ENGINEERING BUSINESS SENTIMENT

2023 Q1

FEBRUARY 2023

ACEC RESEARCH INSTITUTE

ENGINEERING BUSINESS SENTIMENT

2023 Q1

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EXECUTIVE SUMMARY

Current Business Conditions

- Current sentiment for firms and the industry remains extremely optimistic. The Net Rating for firms' overall finances is +84 and +82 for the engineering and design services industry, both similar to last quarter.
- The Net Rating for the U.S. economy is back in positive territory at +12 (up 12 points since last quarter) which represents an increase of 27 points since its low in 2022 Q3.
- Current sentiment remains very optimistic within all market sectors. Sentiment is strongest in the Roads and Bridges (Net Rating +79) and Energy and Utilities (+78) sectors. Sentiment improved in two-thirds of sectors compared to last quarter.
- The median firm backlog declined from 12 months to 10 months. Although only firms with 51 to 200 FTEs saw a decline in the median backlog, the overall decline is due to falling averages across nearly all segments.

Future Business Conditions

- Future sentiment remains positive for firms' finances (Net Rating +33), but less so for the industry +19) and for the U.S. economy (-15).
- Future sentiment of the U.S. economy rose from a Net Rating of -28 last quarter to -15 this quarter. Future sentiment for firms' finances and the industry also rose slightly and remain positive.
- Recession (87%) and inflation (86%) remain the greatest concerns fueling negative future sentiment. But inflation concerns are falling.
- Forty-six percent believe their firms will see a higher backlog of projects 12 months from now, nearly the same as last quarter (47%). The Net Rating also increased slightly from +25 to +27 and is much higher than in 2022 Q3 (+21).
- Sixty-nine percent predict there will be an increase in hiring over the next 12 months at their firms, identical to last quarter.

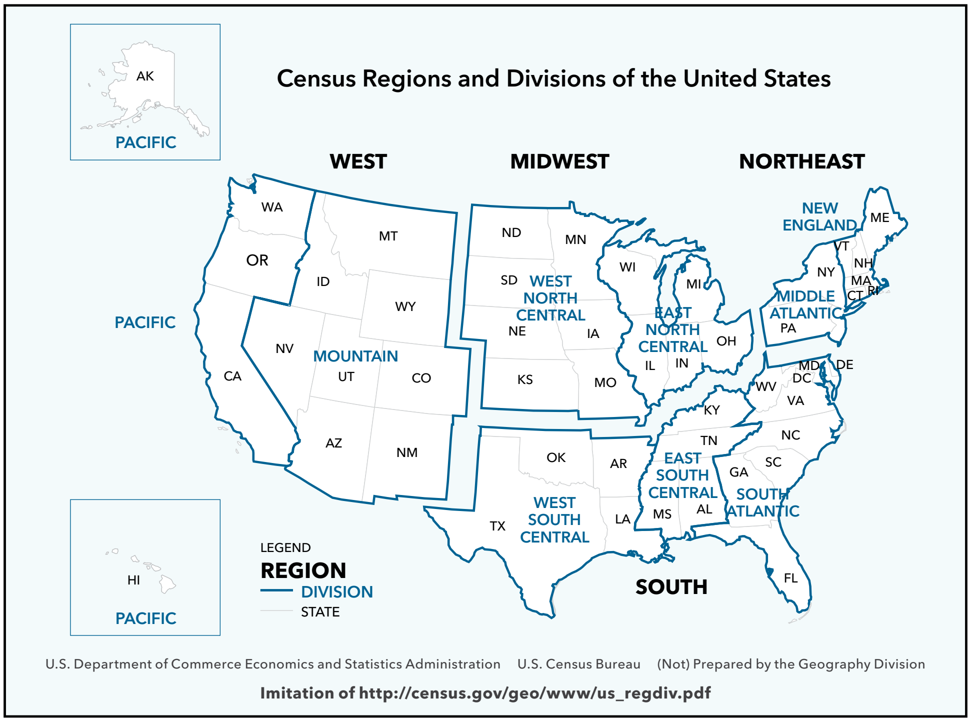
Hot Topics

- Eighty-eight percent currently indicate their firm has at least one opening, down slightly from 91% last quarter. The median number of open positions remained steady at five.
- Concern over the effects of inflation remains high. However, firms are not quite as anxious about its impact as last year.
- In the past three months, about half of firms (49%) have turned down work due to workforce shortages, down slightly from previous quarters.
- Among firms turning down work, most (80%) are being more selective about the projects they are accepting, down from 86%. Fifty-seven percent of firms also indicated that they are turning down less profitable work, slightly less than last quarter.
- Wage inflation is the biggest single concern among firm executives as they head into 2023. Workplace challenges due to hybrid work is also a concern for nearly half of firm executives.
- Thirty-four percent of firm executives believe ESG will be more important in 2023 than in the past while only 8% feel it will be less important.

DEMOGRAPHICS

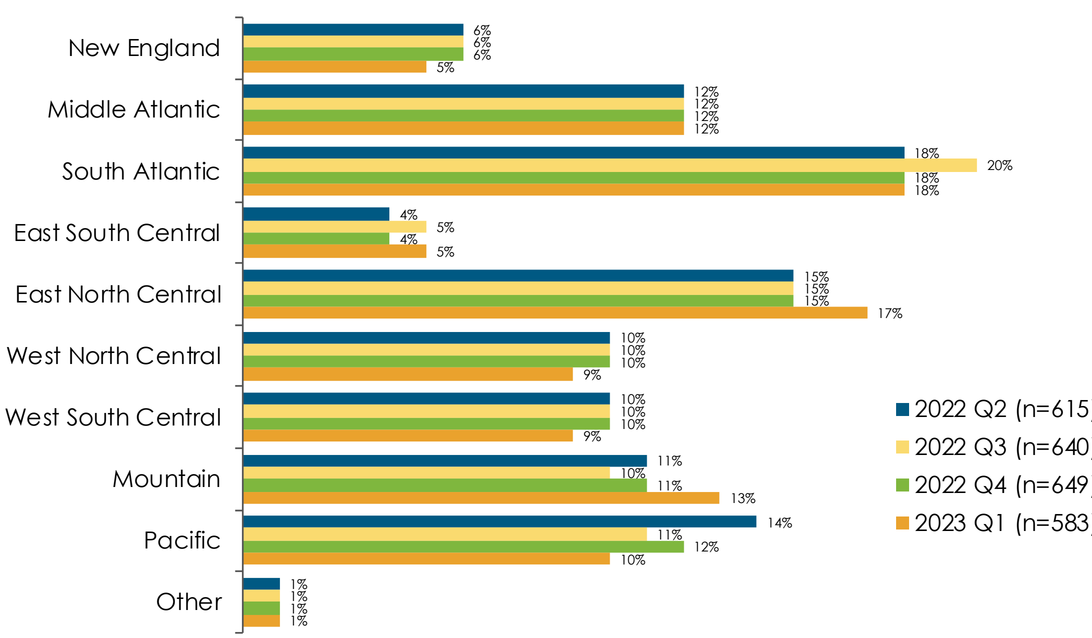
- For reference, the ACEC Research Institute uses the U.S. Census Bureau definition of geographic regions seen in Figure 1 below.

Figure 1: U.S. Census Regions of the United States



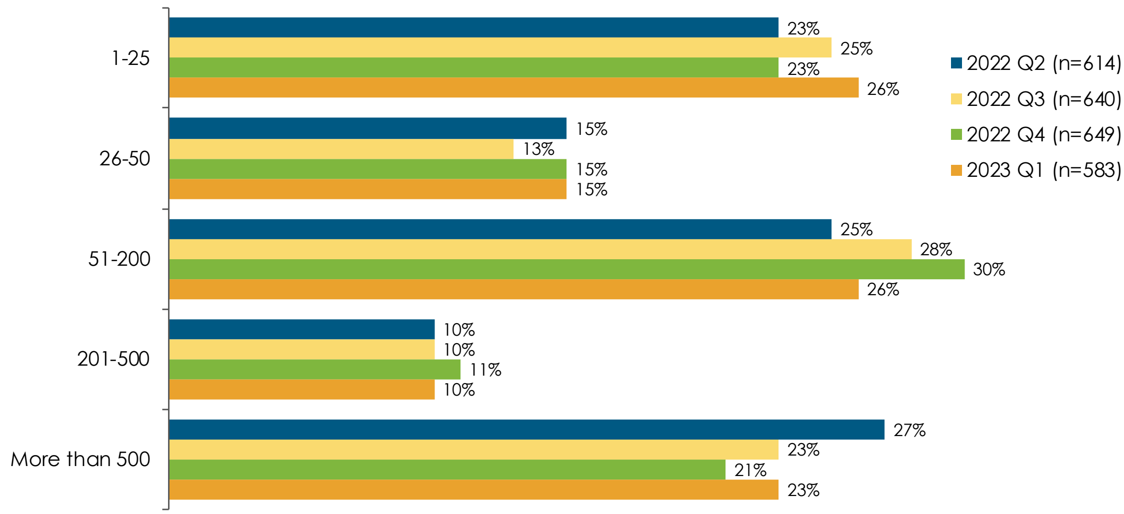
- Respondents' firms are widely dispersed around the United States. A few respondents (Other) indicate their firm is headquartered outside the U.S. These results are statistically similar to previous quarters.

Figure 2: Location of Organization Headquarters



- Respondents represent a wide range of firm sizes. While about one-fourth of respondents represent firms with 25 or fewer full-time equivalents (FTEs), another 23% represent firms with more than 500 FTEs. The median firm size is 80 FTEs, slightly lower than last quarter (85).

Figure 3: Number of Full-Time Equivalents at Firm



CURRENT BUSINESS CONDITIONS

Current U.S. Economy, Industry and Firm Sentiment

- Current sentiment for firms and the industry remains extremely optimistic. The Net Rating for firms' overall finances is +84 and +82 for the engineering and design services industry.
- The Net Rating for the U.S. economy is back in positive territory at +12 (up 12 points since last quarter) which represents an increase of 27 points since its low in 2022 Q3.
- Firms with more than 200 FTEs are the most positive about their firm's finances (+94 Net Rating) and the industry (+90).
- Respondents with 25 or fewer FTEs are relatively less positive about their finances (+73) and the industry (+76), but still quite optimistic.

Figure 4: Current Economic Sentiment

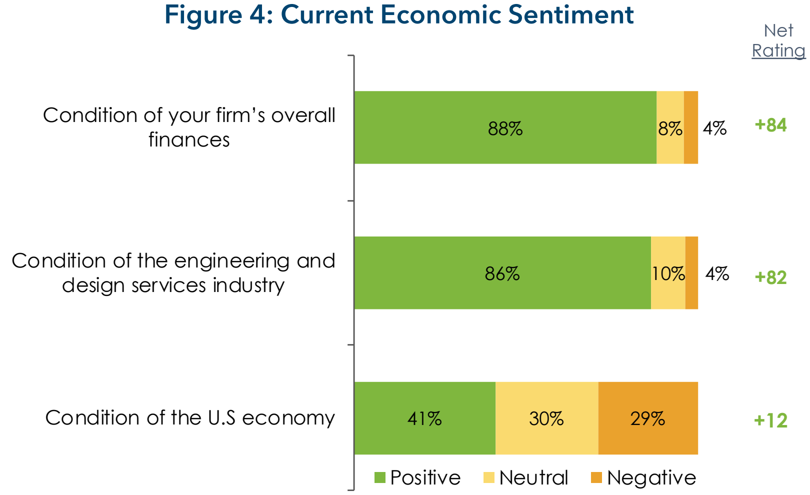
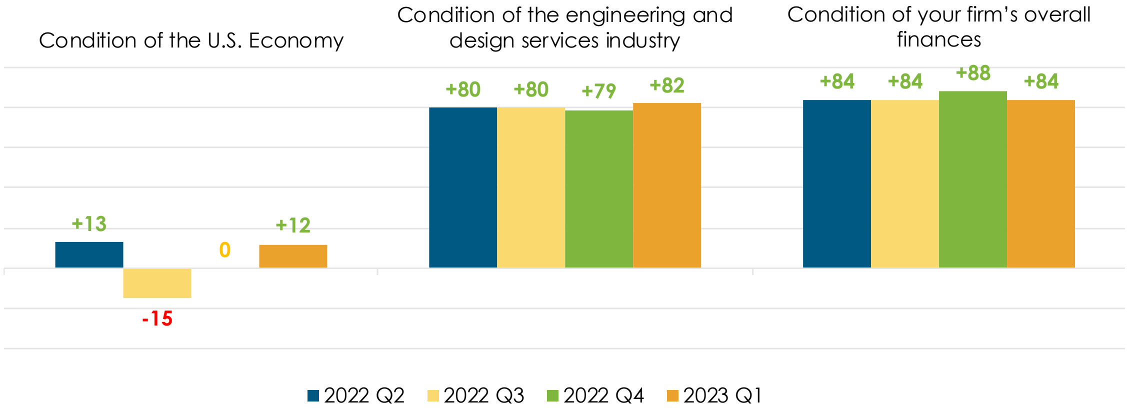


Figure 5: Current Economic Sentiment vs. Previous Quarters



- Nearly all segments have seen substantial increases in sentiment regarding the U.S. economy.

Figure 6: Current Condition of U.S. Economy vs. Previous Quarters – By Region and Firm Size

Condition of the U.S. Economy	2022 Q2 (n=609)	2022 Q3 (n=634)	2022 Q4 (n=643)	2023 Q1 (n=583)	Change vs. Previous Quarter
TOTAL	+13	-15	0	+12	+12
REGION					
Northeast	+22	-19	+4	+28	+24
South	+13	-23	-5	+10	+15
Midwest	+13	-8	+7	+11	+4
West	+8	-9	-2	+5	+7
FIRM SIZE					
1-25	-1	-22	-9	+16	+25
26-50	+17	-10	+4	-6	-10
51-200	+10	-16	-5	+15	+20
201-500	+19	-22	+5	+13	+8
More than 500	+25	-7	+13	+18	+5

Current Industry Sector Sentiment

- Current sentiment remains very optimistic within all market sectors.
- Sentiment is strongest in the Roads and Bridges (Net Rating +79) and Energy and Utilities (+78) sectors.
- The Residential – Land Development (+30 Net Rating) and the Justice (+35) sectors are performing relatively less well, but sentiment is still positive.
- Sentiment improved in two-thirds of sectors compared to last quarter.

Figure 7: Current Industry Sentiment by Sector vs. Previous Quarters

Current Industry Sector Sentiment	2022 Q2 (n = 200-464)	2022 Q3 (n = 196-473)	2022 Q4 (n = 213-505)	2023 Q1 (n = 185-423)	Change vs. Prev. Qtr.
Justice (Courthouses and Corrections)	+37	+33	+27	+35	+8
Education (K-12 and Higher Education)	+56	+52	+50	+57	+7
Energy and Utilities	+73	+67	+72	+78	+6
Data Centers	+71	+70	+65	+69	+4
Transportation – Transit (Rail, BRT)	+65	+68	+65	+69	+4
Transportation – Airports	+73	+72	+73	+77	+4
Healthcare Facilities	+73	+72	+73	+75	+2
Federal/Military, State and Local Government Buildings	+63	+63	+66	+67	+1
Transportation – Roads and Bridges	+76	+77	+78	+79	+1
Telecommunications	+64	+59	+65	+66	+1
Science and Technology	+73	+64	+63	+64	+1
Industrial and Manufacturing Facilities	+68	+66	+63	+62	-1
Water/Wastewater	+77	+76	+77	+74	-3
Convention Centers, Sports Facilities and Cultural Facilities	+51	+43	+42	+39	-3
Commercial Real Estate (Office, Hotel, Retail and Multifamily Residential)	+59	+44	+47	+36	-11
Residential – Land Development	+68	+50	+41	+30	-11

Current Backlog

- The median firm backlog declined from 12 months to 10 months.
- In addition, 45% indicate that their firm has a current backlog of one year or more (down from 52% last quarter).
- Although only firms with 51 to 200 FTEs saw a decline in the median backlog, the overall decline is due to falling averages across nearly all segments.

Figure 8: Current Backlog

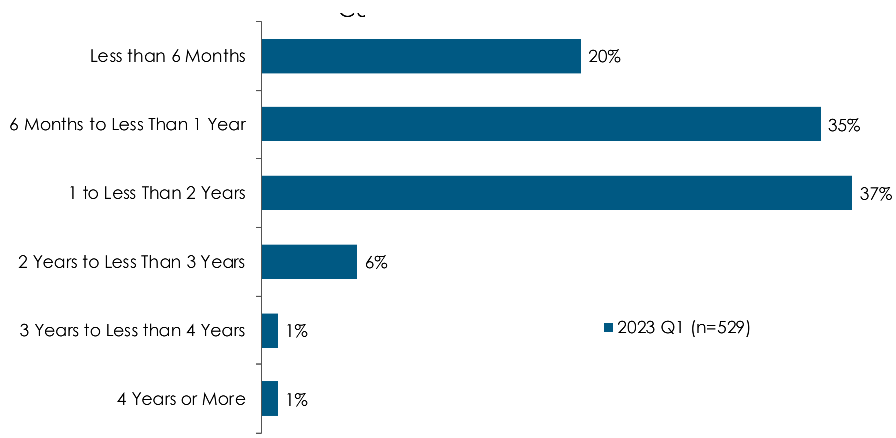


Figure 9: Current Backlog vs. Previous Quarters – By Region and Firm Size

Current Backlog	2022 Q2 (n=542)	2022 Q3 (n=563)	2022 Q4 (n=592)	2023 Q1 (n=529)	Change vs. Previous Quarter
TOTAL	11	12	12	10	-2
REGION					
Northeast	12	12	12	12	0
South	10	10	10	9	-1
Midwest	11	12	12	11	-1
West	10	9	10	8	-2
FIRM SIZE					
1-25	6	6	6	6	0
26-50	9	10	9	9	0
51-200	12	12	12	10	-2
201-500	12	12	12	12	0
More than 500	13	14	13	13	0

FUTURE BUSINESS CONDITIONS

Future U.S. Economy, Industry and Firm Sentiment

- Future sentiment remains positive for firms' finances (Net Rating +33), but less so for the industry +19) and for the U.S. economy (-15, up 13 points).
- Future sentiment for the U.S. economy rose from a Net Rating of -28 last quarter to -15 this quarter. Future sentiment for firms' finances and the industry also rose slightly and remain positive.

Figure 10: Economic Sentiment 12 Months from Now

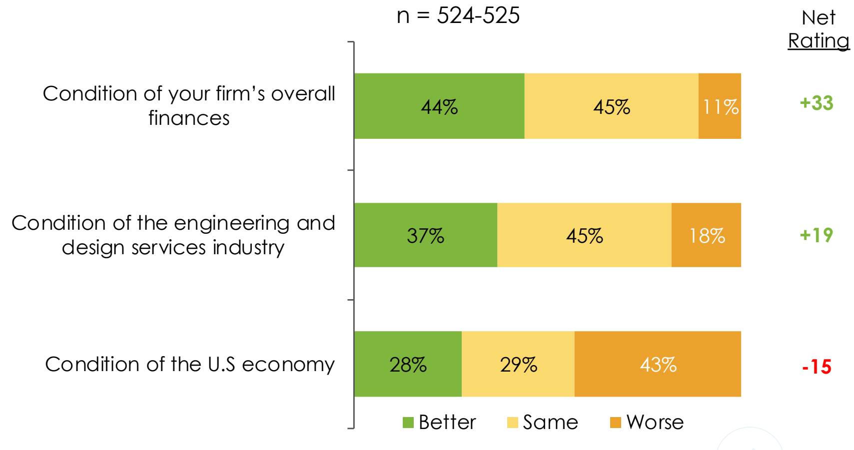
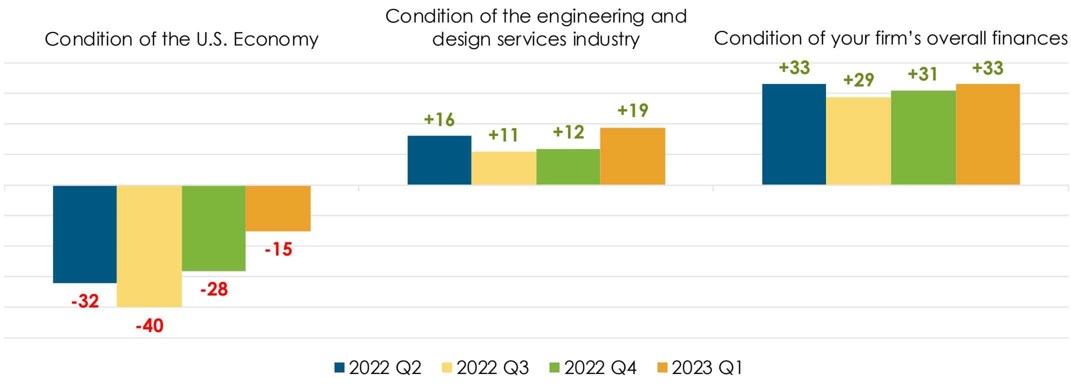


Figure 11: Economic Sentiment 12 Months from Now vs. Previous Quarters



- Future sentiment about the firms' overall finances is slightly more positive than last quarter and has improved in many segments.

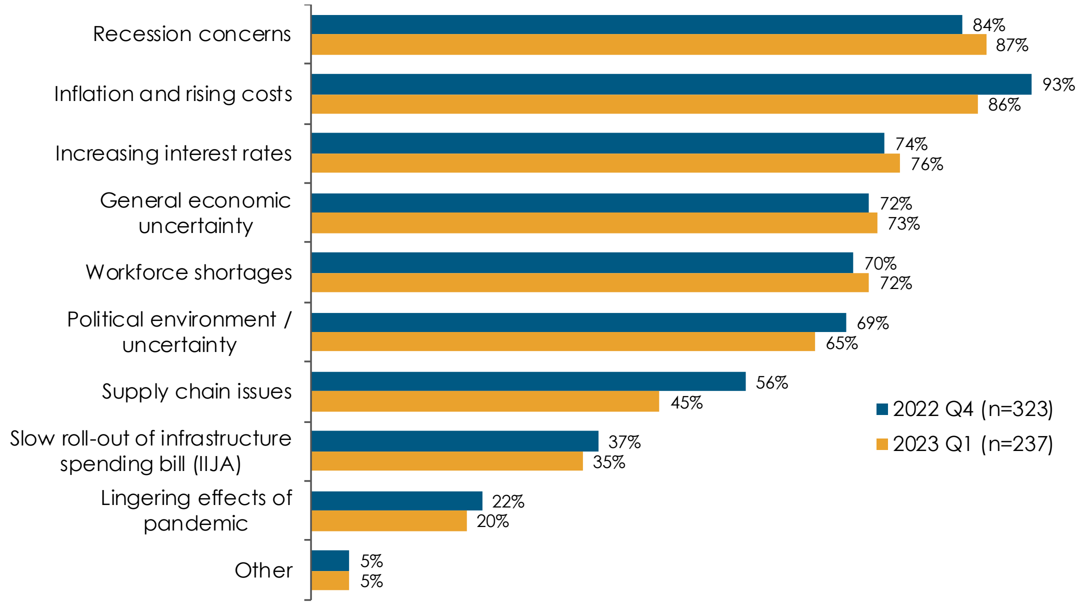
Figure 12: Condition of Firm's Finances 12 Months from Now vs. Previous Quarters – By Region and Firm Size

Condition of your firm's overall finances	2022 Q2 (n=511)	2022 Q3 (n=561)	2022 Q4 (n=590)	2023 Q1 (n=525)	Change vs. Previous Quarter
TOTAL	+33	+29	+31	+33	+2
REGION					
Northeast	+38	+29	+33	+56	+23
South	+33	+32	+35	+29	-6
Midwest	+33	+29	+35	+38	+3
West	+30	+22	+15	+14	-1
FIRM SIZE					
1-25	+12	+13	+8	+9	+1
26-50	+26	+19	+29	+30	+1
51-200	+39	+28	+39	+43	+4
201-500	+29	+40	+30	+33	+3
More than 500	+53	+52	+44	+50	+6

Reasons for Economic Sentiment 12 Months from Now

- Recession (87%) and inflation (86%) remain the greatest concerns fueling negative future sentiment. But inflation concerns are falling.

Figure 13: Reasons for Economic Sentiment 12 Months from Now



Future Industry Sector Sentiment

- Future sentiment is positive in many sectors including Transportation (Roads, Bridges, Transit, and Airports), Energy and Utilities and Water/Wastewater.
- Future sentiment is weakest in the Commercial Real Estate (Net Rating -23) and Residential-Land Development (-25) sectors.
- Most sectors have a positive Net Rating, and nearly all sectors have seen a Net Rating increase since last quarter.

Figure 14: Industry Sentiment by Sector 12 Months from Now vs. Previous Quarters

Future Industry Sector Sentiment	2022 Q2 (n = 202-411)	2022 Q3 (n = 215-460)	2022 Q4 (n = 236-482)	2023 Q1 (n = 196-402)	Change vs. Previous Quarter
Residential – Land Development	-12	-43	-39	-25	+14
Healthcare Facilities	+18	+17	+17	+30	+13
Convention Centers, Sports Facilities and Cultural Facilities	-10	-26	-25	-13	+12
Justice (Courthouses and Corrections)	-4	-6	-11	-1	+10
Telecommunications	+28	+29	+24	+33	+9
Transportation – Airports	+45	+38	+39	+46	+7
Transportation – Roads and Bridges	+55	+55	+52	+58	+6
Industrial and Manufacturing Facilities	+15	+4	+4	+10	+6
Commercial Real Estate (Office, Hotel, Retail and Multifamily Residential)	-11	-37	-29	-23	+6
Transportation – Transit (Rail, BRT)	+46	+46	+42	+48	+6
Education (K-12 and Higher Education)	+8	+2	+5	+9	+4
Water/Wastewater	+45	+37	+42	+46	+4
Science and Technology	+21	+17	+22	+25	+3
Energy and Utilities	+39	+33	+44	+46	+2
Federal/Military, State and Local Government Buildings	+27	+28	+30	+28	-2
Data Centers	+21	+20	+18	+9	-9

Future Backlog

- Forty-six percent believe their firms will see a higher backlog of projects 12 months from now, nearly the same as last quarter (47%).
- The Net Rating also increased slightly from +25 to +27 and is much higher than in 2022 Q3 (+21).

Figure 15: Backlog 12 Months from Now

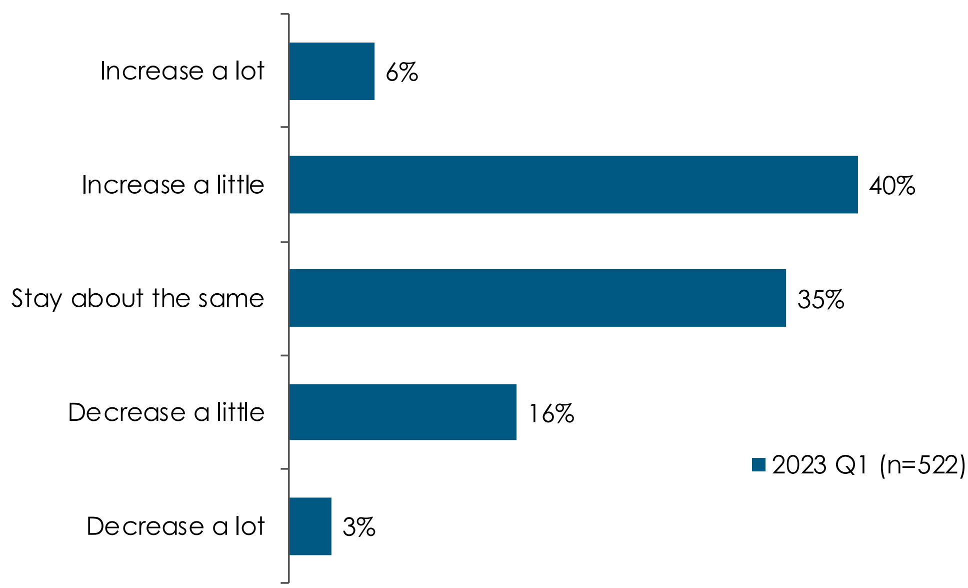
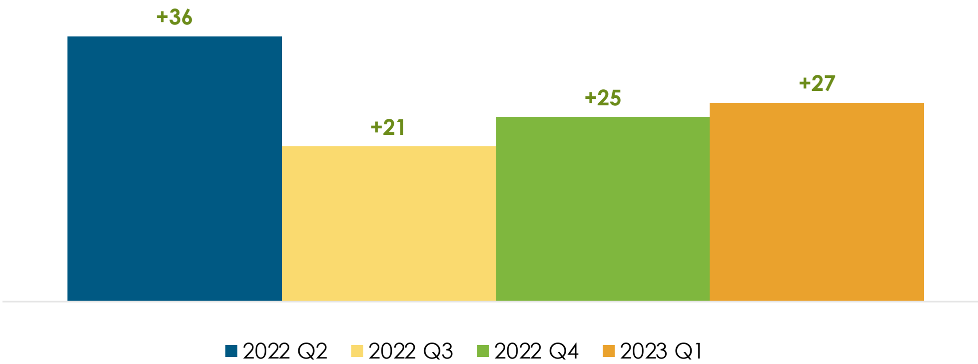


Figure 16: Backlog 12 Months from Now – Net Rating Trend



- Compared to the last quarter, most segments expect to see an increase in future backlog.
- Firms in the Northeast have the highest Net Rating (+61) which is a staggering increase of 25 points over the last quarter.
- Firms with more than 500 FTE also have a very high Net Rating (+56) and surged 18 points over the last quarter.
- Firms in the West have the lowest future backlog Net Rating (+2) compared to other regions.
- Firms with 25 or fewer FTE have the lowest future backlog Net Rating (+7) compared to other firm sizes.

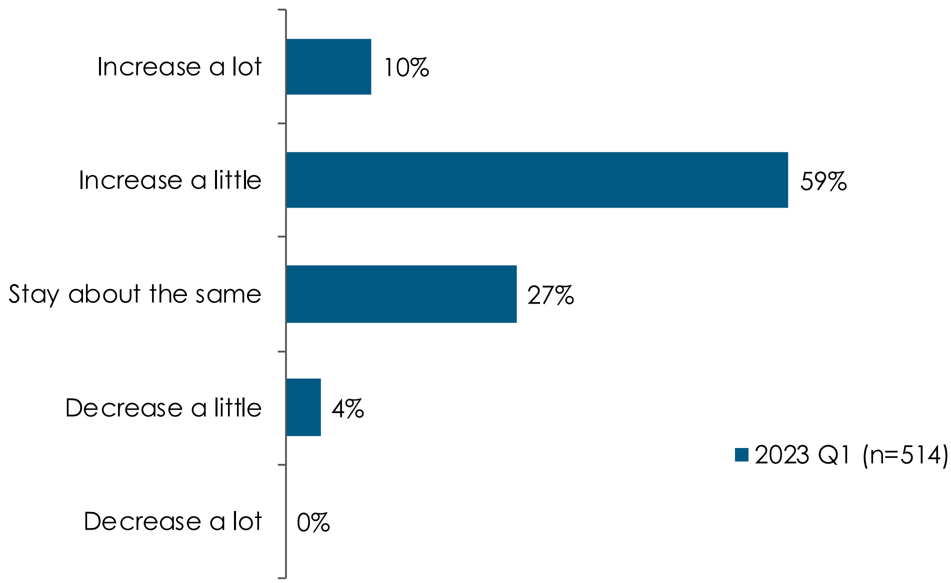
Figure 17: Backlog 12 Months from Now vs. Previous Quarters – By Region and Firm Size

	2022 Q2 (n=507)	2022 Q3 (n=554)	2022 Q4 (n=585)	2023 Q1 (n=522)	Change vs. Previous Quarter
TOTAL	+36	+21	+25	+27	+2
REGION					
Northeast	+46	+40	+36	+61	+25
South	+35	+21	+25	+21	-4
Midwest	+36	+23	+26	+39	+13
West	+31	+6	+12	+2	-10
FIRM SIZE					
1-25	+11	+1	+3	+7	+4
26-50	+16	+9	+20	+13	-7
51-200	+37	+24	+31	+32	+1
201-500	+41	+43	+29	+33	+4
More than 500	+70	+36	+38	+56	+18

Future Hiring Projections

- Sixty-nine percent predict there will be an increase in hiring over the next 12 months at their firms, identical to last quarter.

Figure 18: Hiring Over the Next 12 Months



- Although still optimistic, future hiring sentiment in the West is lower than all other regions (+50, down 6 points).
- Firms with 500+ FTE (+81, up 5) remain the most optimistic about future hiring.
- Although overall future hiring sentiment remains unchanged, half of the segments saw increases and the other half saw declines.

Figure 19: Expectations for Hiring Increases Over the Next 12 Months vs Previous Quarters – By Region and Firm Size

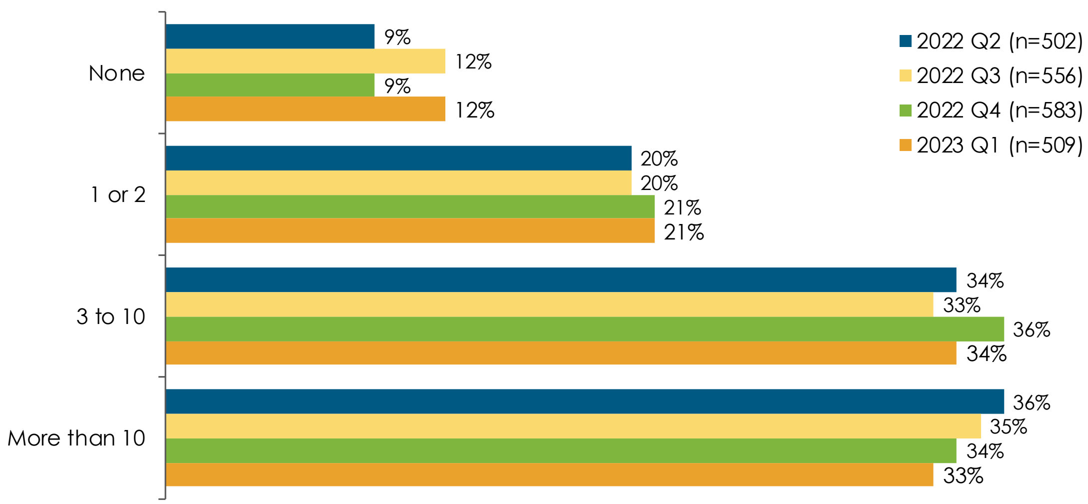
	2022 Q2 (n=495)	2022 Q3 (n=556)	2022 Q4 (n=580)	2023 Q1 (n=514)	Change vs. Previous Quarter
TOTAL	+69	+59	+65	+65	0
REGION					
Northeast	+75	+71	+66	+83	+17
South	+67	+56	+66	+54	-12
Midwest	+73	+67	+71	+77	+6
West	+61	+49	+56	+50	-6
FIRM SIZE					
1-25	+38	+42	+45	+37	-8
26-50	+62	+46	+66	+62	-4
51-200	+77	+68	+69	+77	+8
201-500	+78	+69	+72	+70	-2
More than 500	+89	+75	+76	+81	+5

HOT TOPICS

Current Open Positions

- Eighty-eight percent currently indicate their firm has at least one opening, down slightly from 91% last quarter. The median number of open positions remained steady at five.
- Open positions remained largely steady in the past quarter. However, the largest firms (more than 500 employees) have a median of 80 open positions, down 20 from last quarter.

Figure 20: Current Open Positions vs. Previous Quarters



Inflation

- Concern over the effects of inflation remains high.
- While still very concerned about inflation, firms are not quite as anxious about its impact as last year.
- Firms remain concerned that inflation will lessen the impact of the IIJA, but less so than last quarter.

Figure 21: Inflation Concerns

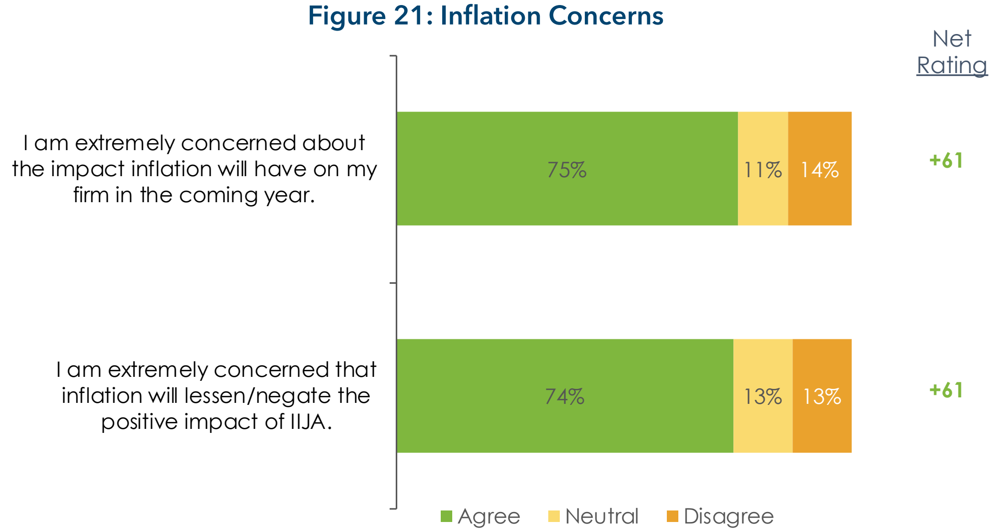
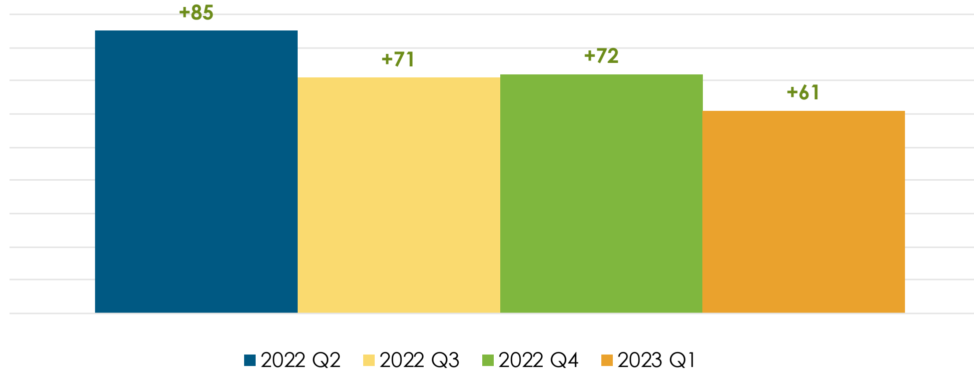
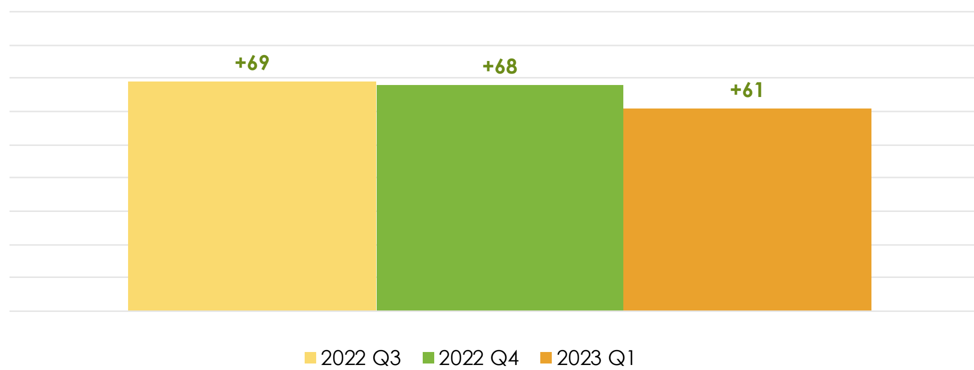


Figure 22: Inflation Concerns vs. Previous Quarters

I am extremely concerned about the impact inflation will have on my firm in the coming year.



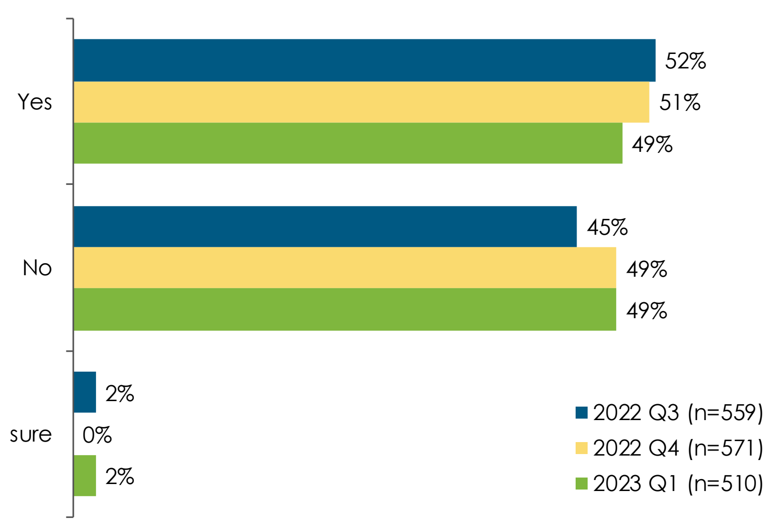
I am extremely concerned that inflation will lessen/negate the positive impact of IIJA.



Turned Down Work Due to Workforce Shortages

- In the past three months, about half of firms (49%) have turned down work due to workforce shortages, down slightly from previous quarters.
- At 54%, firms in the Midwest are most likely to have turned down work. Firms in the South are least likely to have turned down work (41%).
- Firm size has no impact on whether firms have turned down work.

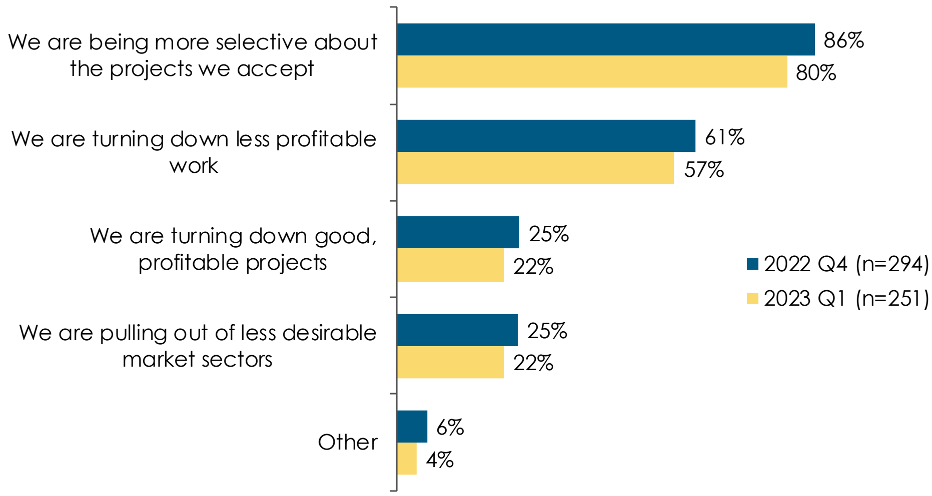
Figure 23: Turned Down Work Due to Workforce Shortages



Types of Work Turned Down

- Among firms turning down work, most (80%) are being more selective about the projects they are accepting, down from 86%.
- Fifty-seven percent of firms also indicated that they are turning down less profitable work, slightly less than last quarter.

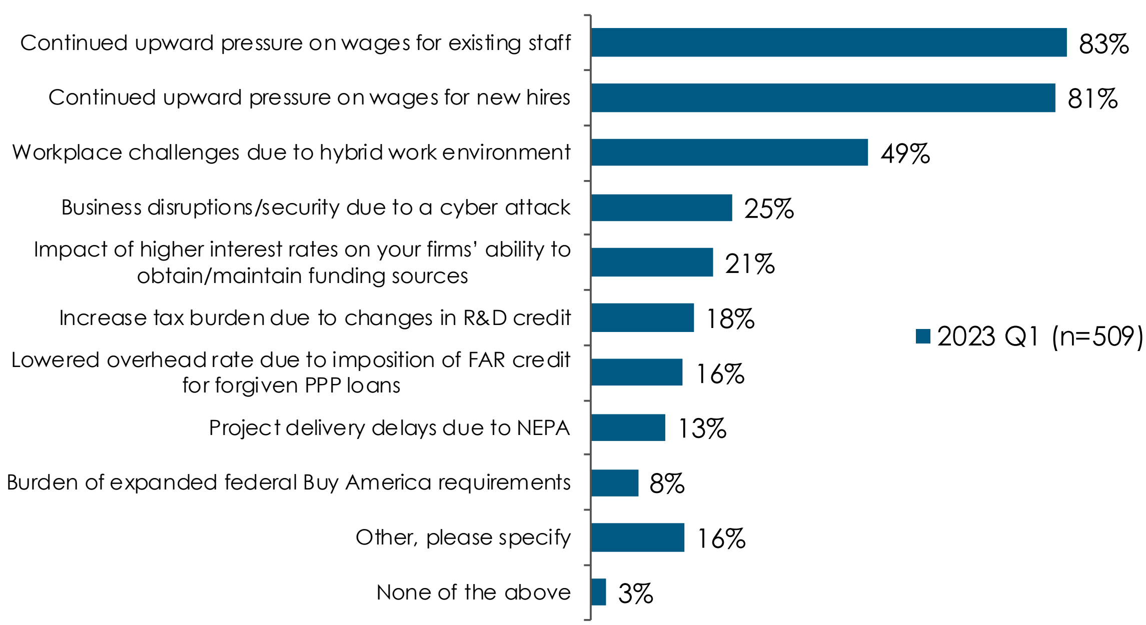
Figure 24: Types of Work Turned Down



Biggest Concerns in 2023

- Wage inflation is the biggest single concern among firm executives as they head into 2023.
- Workplace challenges due to hybrid work is also a concern for nearly half of firm executives.
- "Other" comments mentioned by respondents follow concerns regarding the U.S. Economy detailed in Figure 13.

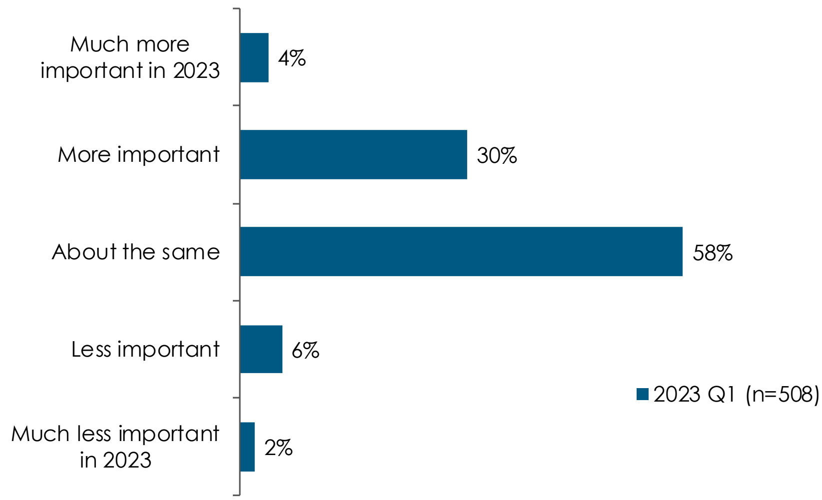
Figure 25: Biggest Concerns in 2023



Importance of ESG in 2023 Compared to Past

- Thirty-four percent of firm executives believe ESG will be more important in 2023 than in the past while only 8% feel it will be less important.
- Firms in the Northeast (45%) and Midwest (37%) are more likely to feel ESG will be more important this year compared to other regions.
- Importance of ESG increases as firm size increases. For example, 25% of firms with 25 or fewer FTEs feel ESG will become more important compared to 50% of firms with 500+ FTEs.
- 11% or less of any segment feel ESG will be less important than in the past.

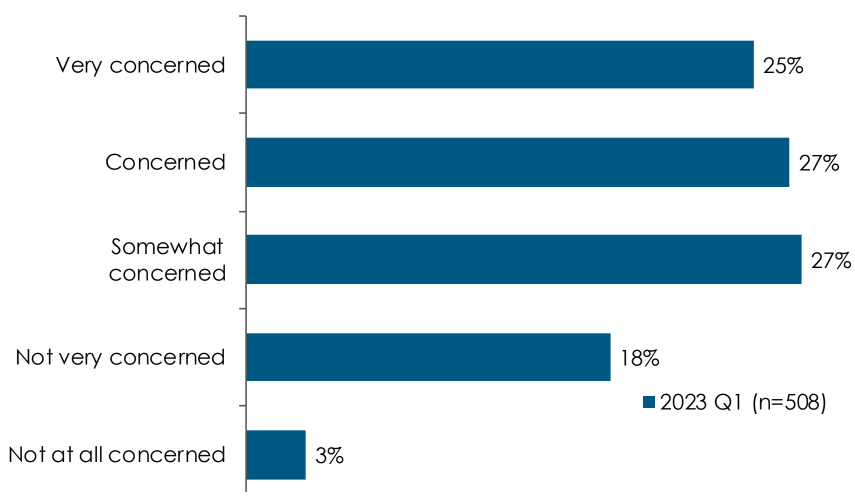
Figure 26: Importance of ESG in 2023 Compared to Past



Concern about Covid's Impact on Students Choosing STEM Majors in College

- Seventy-nine percent of firm executives are at least somewhat concerned that fewer students will choose STEM majors in college due to the long-term impact of Covid on education.

Figure 27: Concern about Covid's Impact on Students Choosing STEM Majors



METHODOLOGY

The Institute for Association and Nonprofit Research (IFANR) recruited individuals from among the database list of members provided by the ACEC Research Institute. Data collection occurred between January 12 and January 25, 2023.

A total of 11,259 invitations were emailed, although 2,068 bounced and 70 opted-out, resulting in a total of 9,121 potential respondents. Individuals who did not respond to the first email were sent two follow-up reminders, and a final reminder email was sent to the remaining non-respondents.

In all, 583 individuals completed the survey for an overall response rate of 6%.

Throughout this report meaningful, statistically significant differences are noted for various subgroups, including geographic region and firm size.

NOTE: Throughout this report, “Net Ratings” are shown on many graphs to quantify the sentiment of respondents. The Net Rating is calculated by subtracting the negative ratings from the positive ratings. Therefore, a positive Net Rating indicates overall sentiment is optimistic while a negative Net Rating indicates an overall pessimistic sentiment. The higher the numeric value the stronger the sentiment (either optimistic or pessimistic).

STATISTICAL NOTES

Due to rounding, not all graphs total 100%.

Statistically significant differences are evaluated at a 95% confidence interval.

There is no margin of sampling error as this was a census of all executive-level individuals at member firms in the ACEC database.

Although every effort was taken to minimize survey bias, there is no way to eliminate all sources of potential bias. Sources of potential bias include, but are not limited to, the following:

- Non-response bias
- Confounding bias
- Question wording bias
- Question order bias
- Habituation
- Sponsor bias
- Confirmation bias

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The ACEC Research Institute provides the engineering industry with cutting edge research, trend data, and economic analysis to help firm owners make decisions and delivers thought leadership that advances engineering's essential value to society.

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TBS T. BAKER SMITH
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ACEC
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Janice Marsters

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