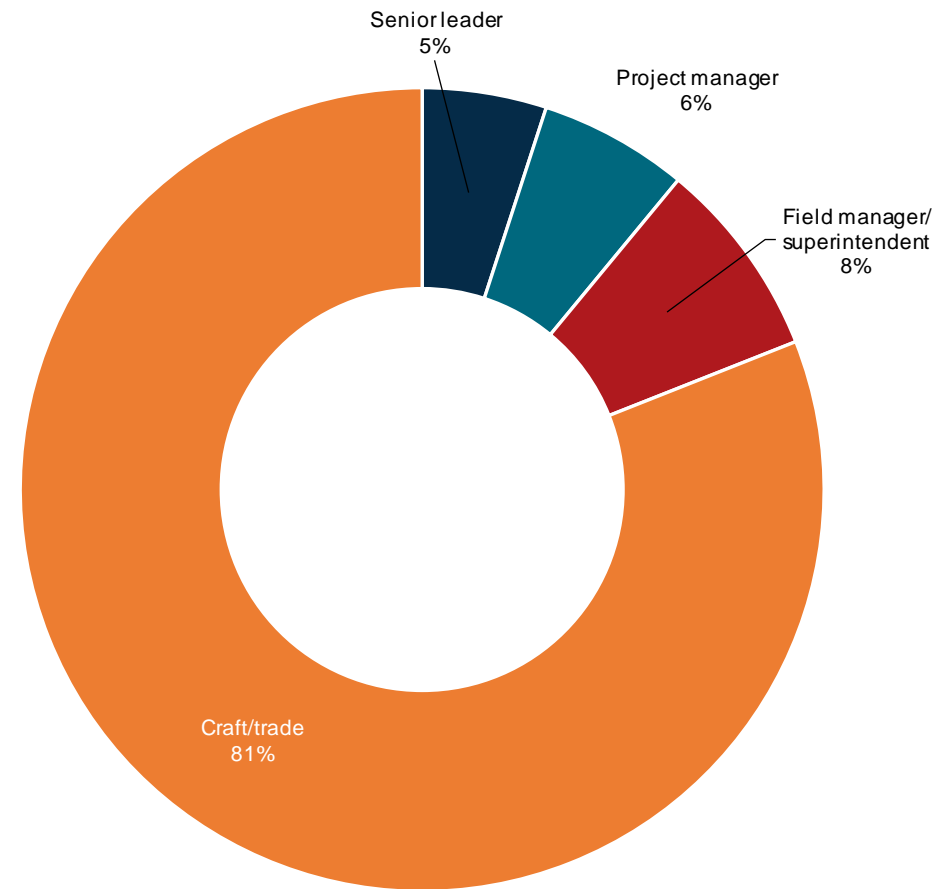


In 2020, ABC member contractors provided safety education to more than 320,000 course attendees.

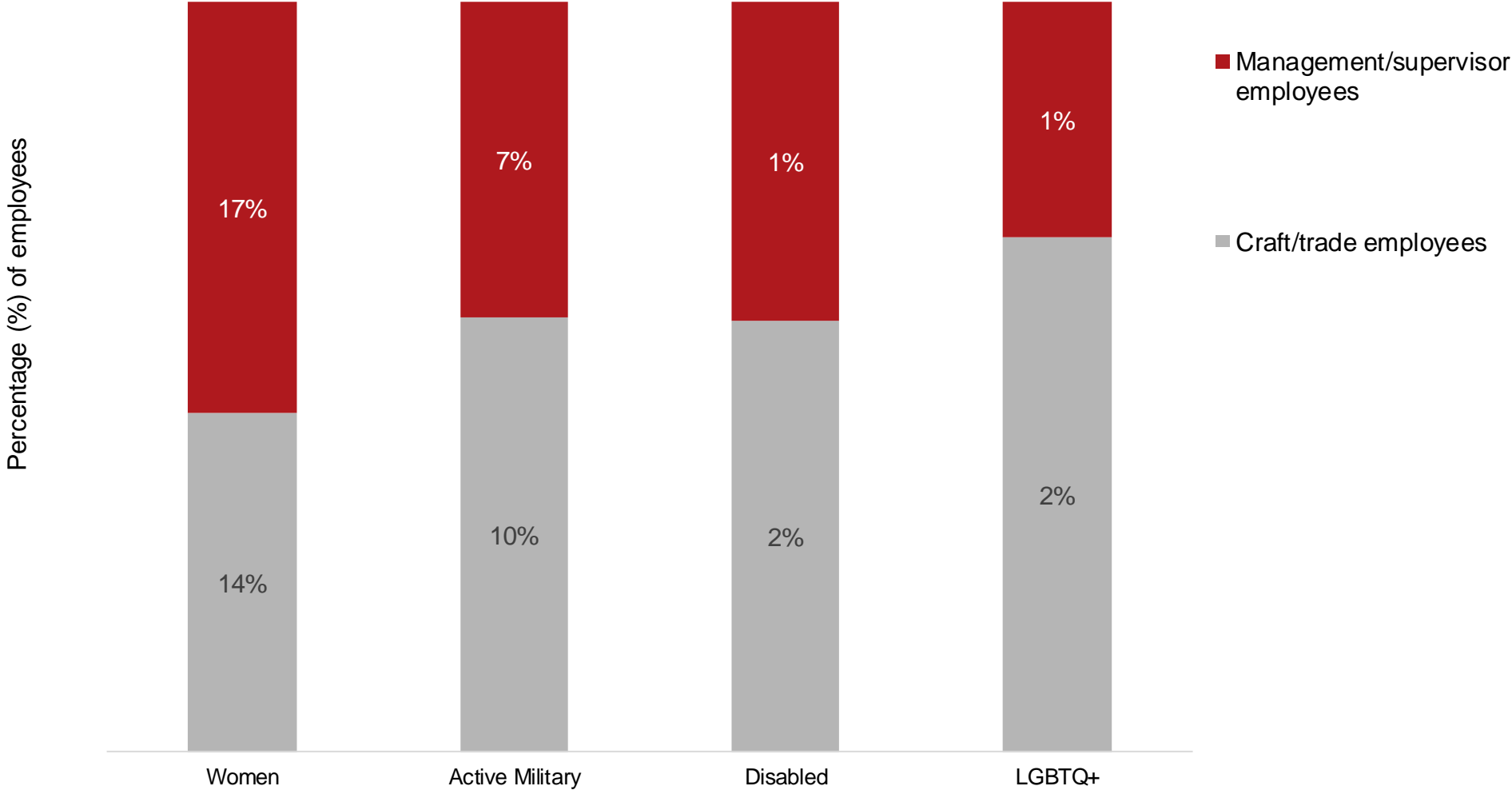
Personnel educated by educating type



Personnel educated by role



Women in management/supervisory roles ticked up to 17% in 2020 from 16% in 2019, and women in craft/trade roles increased from 13% to 14% year over year.





for the Built Environment



Key Findings



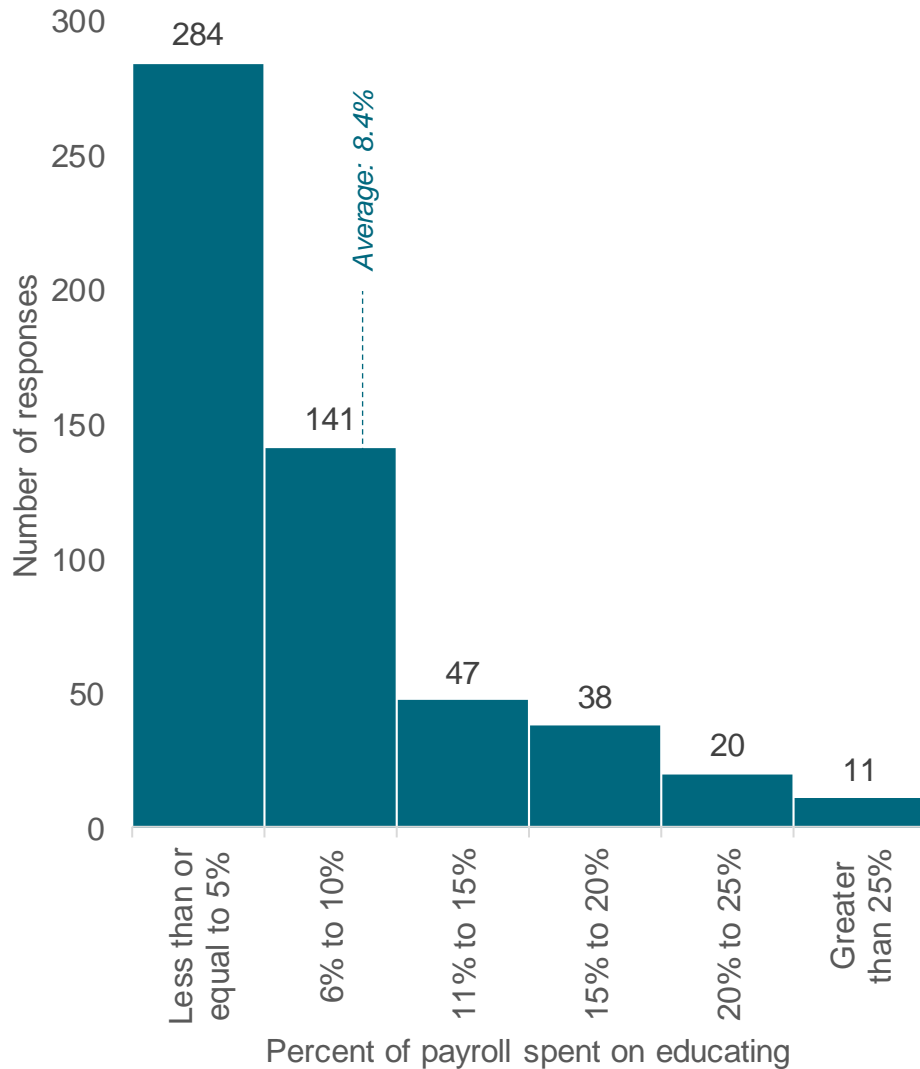
for the Built Environment



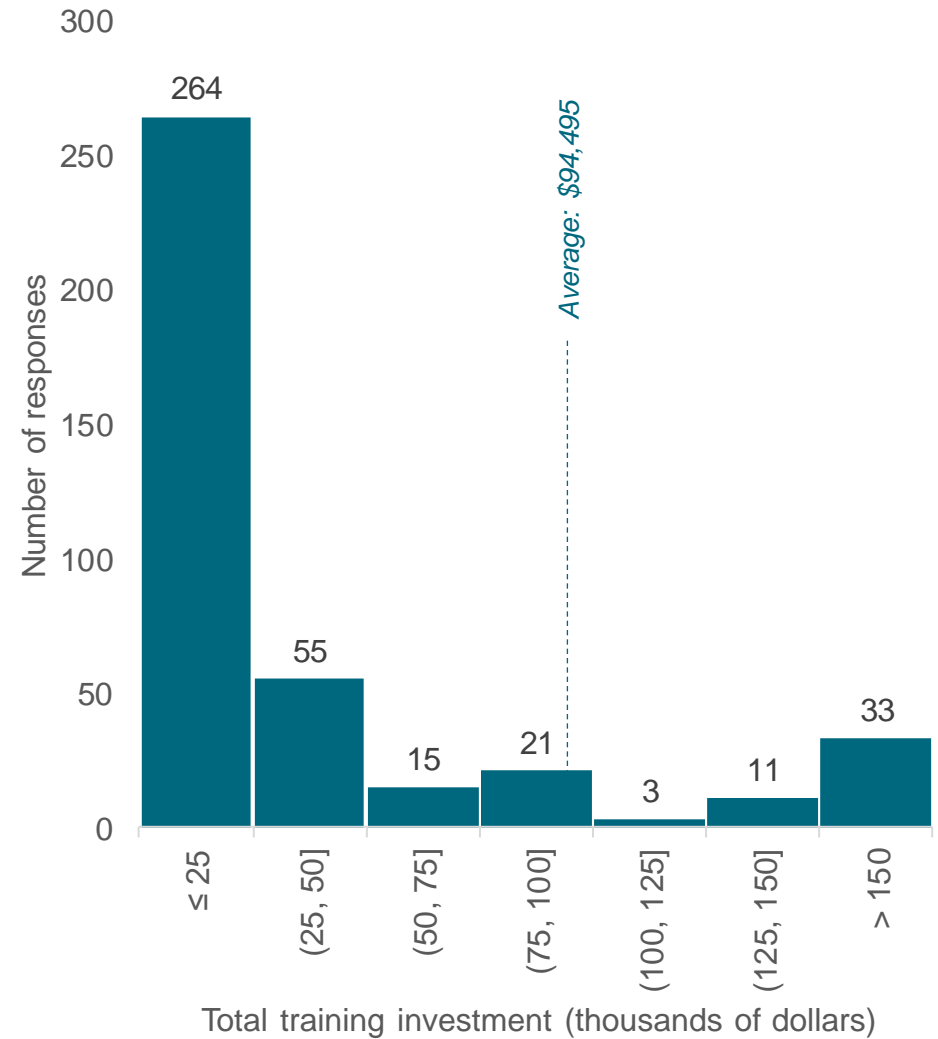
Workforce Development

ABC member contractors invest an average of 8.4% of payroll on workforce development compared to 7.9% in 2019.

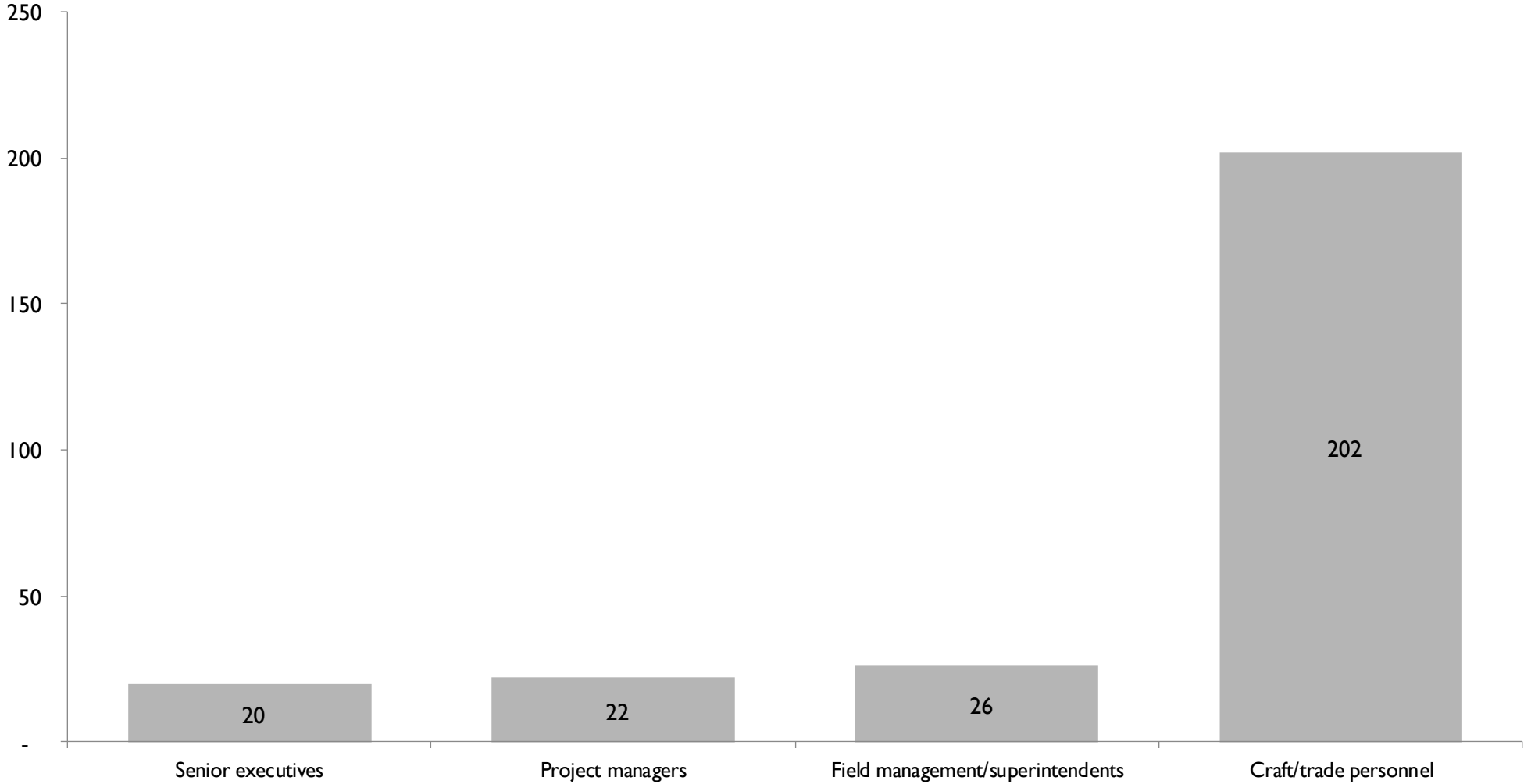
What percentage of your company's payroll is spent on education?



What is your total investment for educating personnel (in dollars)?

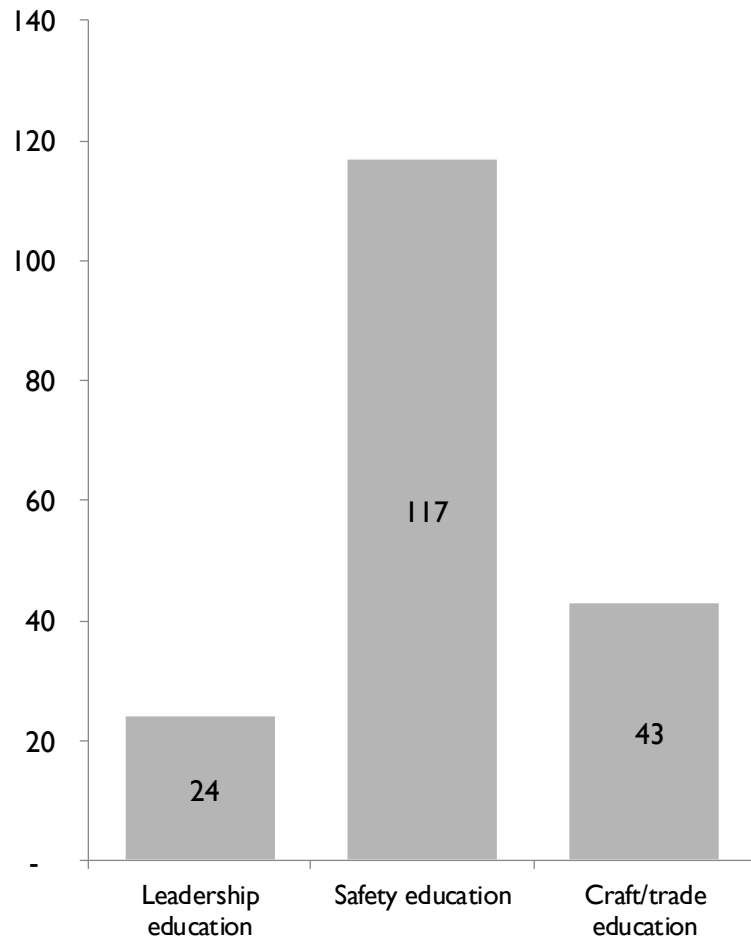


The number of craft/trade personnel educated on average by ABC member contractors is significantly higher than any other group.

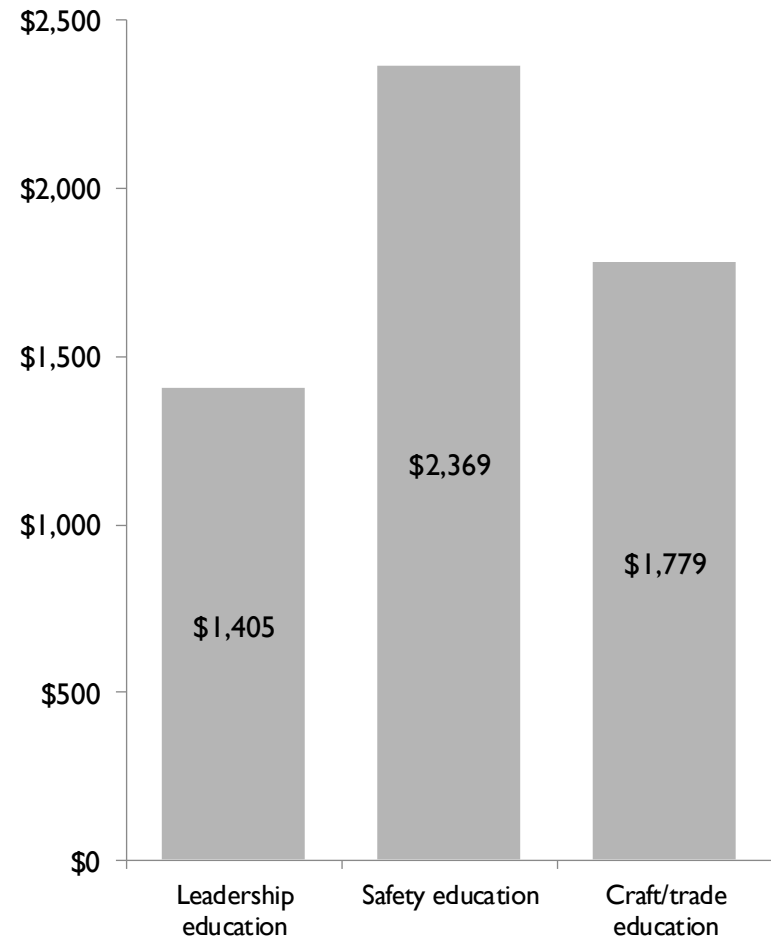


In 2020, construction firms on average invested in safety education for 117 employees.

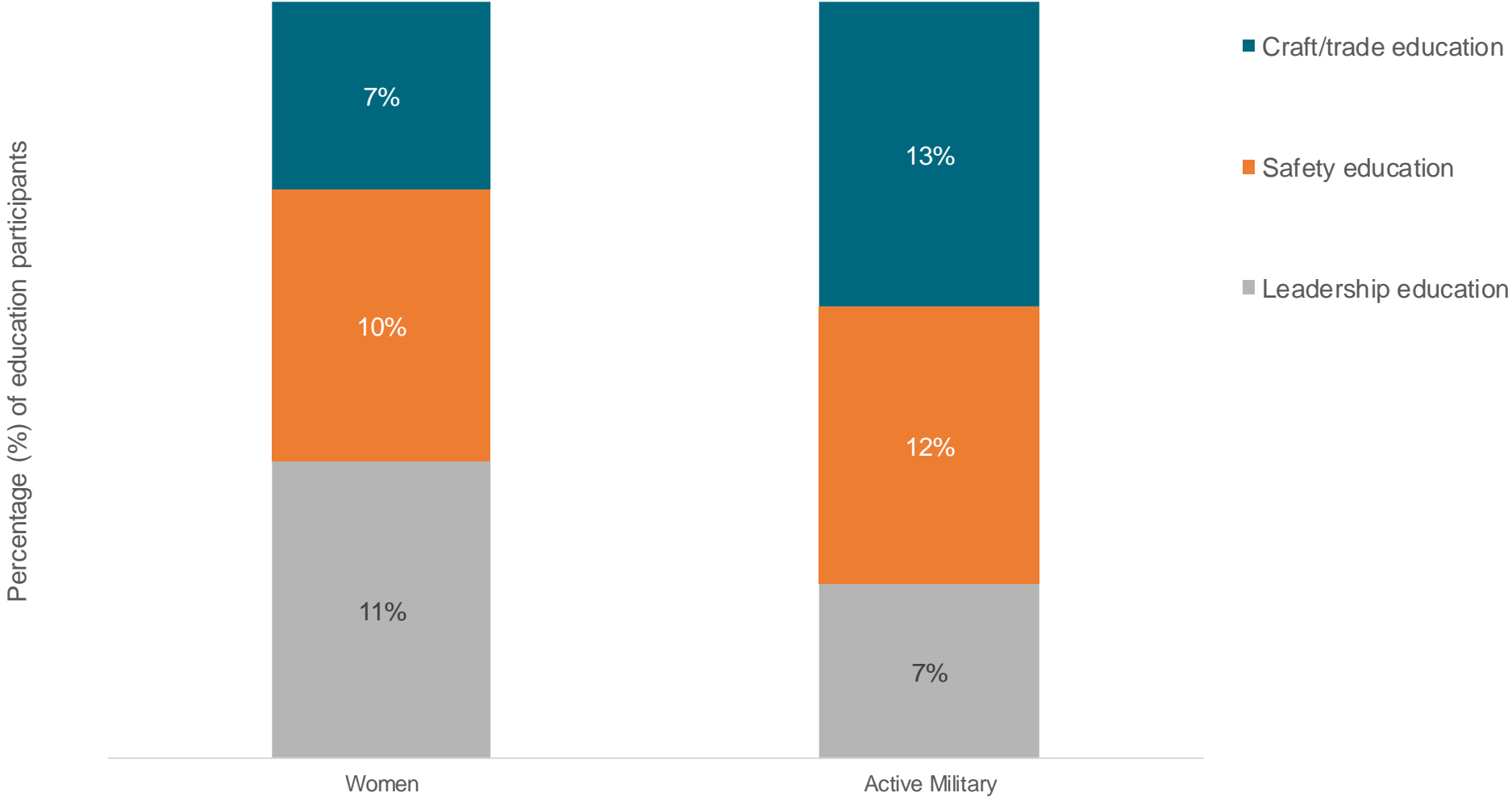
How many personnel receive education in the following categories annually?



How much does your organization invest annually per person on each of the following types of education?



On average, 4% more women are involved in leadership education than active military or veterans, whereas 6% more active military or veterans are involved in craft/trade education than women.





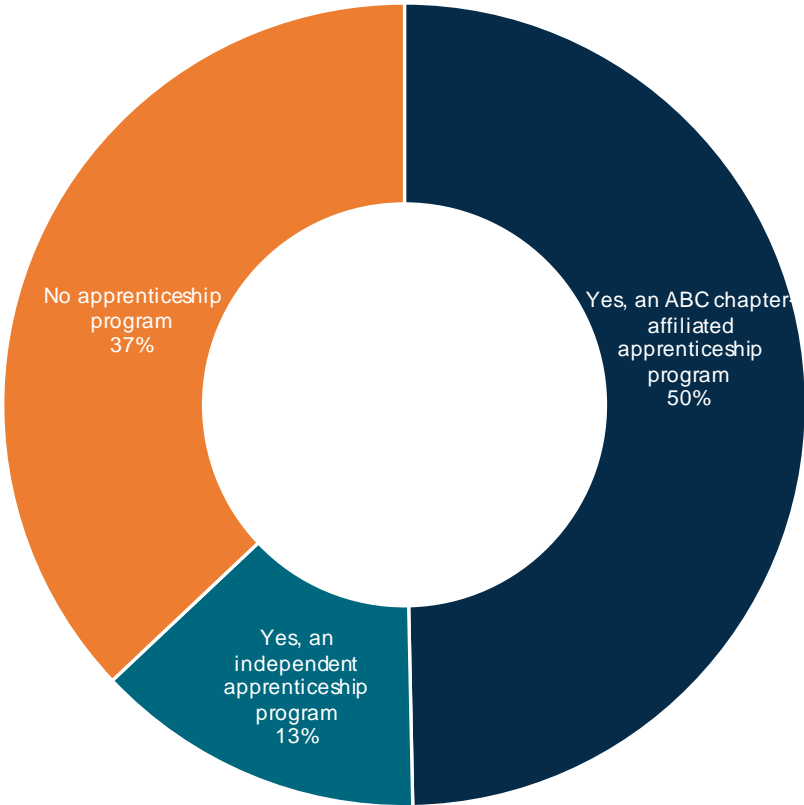
for the Built Environment



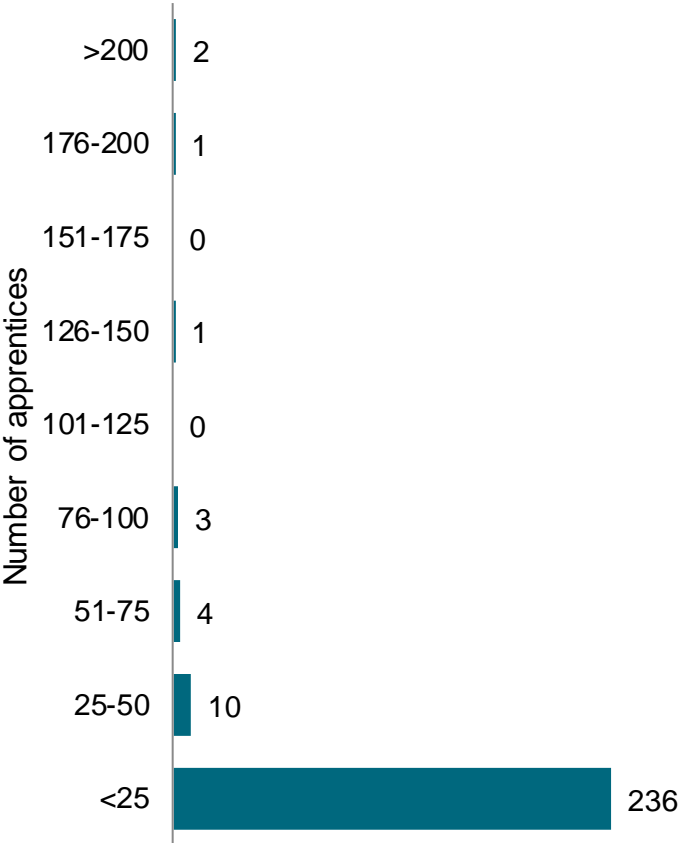
Development Practices

The use of independent apprenticeship programs stayed at 13% in 2020. The usage of ABC chapter-affiliated programs increased by 3%.

Does your company have an apprenticeship program that is registered with the state or federal Department of Labor? Select all that apply.

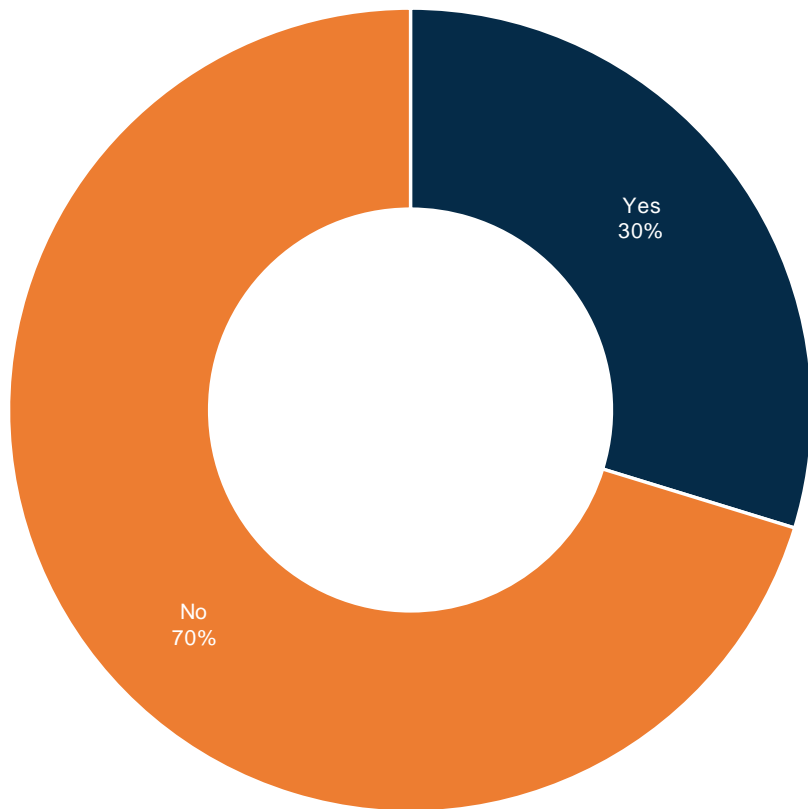


How many apprentices are currently involved in your program?

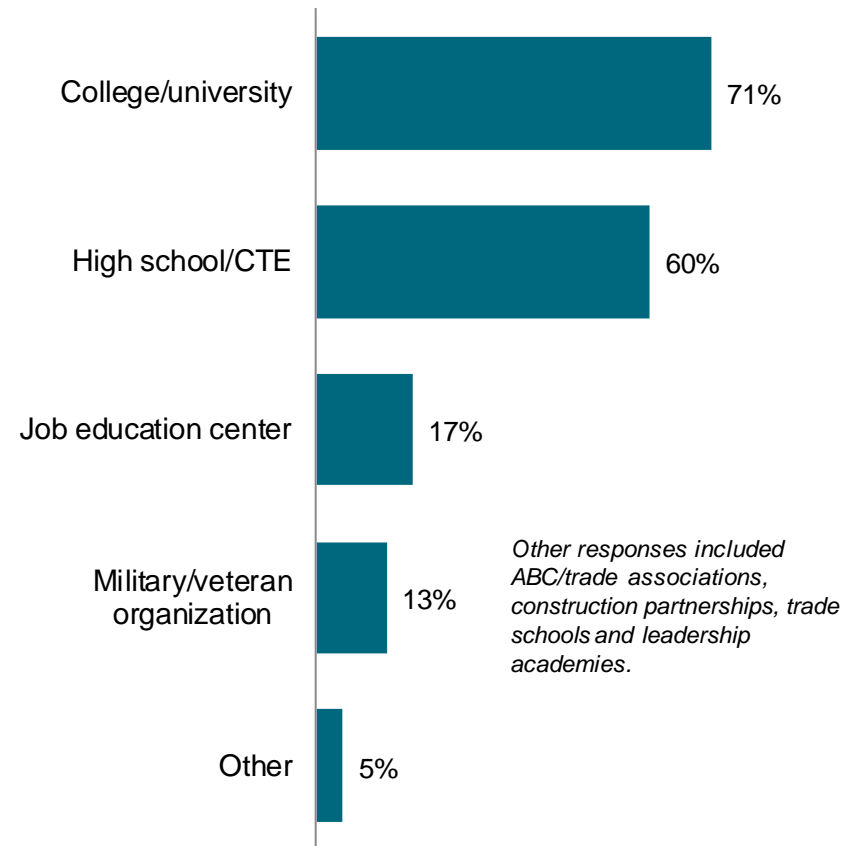


30% of ABC member organizations participate in internship programs.

Does your organization participate in internships programs in the United States?

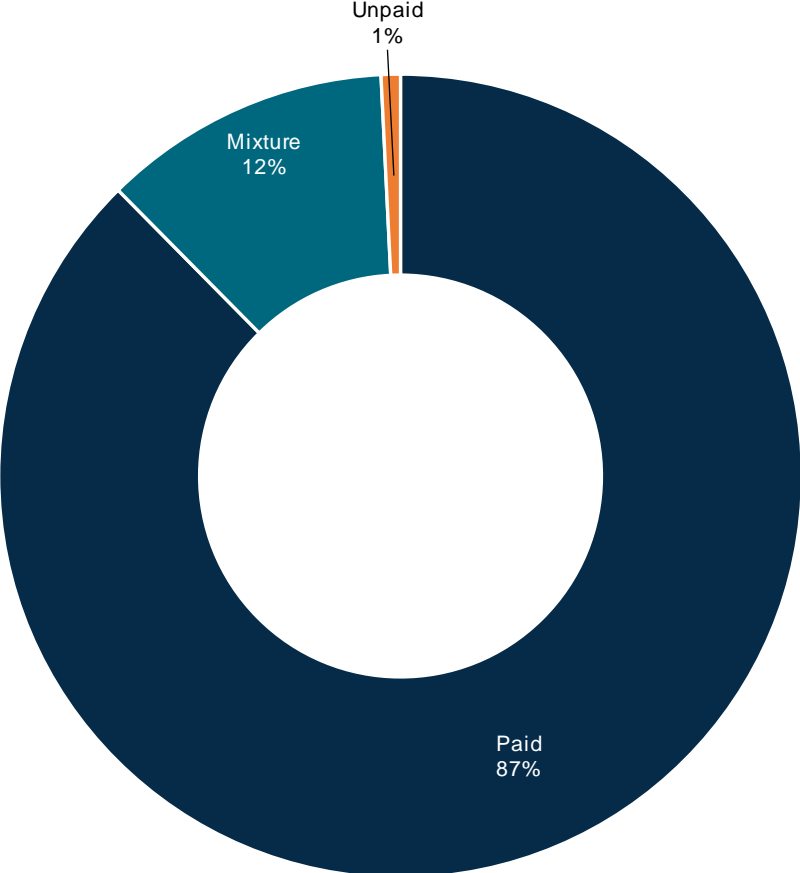


What types of entities do you partner with for your internship program? Select all that apply.

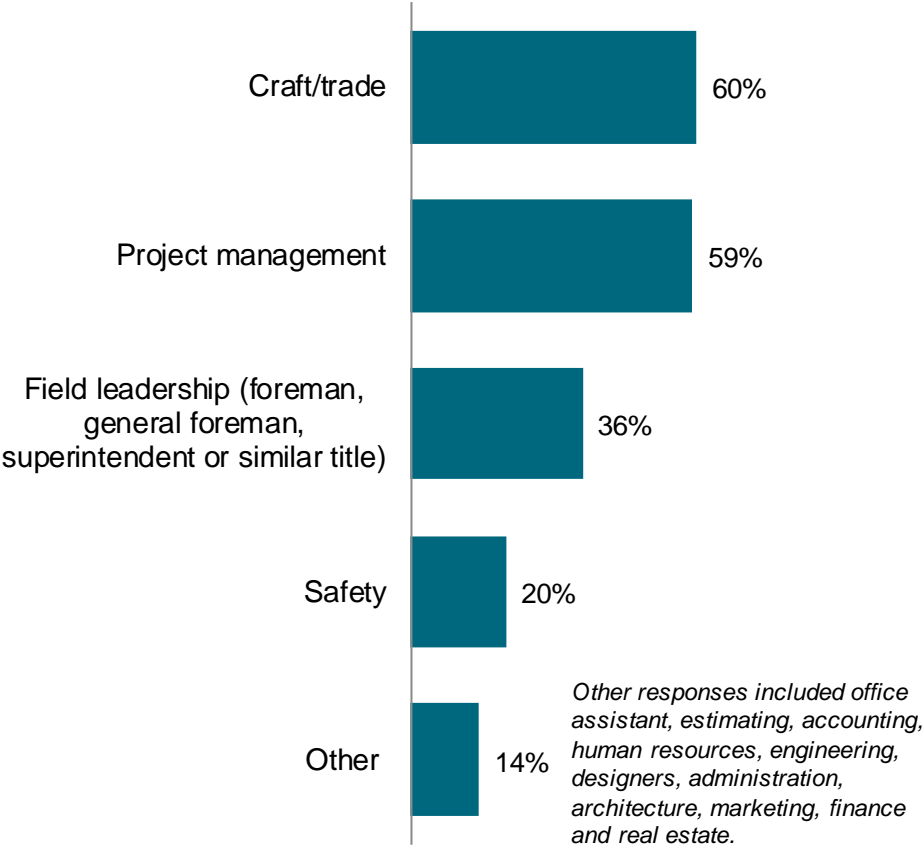


60% of contractors participate in internships for craft/trade job classifications, while 59% participate in internships for project management.

Are your interns paid or unpaid?

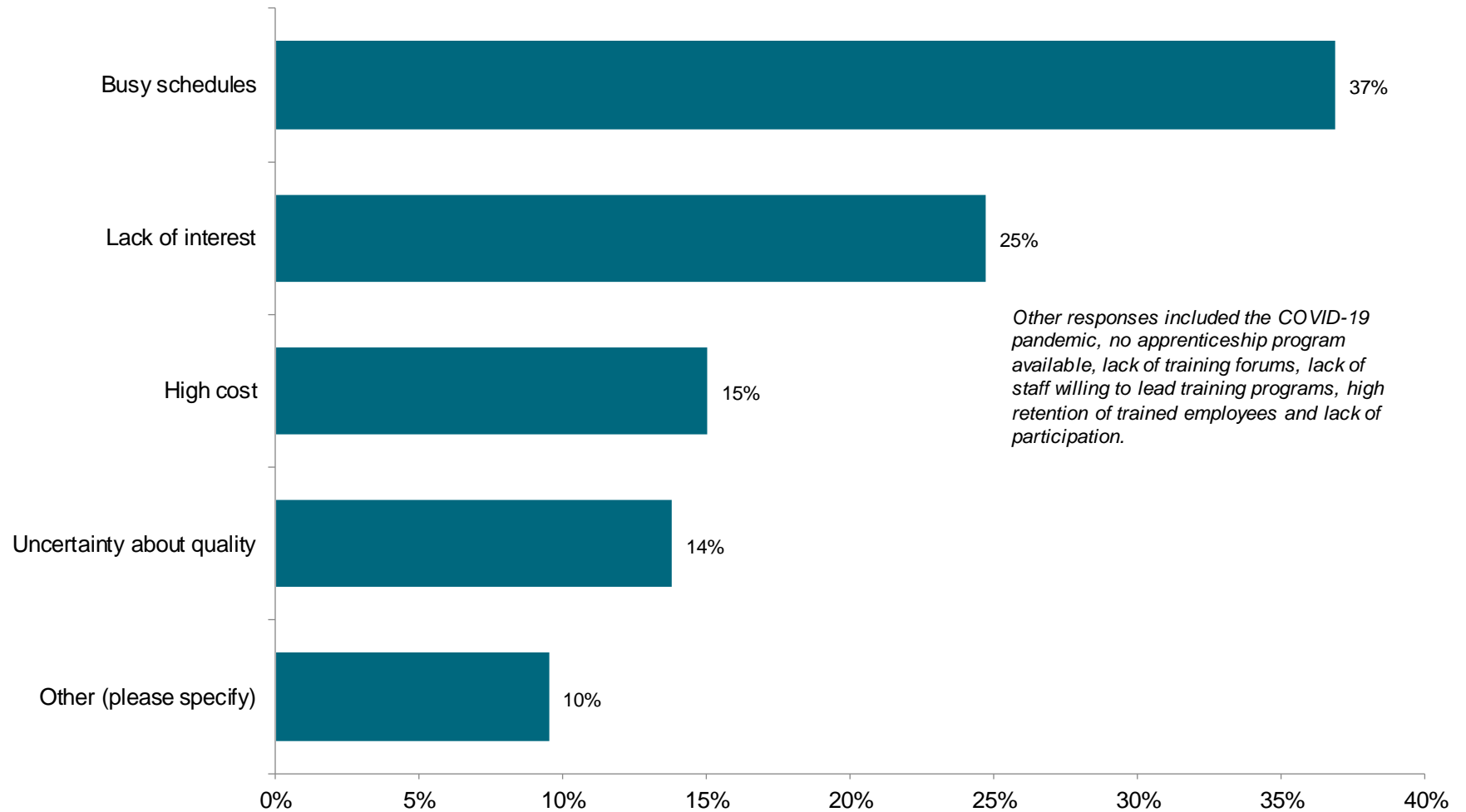


For which job classifications do you provide internships?

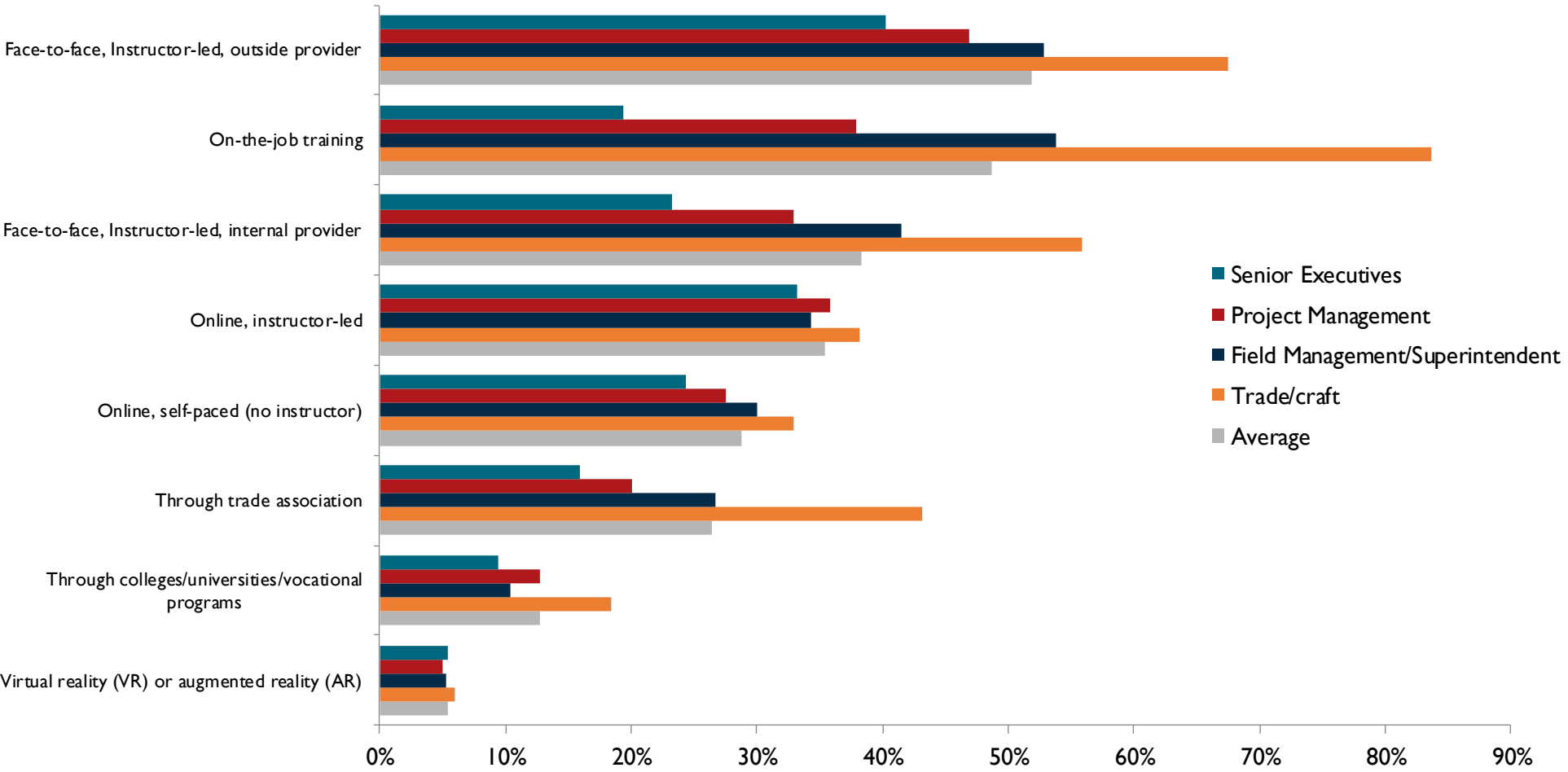


More than a third (37%) cited busy schedules as the main obstacle to workforce development.

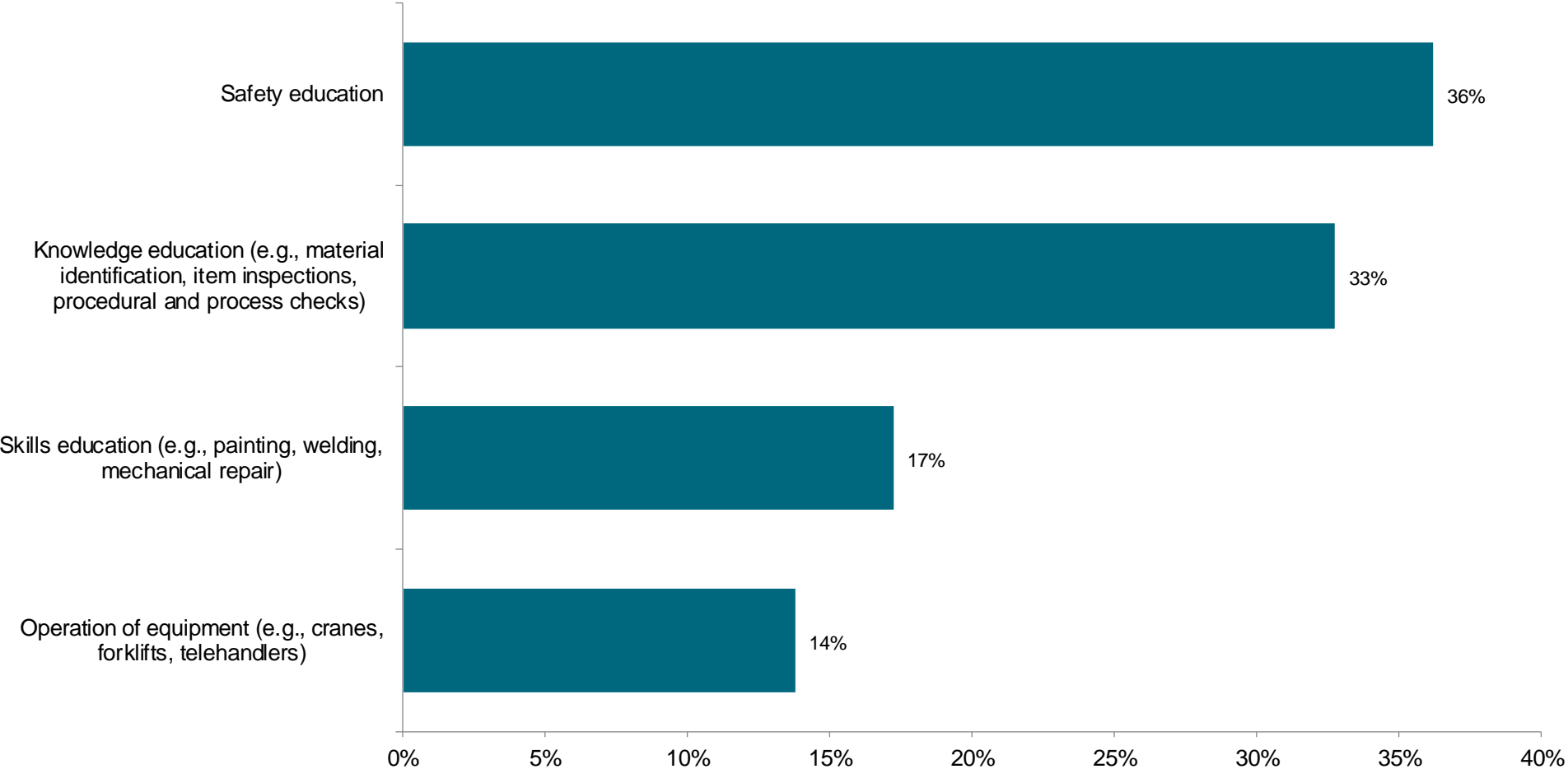
Which of the following obstacles are limiting your ability to deliver education and/or participate in outreach (career fairs, awareness events, education boards, etc.)? Select up to three.



The use of online instructor-led educating increased from 23% in 2019 to 35% in 2020.



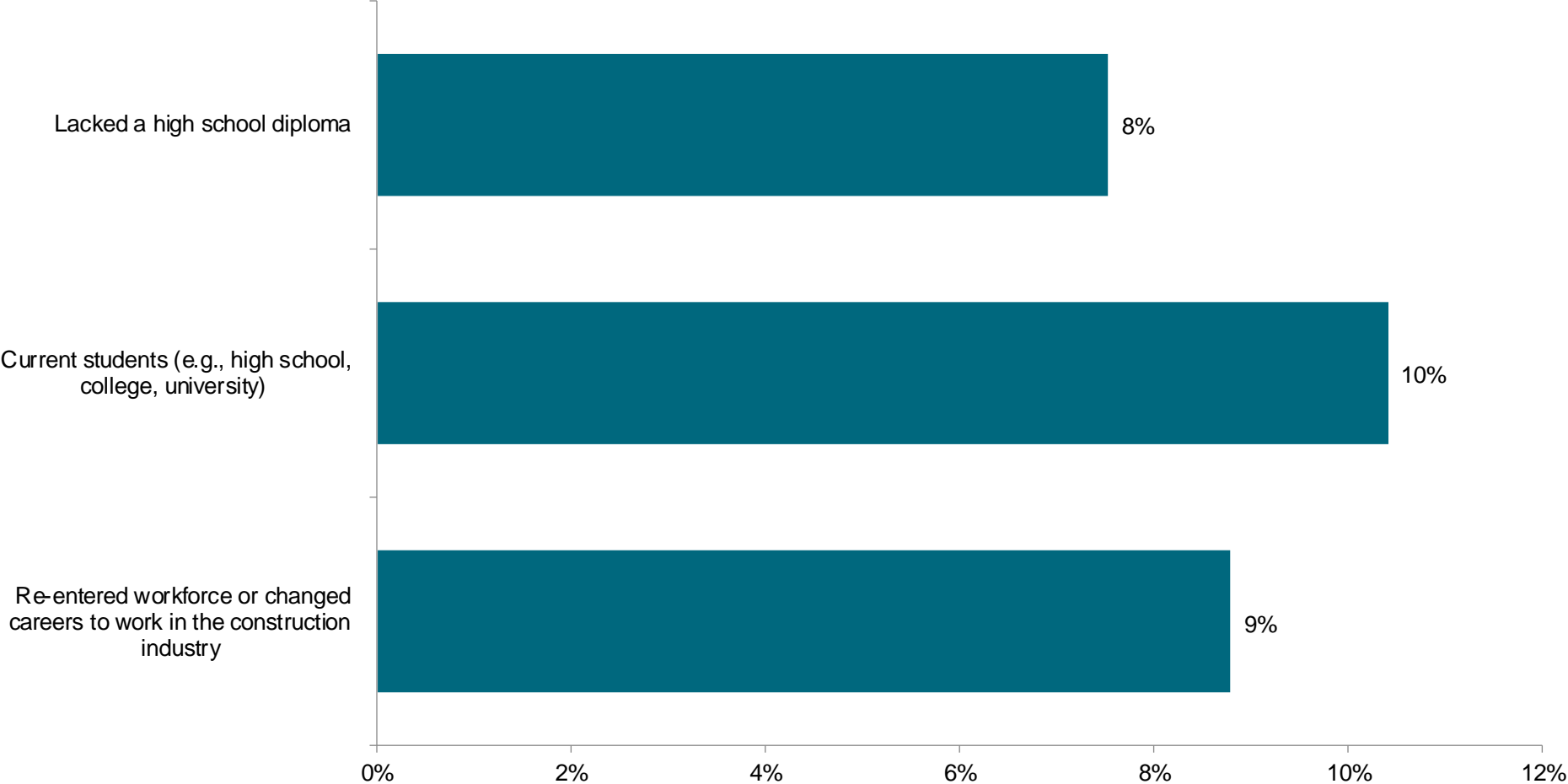
More than two-thirds (69%) of ABC member contractors that have utilized virtual reality or augmented reality use it for education platforms.



Easy, affordable, flexible and convenient are among the top words used to describe virtual reality and/or augmented reality for education.



On average, 27% of personnel receiving education in the past year met the below criteria.





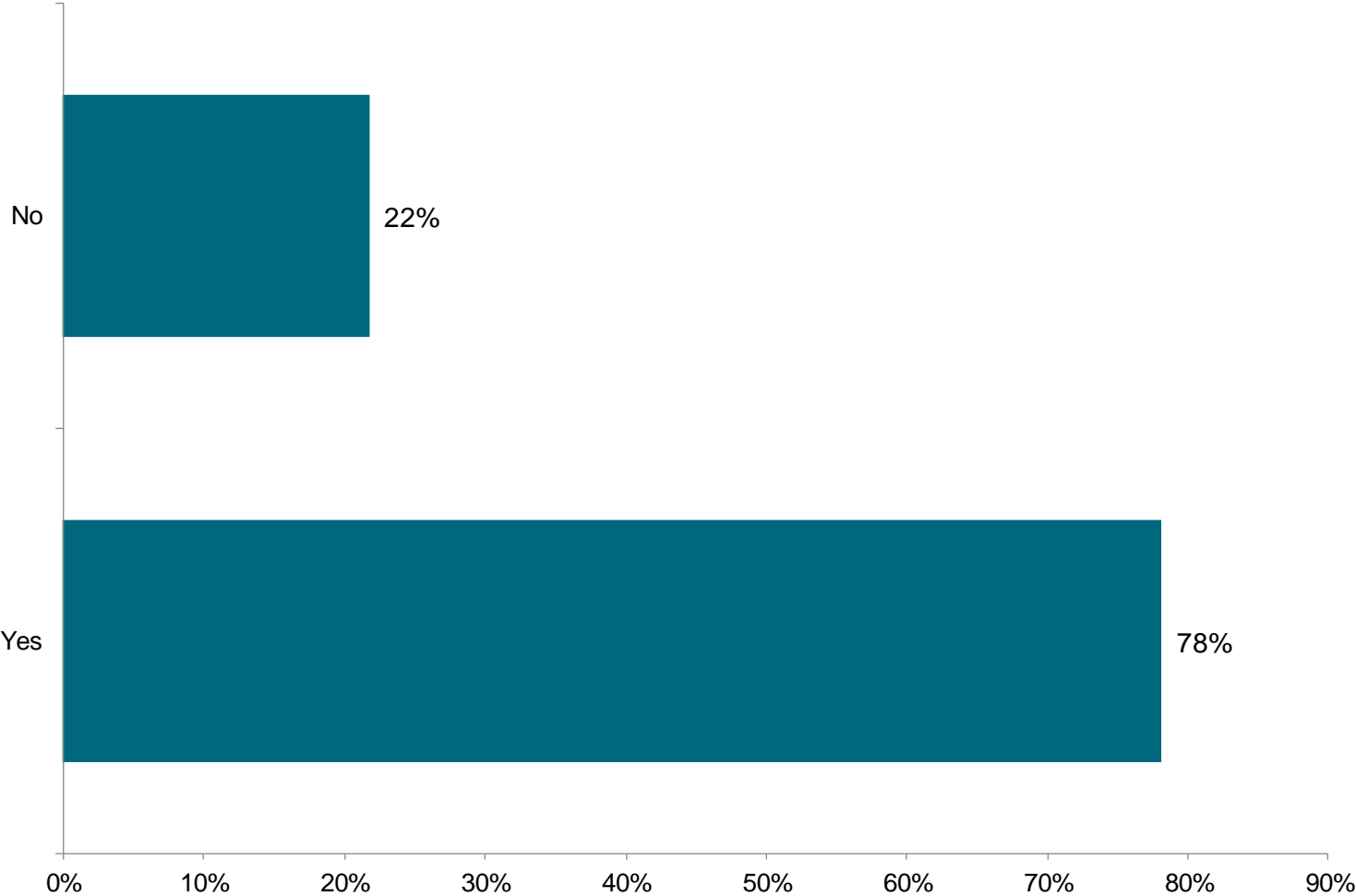
for the Built Environment



Safety Education

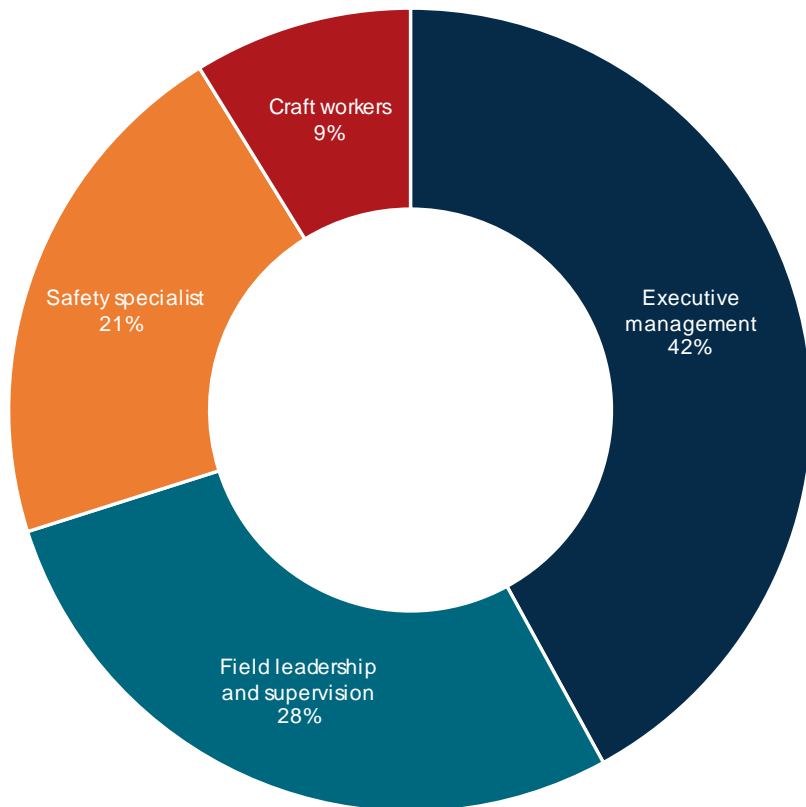
Almost 80% of respondents currently use or plan to use safety technology.

Do you use or are you planning to use safety technology within your organization (artificial intelligence, virtual reality, safety information management system, etc.)?

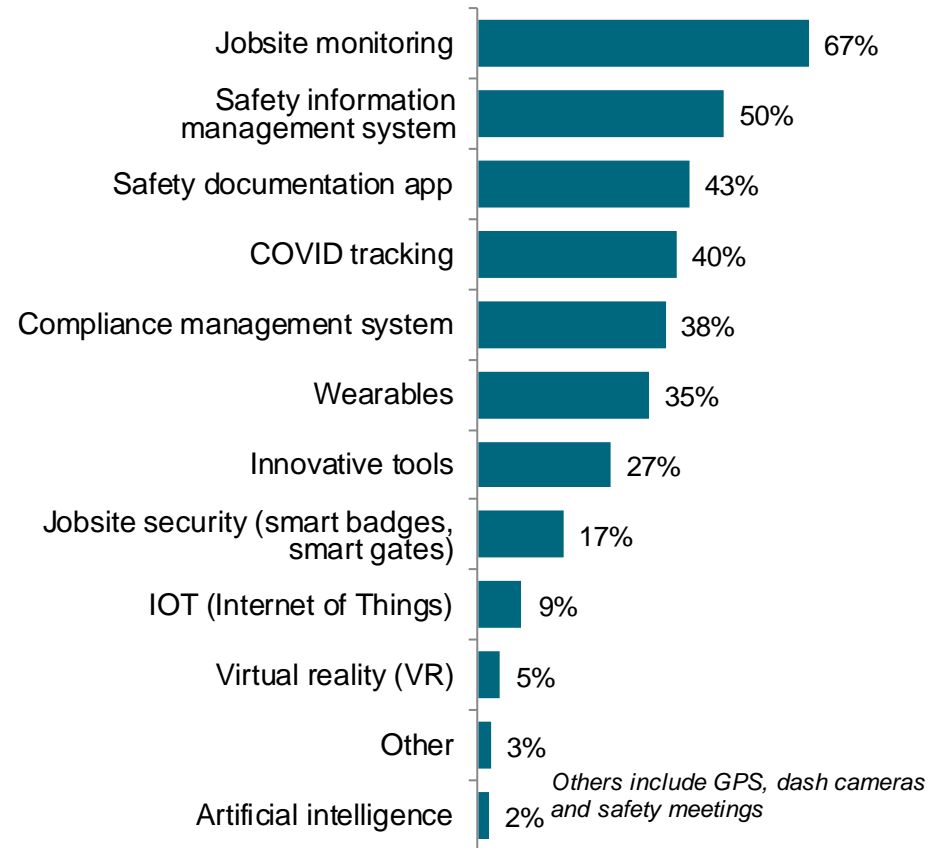


Executive management (42%) is most often involved in the purchasing and deployment of safety technology, followed by field leadership and supervision (28%).

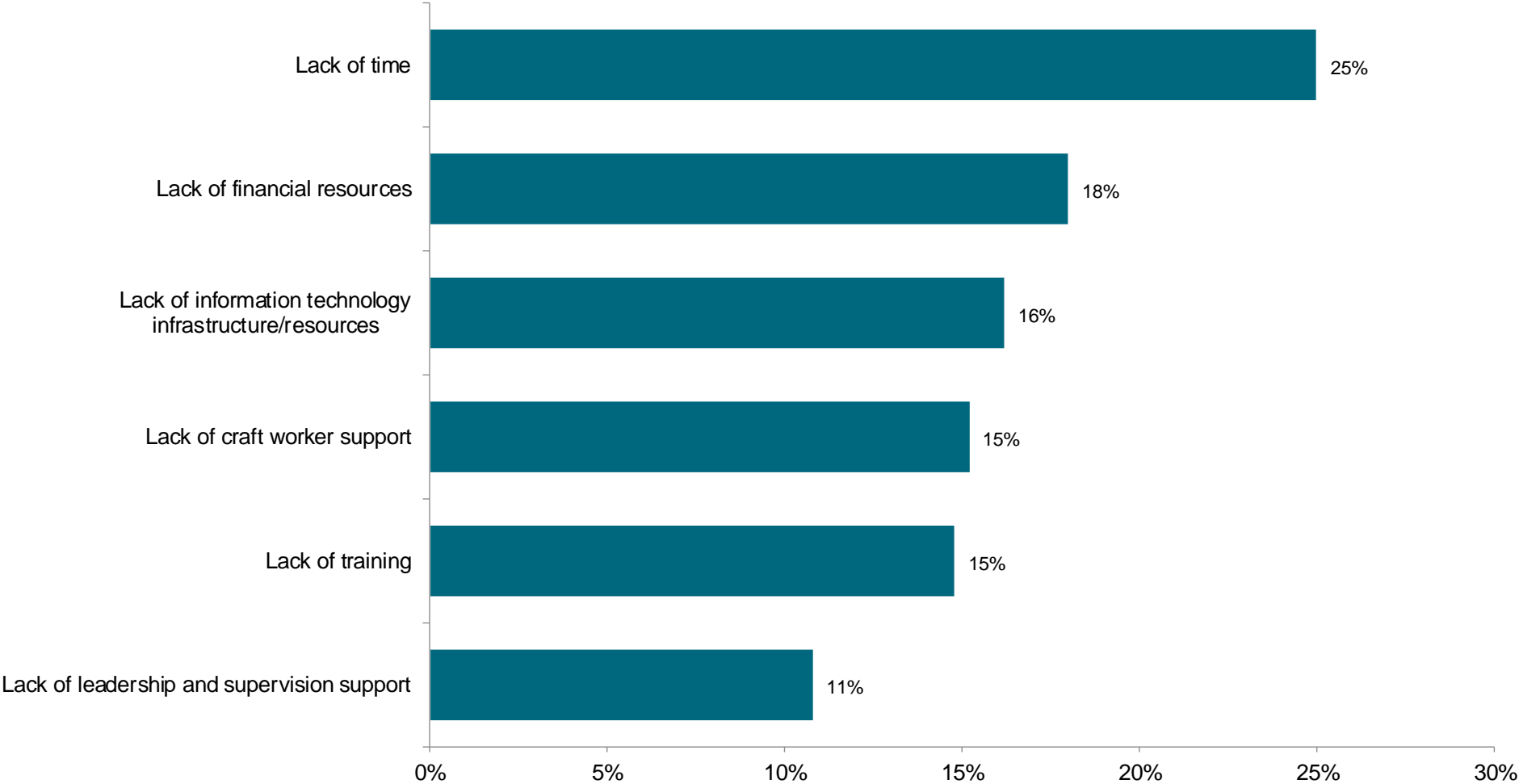
Who is involved in the identification and decision to purchase and deploy safety technology?



What safety technology are you using today or planning to use in the future? Check all that apply.

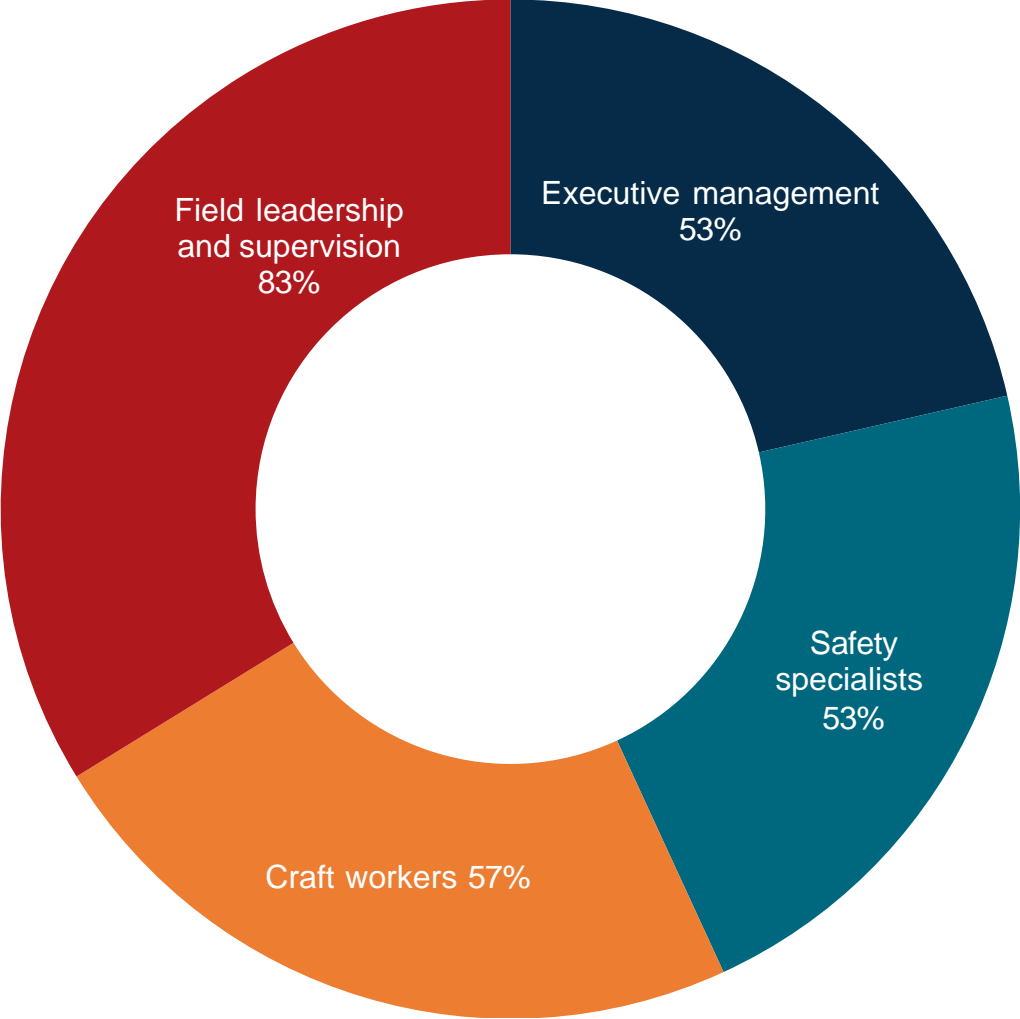


Lack of time, financial resources and IT infrastructure were stated as the top three barriers to adopting and deploying safety technology.



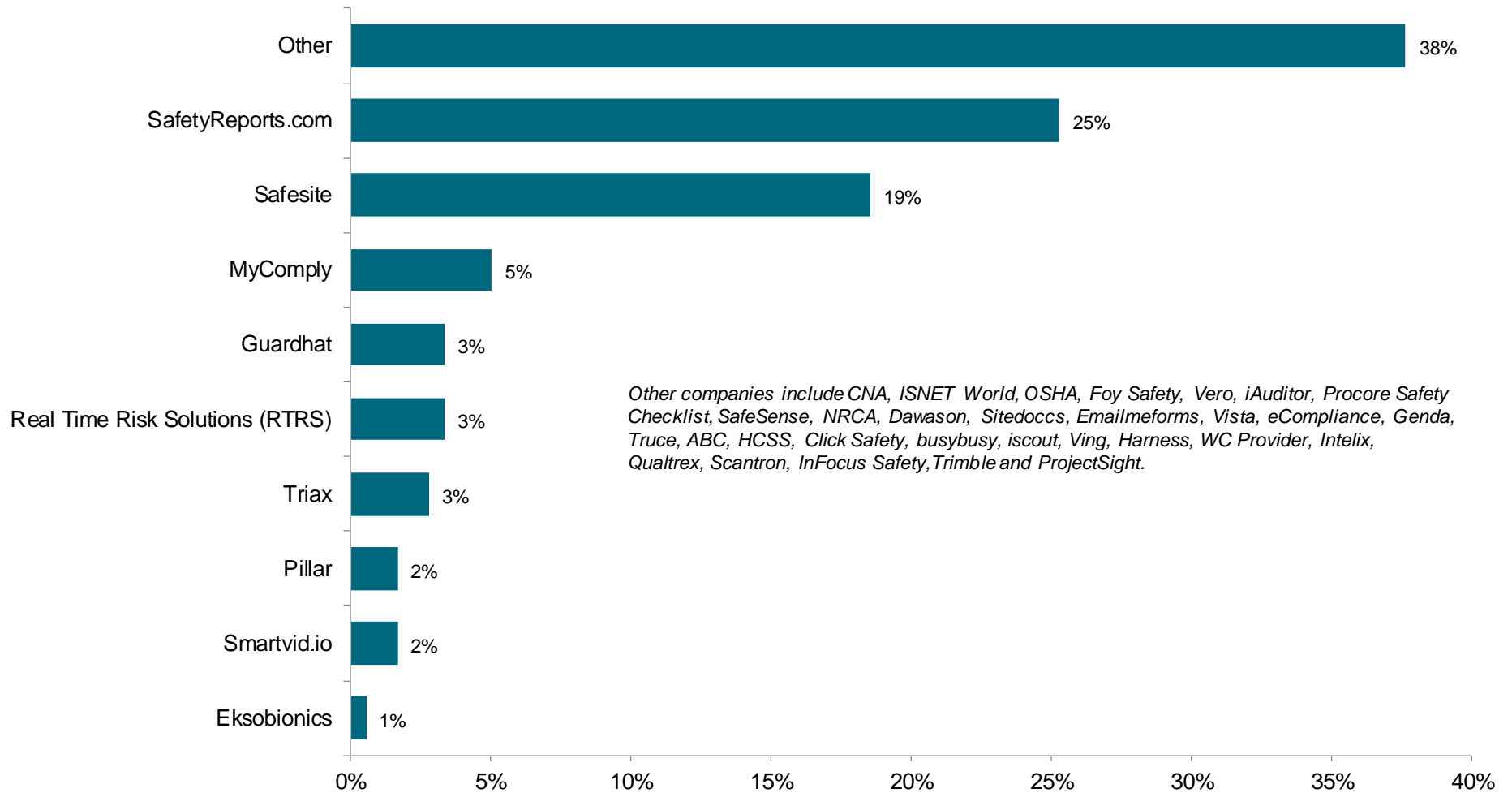
According to respondents, 83% of field leadership and supervisors utilize safety technologies.

Within your company, who utilizes deployed safety technologies? Check all that apply.



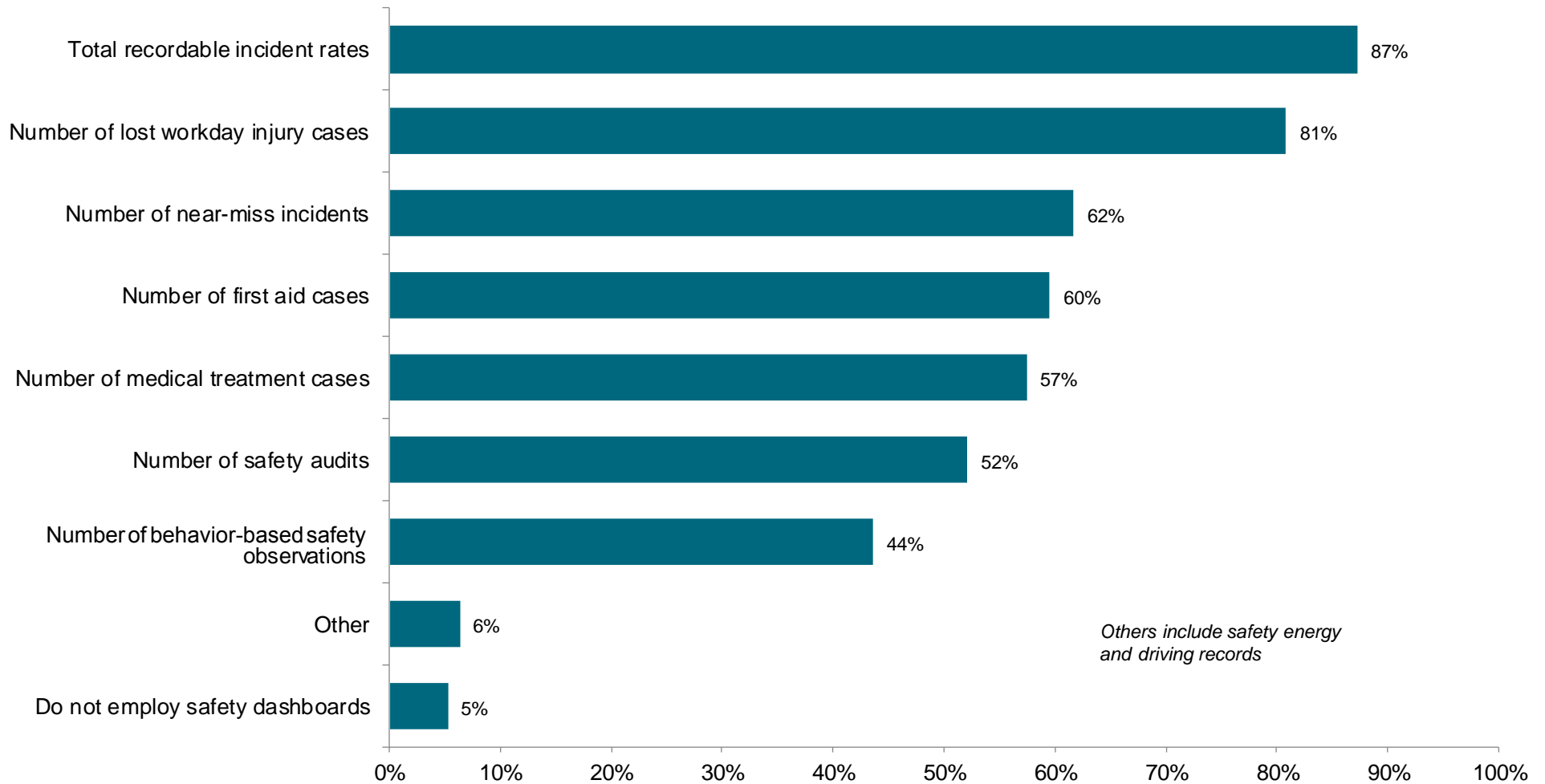
44% of respondents utilize SafetyReports.com and Safesite to research, purchase or deploy safety technology.

What technology companies do you use, or have you used to research, purchase or deploy safety technology?

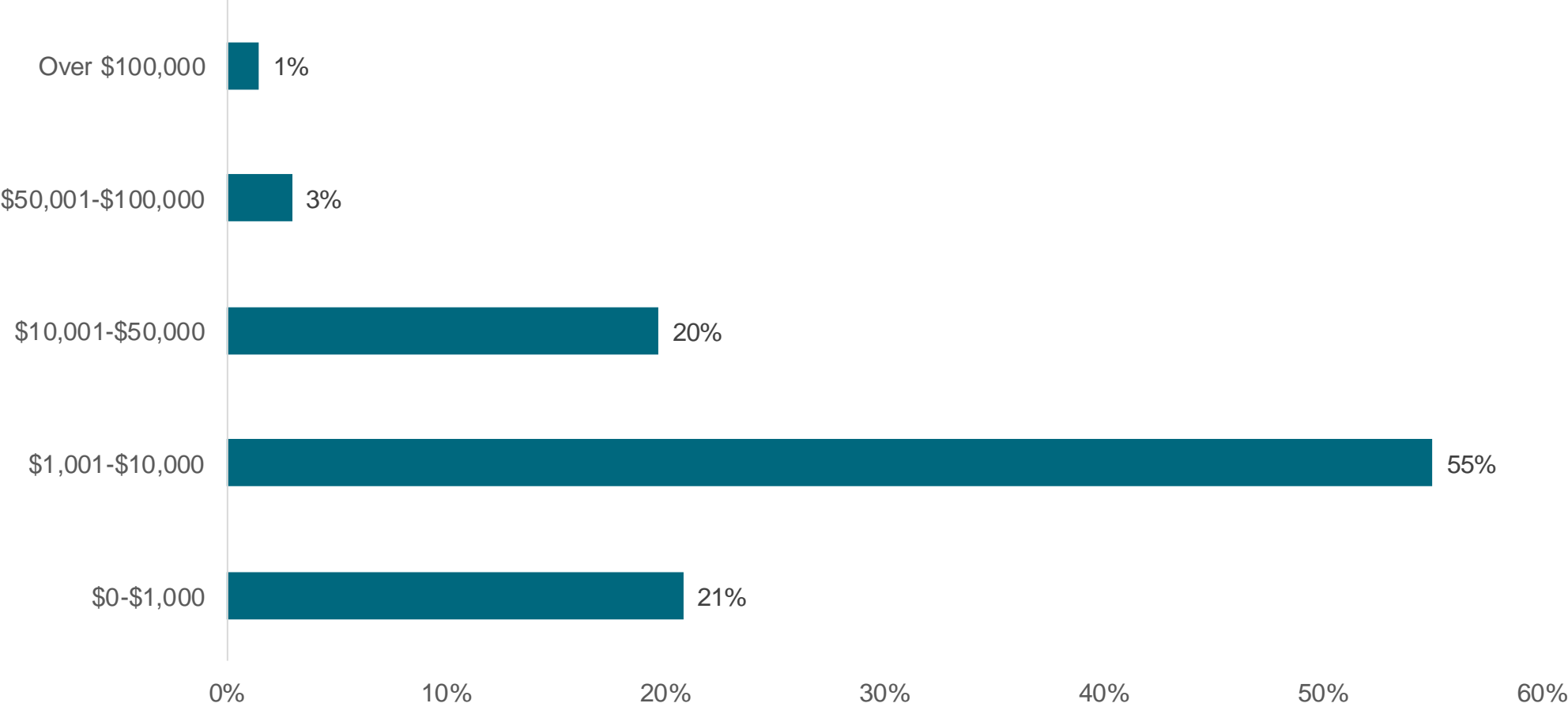


More than 80% of respondents utilize safety reports to track total recordable incident rates and lost workday injury cases.

What metrics do you capture, track and report on your safety report? Check all that apply.

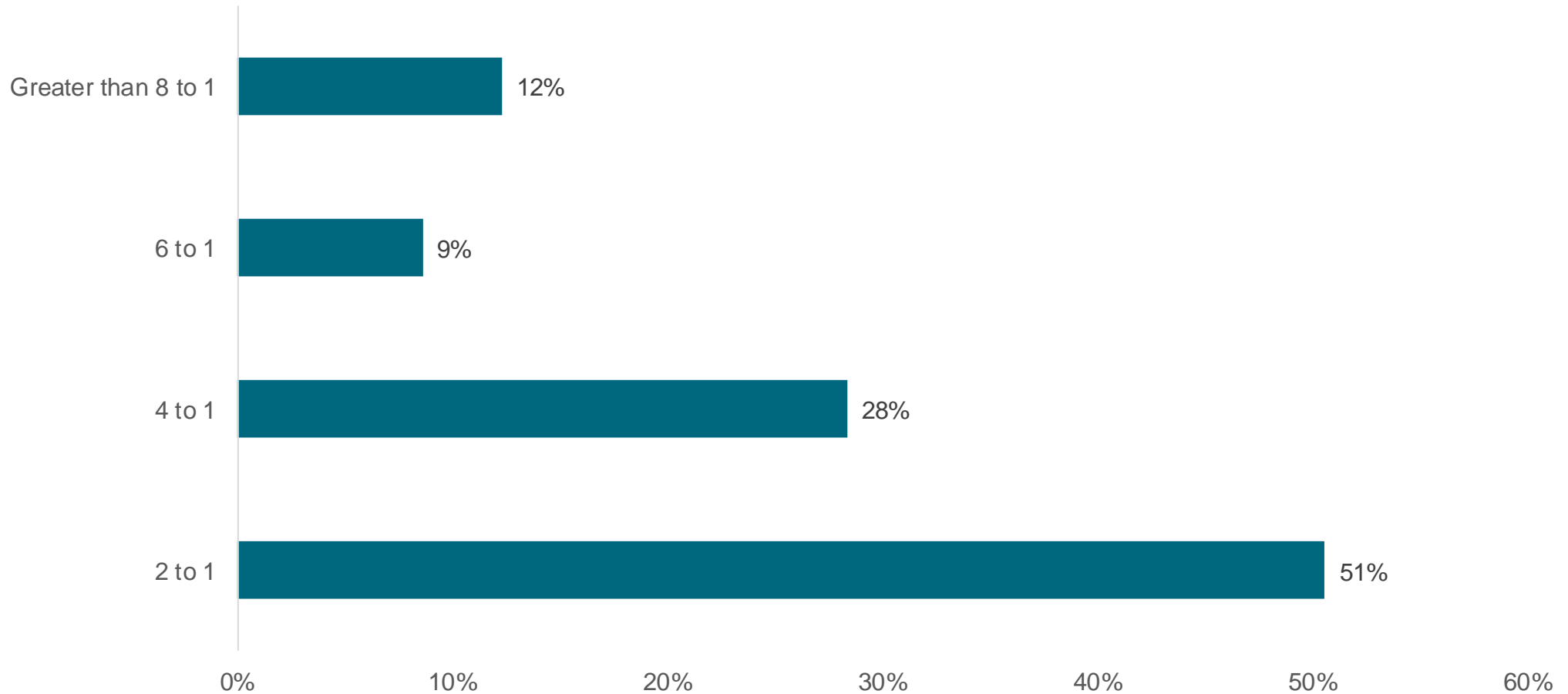


More than half of respondents dedicate between \$1,000 and \$10,000 to safety technology.



More than half of respondents (51%) stated that the estimated factor of ROI versus the actual investment in safety technology is 2 to 1.

What is the estimated factor of ROI versus the actual investment based on the implementation of safety technology?





for the Built Environment



Appendix



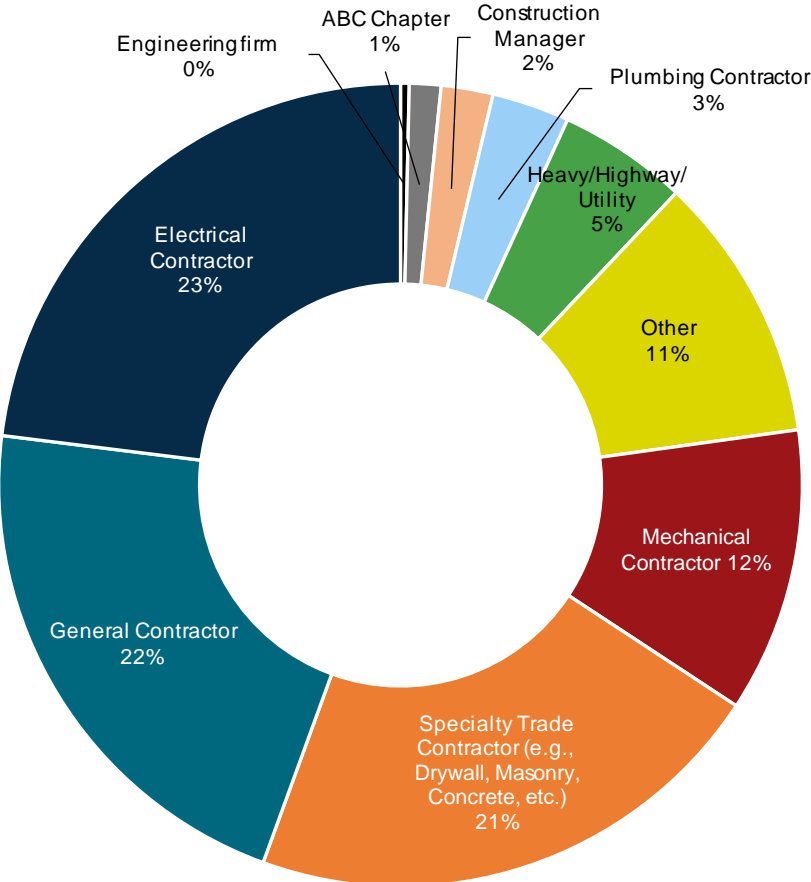
for the Built Environment



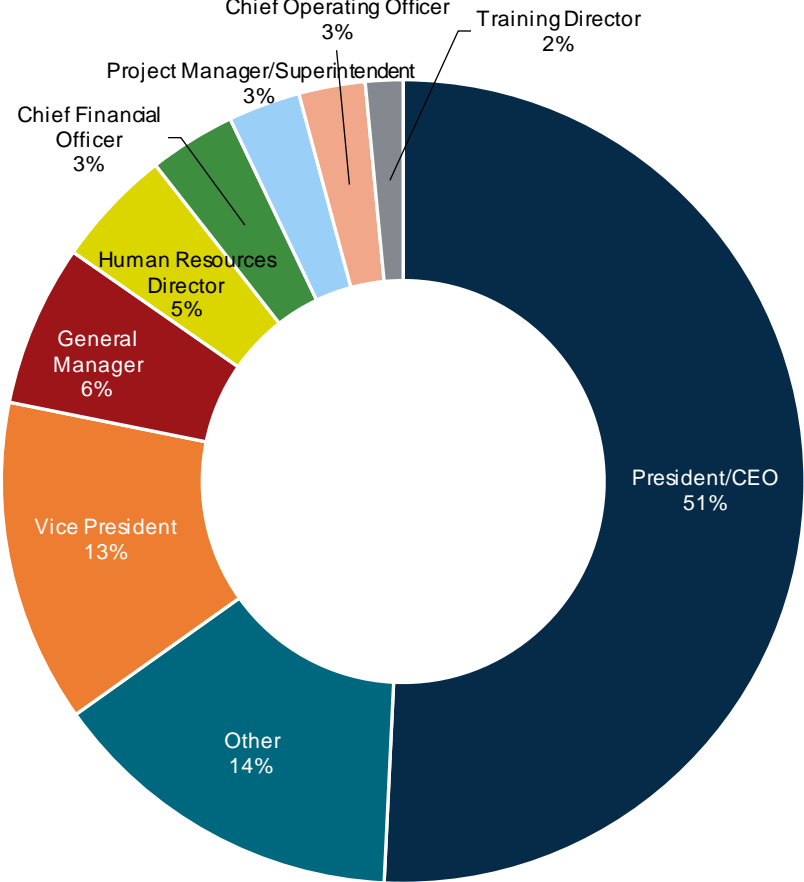
Contractor Survey Demographics

Trade contractors (e.g., electrical, mechanical, plumbing or other specialty) accounted for 59% of survey respondents.

Which of the following best describes your company or organization?



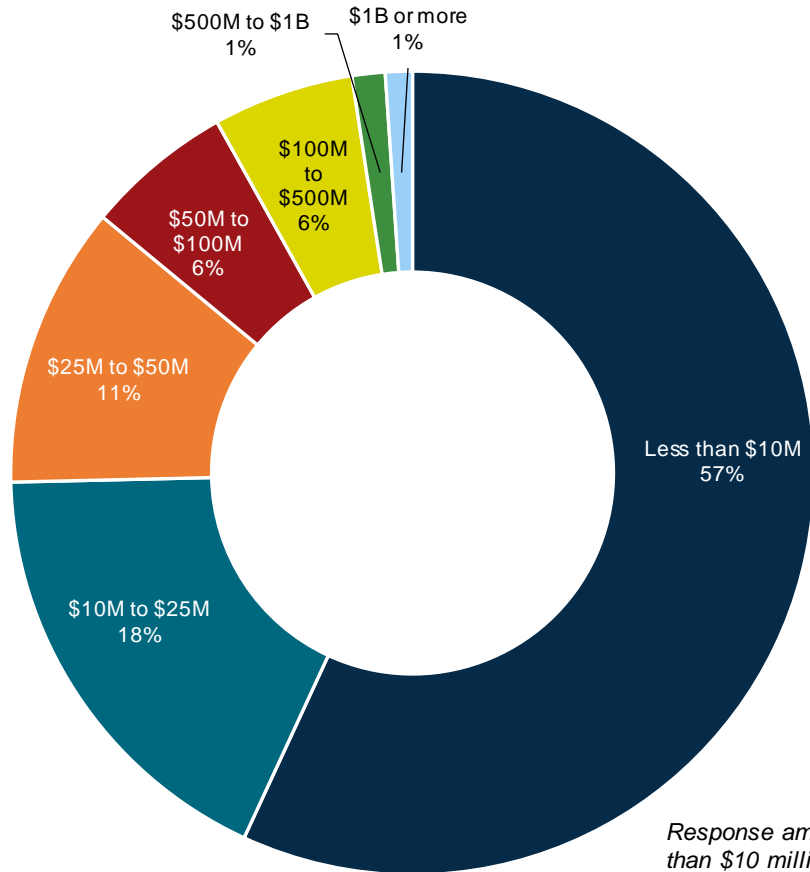
Which of the following best describes your role?



Other includes Owner, Division Manager, Controller, Director of Safety, Safety Manager, Office Manager, Marketing Manager, Operations Manager, Business Development/Operations, Sales, Payroll, Preconstruction, Executive Assistant and Project Administrator.

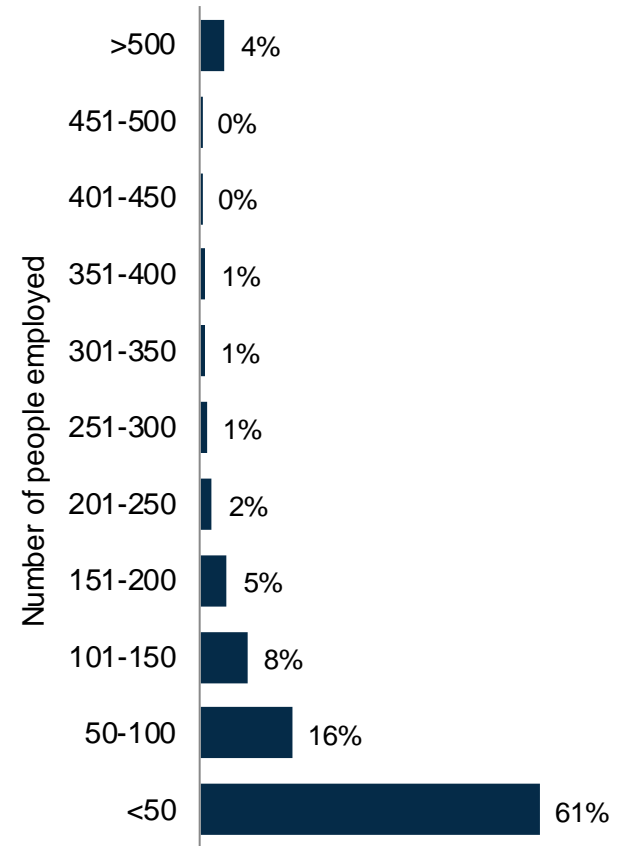
More than half (57%) of the survey sample is from firms with less than \$10 million in revenue or employing fewer than 50 people.

Which of the following best describes your company's annual construction revenue?



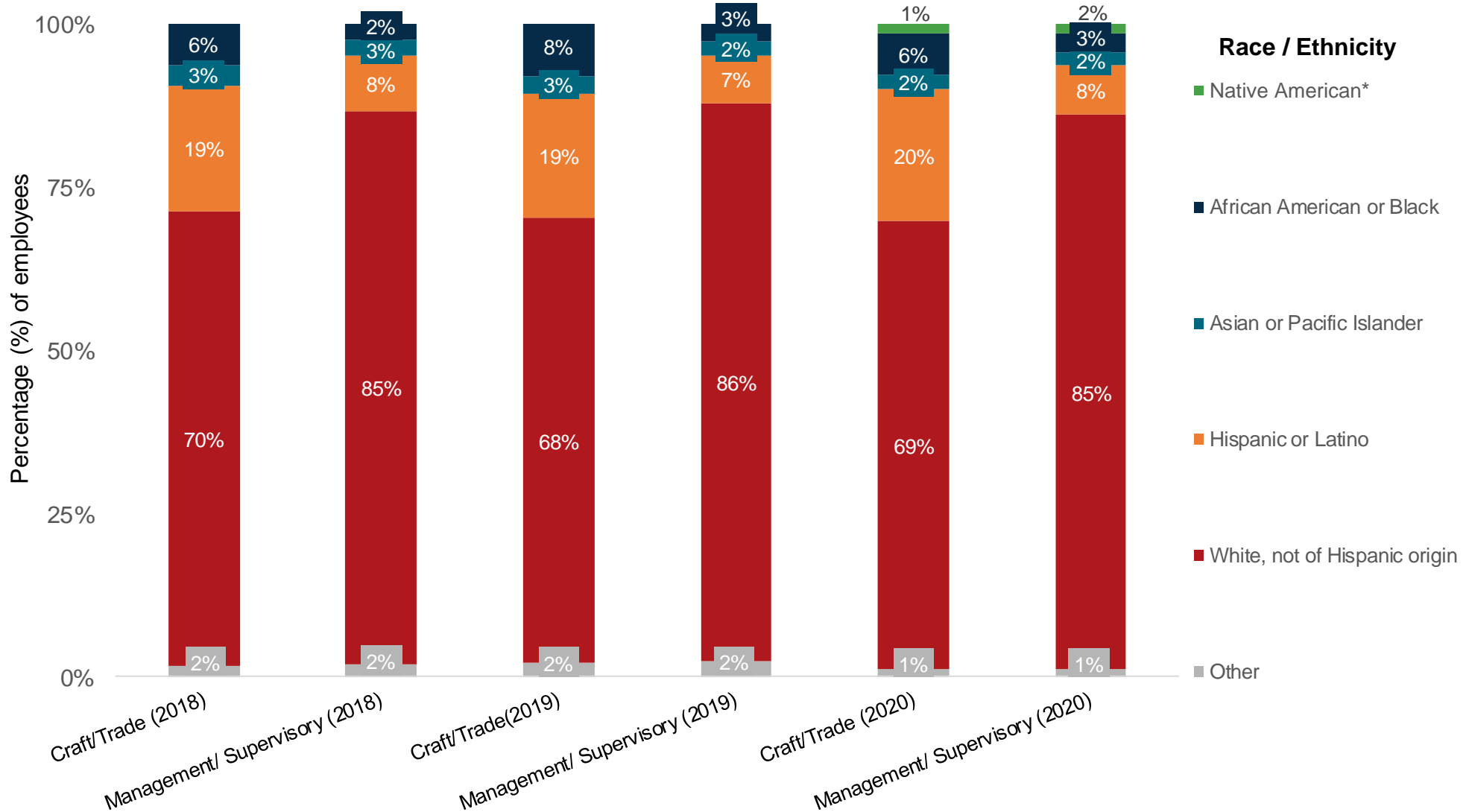
Response among contractors with less than \$10 million in revenue was down compared to 2019, when they accounted for 59% of the sample.

How many people are employed (both craft and salary) by your company at its seasonal peak?



Since 2018, the percentage of employees in both craft/trade and management/supervisory roles has stayed relatively consistent across all race/ethnic groups.

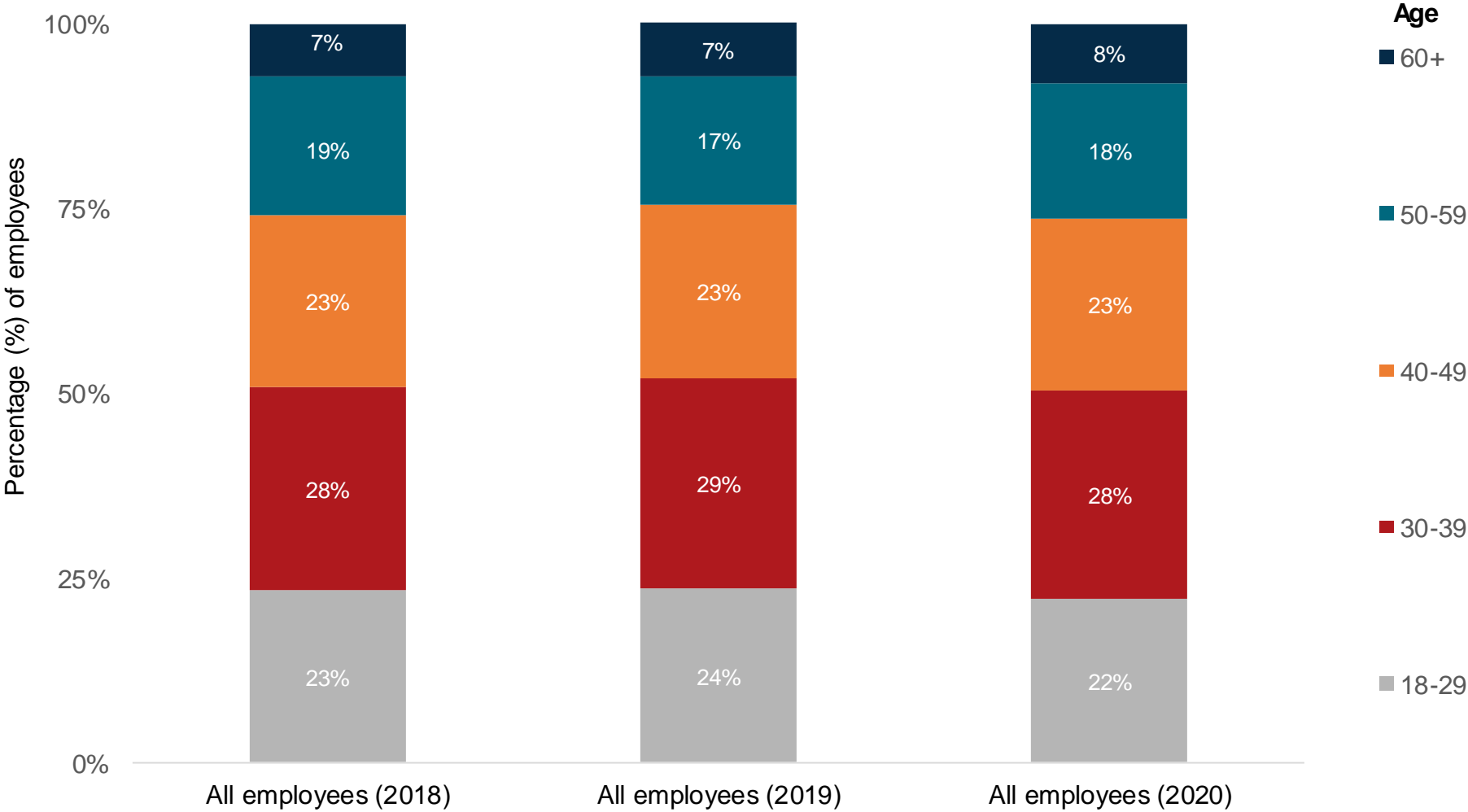
In your company, what percentage (%) of employees are of the following race/ethnic groups?



*2020 was the first year respondents were asked to provide information for Native American employees

A 3% decrease in the share of employees under 40 years from 2019 to 2020 suggests the industry is struggling to attract the younger demographic to the industry.

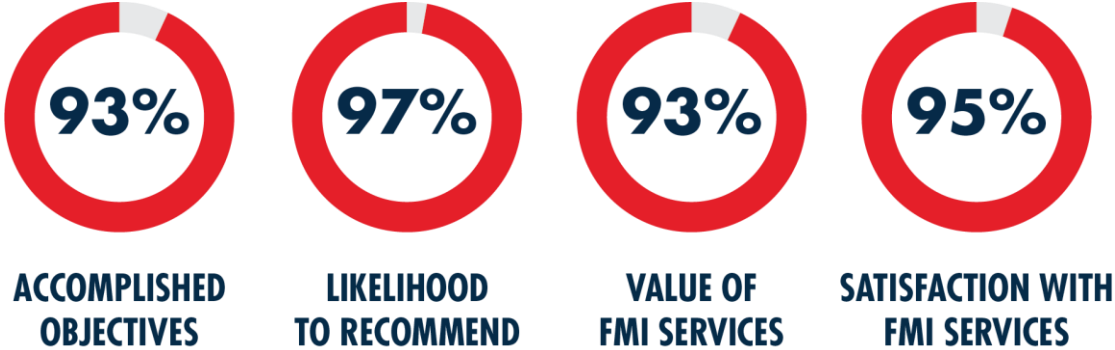
In your company, what percentage (%) of your company's workforce falls into the following age groups?



QUALITY ASSURANCE

For over 65 years, FMI has been the leading management consulting and investment banking firm dedicated exclusively to engineering and construction, infrastructure and the built environment. It is the goal of everyone at FMI to improve the quality and depth of our client relationships and to create loyal, enduring relationships. We are committed to the success of our clients. We stake our reputation on it every day. That is why we constantly monitor what our clients think of our services and the professionals delivering our services. For over two decades, FMI has conducted client evaluations to assure that our services meet the needs of our clients, achieve the results proposed and deliver high value in a professional and effective manner. Upon completion of this engagement, we will ask you to provide us with a written evaluation of our work.

Summary of our client feedback:





for the Built Environment

DENVER

210 University Blvd.
Suite 800
Denver, CO 80206
303.377.4740

EDMONTON

Edmonton, AB
780.850.2693

HOUSTON

1301 McKinney St.
Suite 2000
Houston, TX 77381
713.936.5400

PHOENIX

7639 E Pinnacle Peak Rd.
Suite 100
Scottsdale, AZ 85255
602.381.8108

RALEIGH (*headquarters*)

223 S. West Street
Suite 1200
Raleigh, NC 27603
919.787.8400

TAMPA

308 South Blvd.
Tampa, FL 33606
813.636.1364

WWW.FMINET.COM