

ENGINEERING BUSINESS SENTIMENT

2021 Q4

NOVEMBER 2021

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EXECUTIVE SUMMARY

Business Conditions Compared to Three Months Ago

- Economic sentiment has improved for firms and the industry compared to three months ago. However, sentiment regarding the U.S. economy has taken a turn for the worse.
- Although sentiment in all sectors improved compared to three months ago, sentiment for the roads and bridges (+30 Net Rating) and water/wastewater (+34) sectors improved the most.
- 68% of respondents indicate their organization has added at least one full-time employee within the past three months. The median number of new hires is three.
- 52% indicate their backlog has increased in the past three months compared to 16% who say it has decreased.

Current Business Conditions

- Current sentiment is extremely optimistic. The Net Rating for firms' overall finances is a staggering +84 and +75 for the engineering and design services industry. Although the Net Rating for the U.S. Economy is much lower at +40, it is still very good.
- Current sentiment is also extremely optimistic within all market sectors. Sentiment is strongest in the data centers (+77), waste/wastewater (+77) and healthcare (+73) sectors.
- The median firm backlog stands at 10 months. In addition, 42% indicate that their firm has a current backlog of a year or more.

Future Business Conditions

- Future sentiment is very optimistic for firms (+48 Net Rating) and the industry (+40). Although weaker than the other measures, sentiment for the U.S. economy (+6) remains positive.
- Future sentiment is very optimistic in many sectors. Optimism is strongest in the roads and bridges (+69 Net Rating) and transit (+60) sectors.
- 64% believe their firms will see an increased backlog of projects over the next year.
- 74% predict there will be an increase in hiring over the next year at their firms.

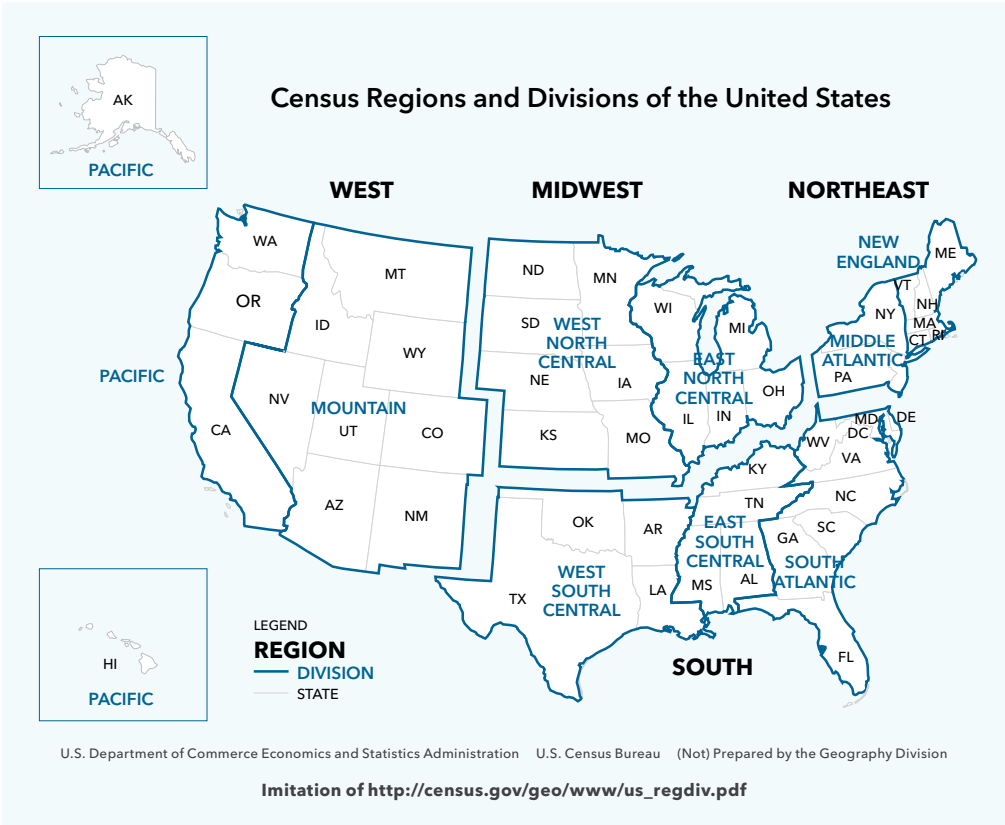
Hot Button Issue - Workforce

- 87% of respondents indicate their organization has at least one current opening.
 - The median number of open positions is five.
- 97% agree that there is a tight labor market in the industry.
- 70% indicate that the lack of qualified workers is the single largest barrier to growing their firm.

DEMOGRAPHICS

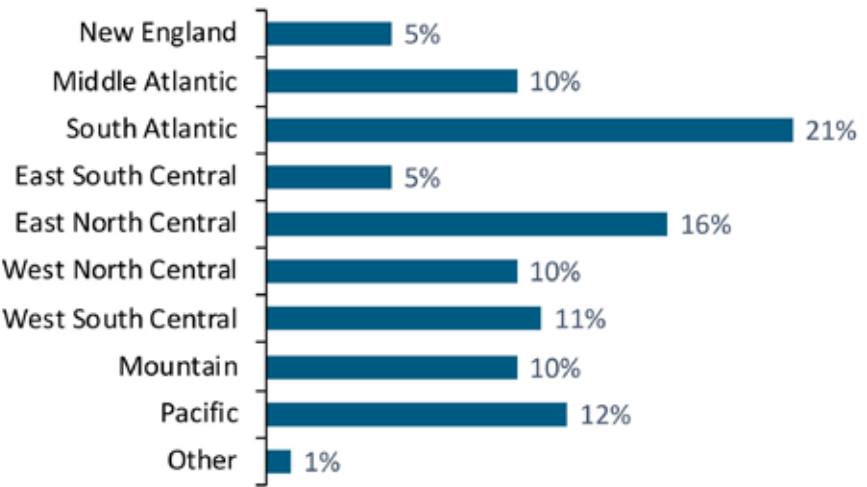
For reference, the ACEC Research Institute uses the U.S. Census Bureau definition of geographic regions seen in the below image.

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



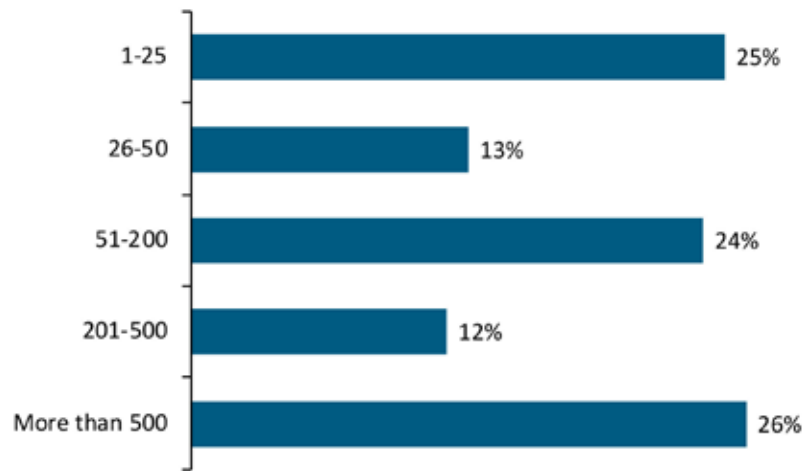
Respondents’ firms are widely dispersed around the United States. A few respondents (Other) indicate their firm is headquartered outside the U.S.

Figure 2: Location of Organization Headquarters



Respondents represent a wide range of firm sizes. While one-fourth of respondents represent firms with 25 or fewer full-time equivalents (FTEs), another 26% represent firms with more than 500 FTE. The median firm size is 99 FTE.

Figure 3: Number of Full-Time Equivalents at Firm



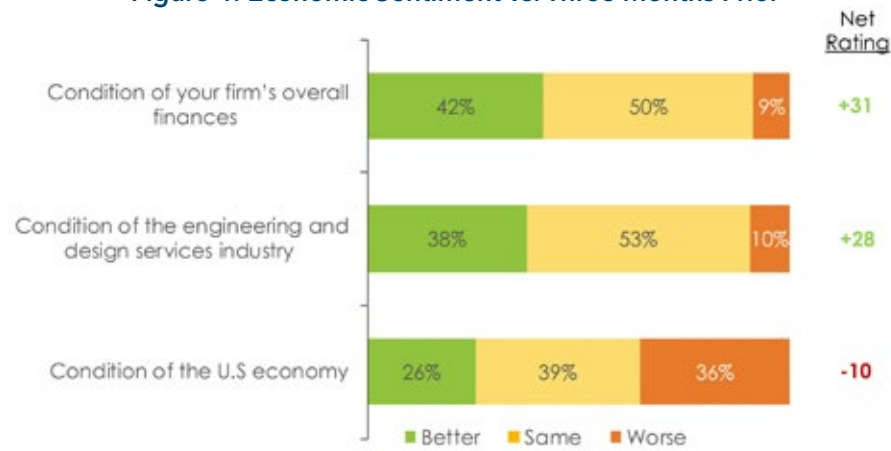
BUSINESS CONDITIONS COMPARED TO THREE MONTHS PRIOR

U.S. Economy, Industry and Firm Sentiment

Economic sentiment has improved for firms and the industry compared to three months ago. However, sentiment regarding the U.S. economy has taken a turn for the worse.

- As firm size increases so too has sentiment in all three areas measured. For instance, the Net Rating for the firms’ overall finances for firms with 25 or fewer FTE is +17 compared to +37 for firms with >500 FTE.
- Sentiment among respondents in the Midwest has improved the most in all areas while it has improved the least among those in the West.

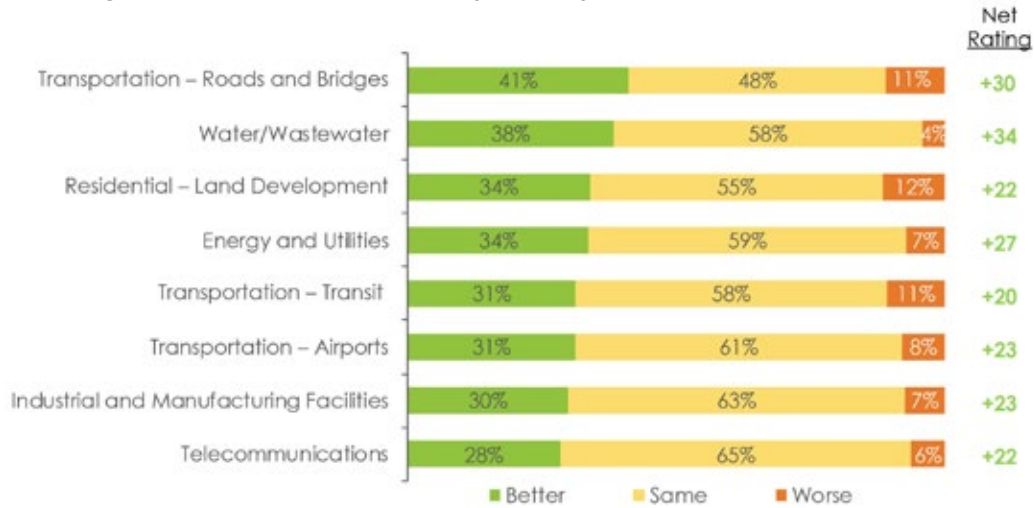
Figure 4: Economic Sentiment vs. Three Months Prior



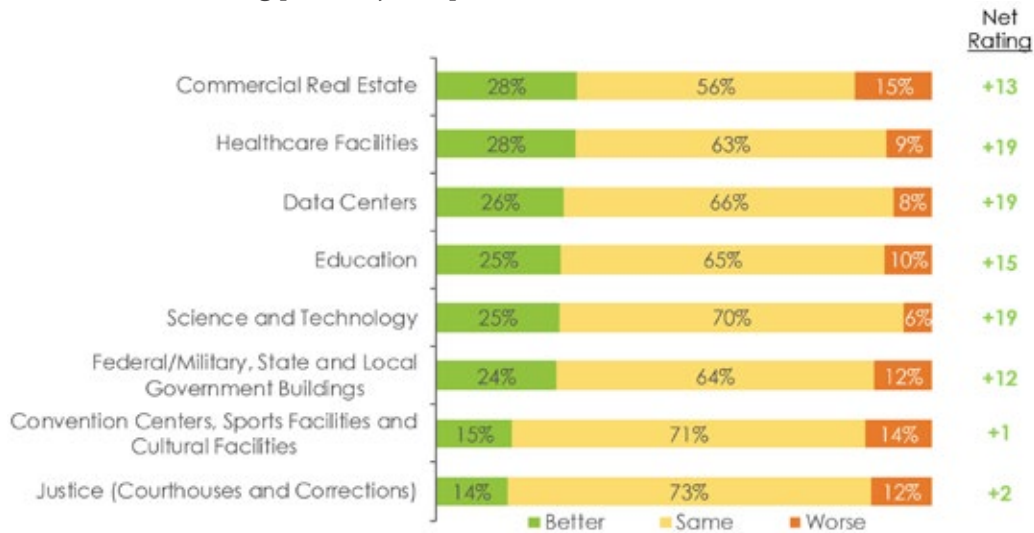
Industry Sector Sentiment

Although sentiment in all sectors improved compared to three months ago, sentiment for the roads and bridges (+30 Net Rating) and water/wastewater (+34) sectors improved the most.

Figure 5: Economic Sentiment by Industry Sector vs. Three Months Prior



Sectors that are not performing as well, relative to others, are those where large social gatherings take place and the justice sector. These are likely being affected by the pandemic as well as re-alignment of the social/political sensitivities surrounding privately run prisons.



Backlog Conditions

Further evidence of a rebounding industry is that 52% of respondents indicate that their firms' backlog has increased in the past three months compared to 16% who say it has decreased.

- At 23%, the West has seen the biggest decrease (vs. 12% to 16% elsewhere) in its backlog over the past three months.
- Smaller firms (50 or fewer employees) have seen much more of a decrease in their backlog: 20% to 23% vs. 5% to 16% among larger firms.

Workforce

68% of respondents indicate their organization has added at least one full-time employee within the past three months. The median number of FTEs added is three, again signaling a very robust recovery.

- Firms in the Northeast (median FTE added = five) and Midwest (four) added more FTE than firms in other areas (median of two in the South and West).
- The median number of new hires increases as the size of the firm increases:
 - >500 FTE = 30
 - 201 to 500 = 10
 - 51 to 200 = 3
 - 26 to 50 = 1
 - 1 to 25 = 0

Figure 6: Status of Backlog vs. Three Months Prior

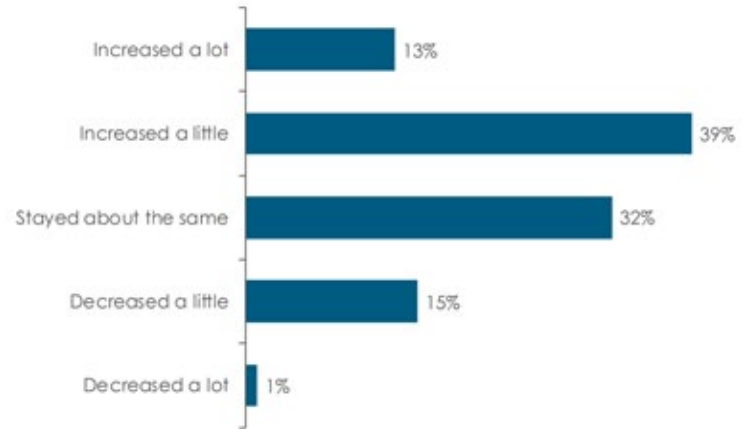
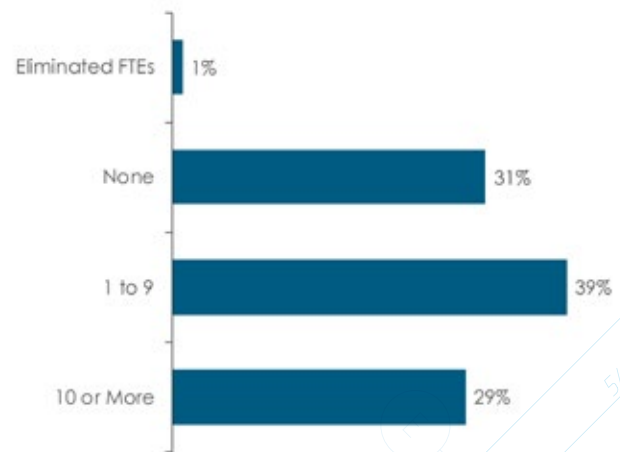


Figure 7: FTE Hired in Prior Three Months



CURRENT BUSINESS CONDITIONS

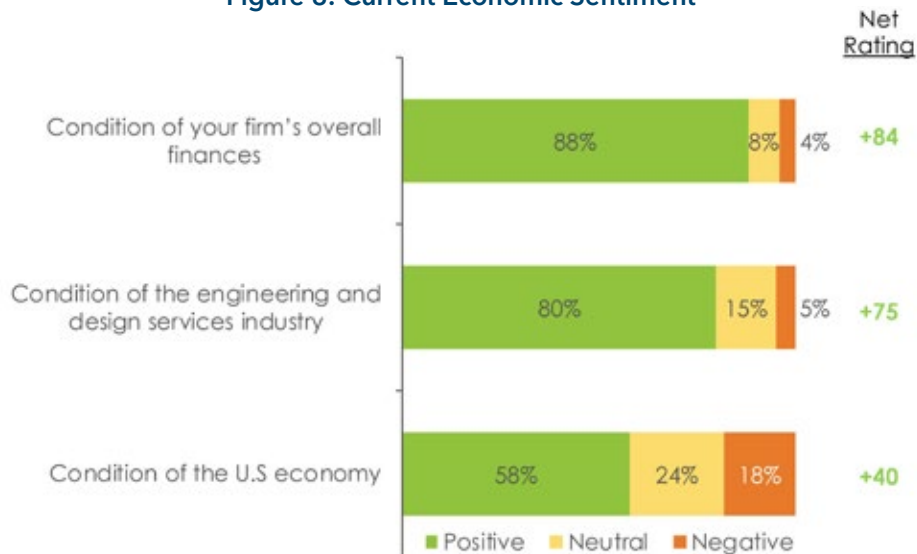
Current U.S. Economy, Industry and Firm Sentiment

Current sentiment is extremely optimistic revealing the industry has fully recovered from the pandemic induced recession. However, sentiment differs by firm size and region as noted below. The anticipated passage of a federal infrastructure bill certainly buoys current sentiment.

The Net Rating for firms' overall finances is a staggering +84 and +75 for the engineering and design services industry. Although the net rating for the U.S. Economy is much lower at +40, it is still very good.

- Firms with more than 500 employees are the most positive about their firm's finances (+96 Net Rating).
- Small firms (25 or fewer FTE) are less positive about the overall condition of the U.S. economy (+19), their firm's finances (+59) and the industry (+67) compared to larger firms.
- Respondents in the Northeast are the least positive about the industry (+64) compared to all other regions (+75 to +76).
- Respondents in the Northeast and West are less positive about the U.S. economy (+32) compared to those in the South (+40) and Midwest (+50).

Figure 8: Current Economic Sentiment

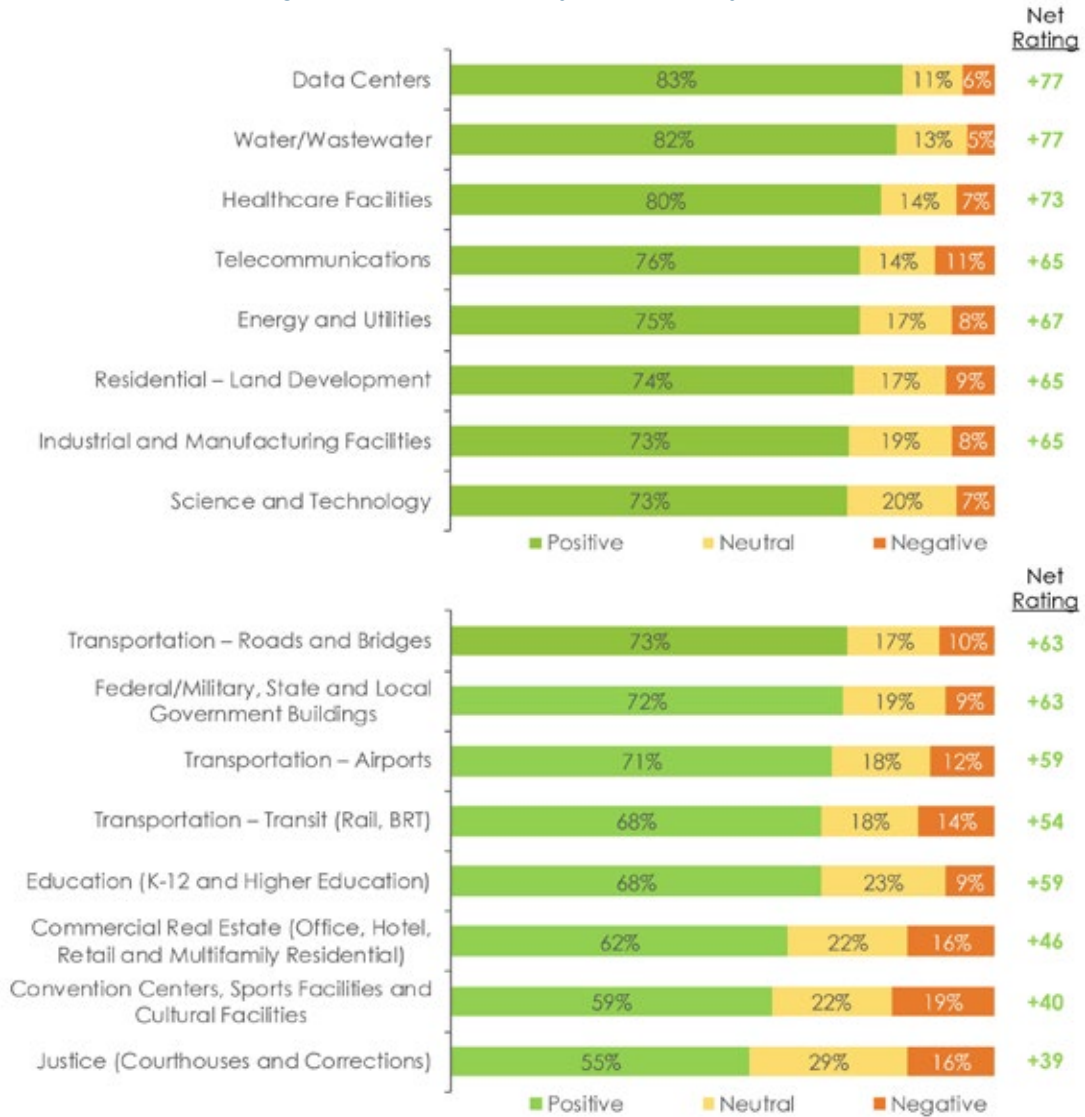


Current Industry Sector Sentiment

Current sentiment is also extremely optimistic within all market sectors revealing a broad-based recovery. Sentiment is strongest in the data centers (+77), waste/wastewater (+77) and healthcare (+73) sectors which have seen sustained growth during the pandemic.

- The convention centers (+40 Net Rating) and the justice (+39) sectors are performing relatively less well for the same reasons noted earlier, but sentiment is still relatively strong.

Figure 9: Current Industry Sentiment by Sector

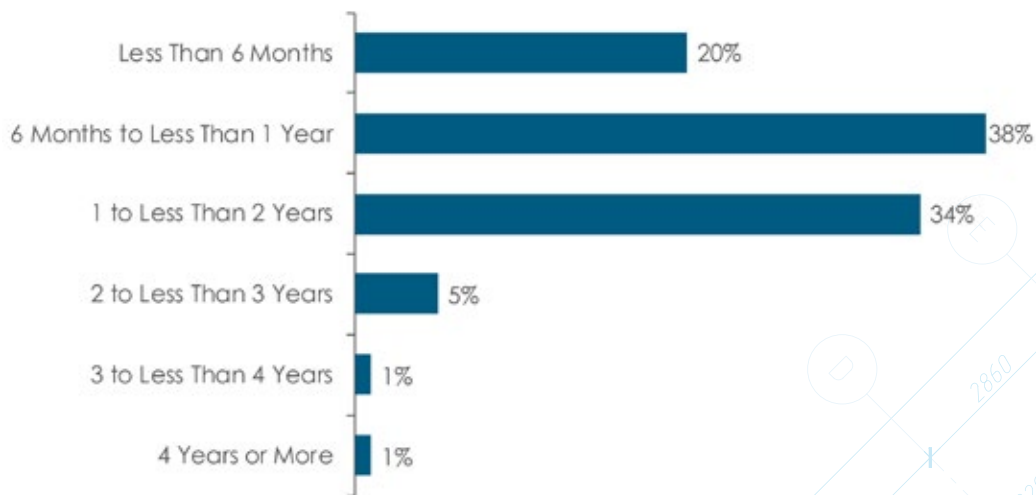


Current Backlog

The median firm backlog stands at 10 months, which represents a dramatic improvement compared to a backlog of six months during the height of the pandemic recession (September 2020). In addition, 42% of respondents indicate their firm has a current backlog of a year or more.

- Backlog increases as firm size increases:
 - >500 FTE = 12 months (median)
 - 201 to 500 = 10
 - 51 to 200 = 10
 - 26 to 50 = 9
 - 1 to 25 = 6
- Backlog varies by geography:
 - Northeast = 12 months (median)
 - Midwest = 10
 - West = 10
 - South = 9

Figure 10: Current Backlog



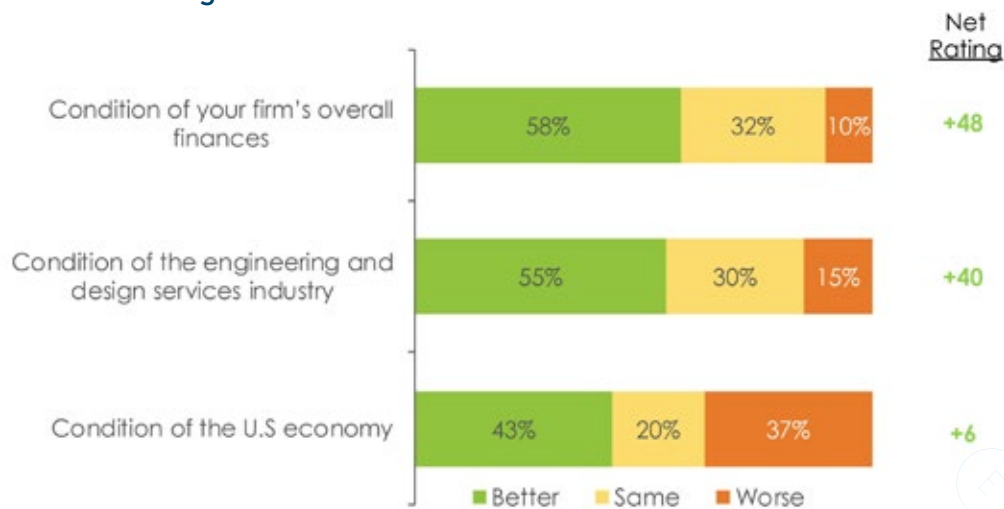
FUTURE BUSINESS CONDITIONS

Future U.S. Economy, Industry and Firm Sentiment

Future sentiment is very optimistic for firms (+48 Net Rating) and the industry (+40). Although weaker than the other measures, sentiment for the U.S. economy (+6) remains positive. This likely reflects the anticipated benefits to the industry of the infrastructure bill currently before Congress but is lower than current sentiment due to concerns over supply chain shortages, inflation, the potential lingering effects of the pandemic (or fear of a resurgence) and a continued labor shortage.

- As firm size increases so too does optimism about the future (in all areas). For example, the Net Rating for firm's finances among firms with 25 or fewer FTE is +28 compared to +66 for firms with more than 500 FTE.
- Firms in the West are much less optimistic in all areas than firms in the Northeast, Midwest and South.

Figure 11: Economic Sentiment 12 Months from Now

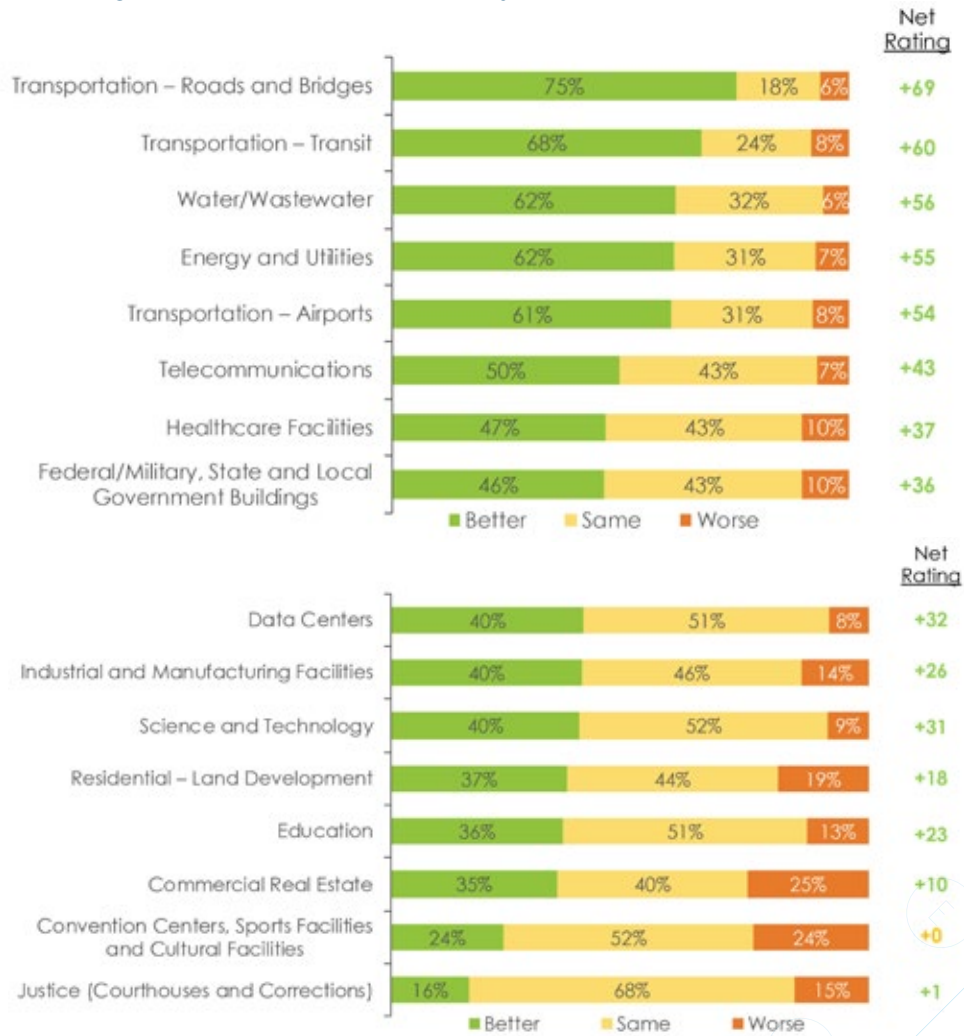


Future Industry Sector Sentiment

Future sentiment is very optimistic in many sectors. Optimism is strongest in the roads and bridges (+69 Net Rating) and transit (+60) sectors. All the top sectors are those that will be positively impacted by potential new infrastructure spending.

- Future sentiment is weakest in the convention centers, sports facilities and cultural facilities sector (Net Rating = 0). Similarly, it is very weak in the justice sector (+1). These areas which have lagged in the past and present will likely continue to struggle into the next year.

Figure 12: Economic Sentiment by Sector 12 Months from Now

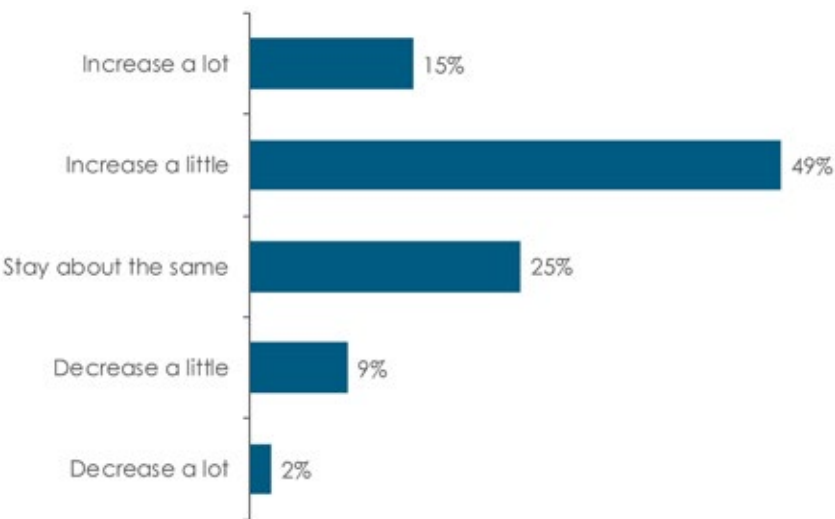


Future Backlog

Supporting the bullish future sentiment above, 64% of respondents believe their firms will see an increased backlog of projects over the next year.

- The West is significantly less optimistic about an increase in backlog (50% vs. 67% to 74% for other regions).
- Firms with 25 employees or fewer are significantly less optimistic about backlog increases (46% vs. 62% to 82% for larger firms).

Figure 13: Backlog 12 Months from Now

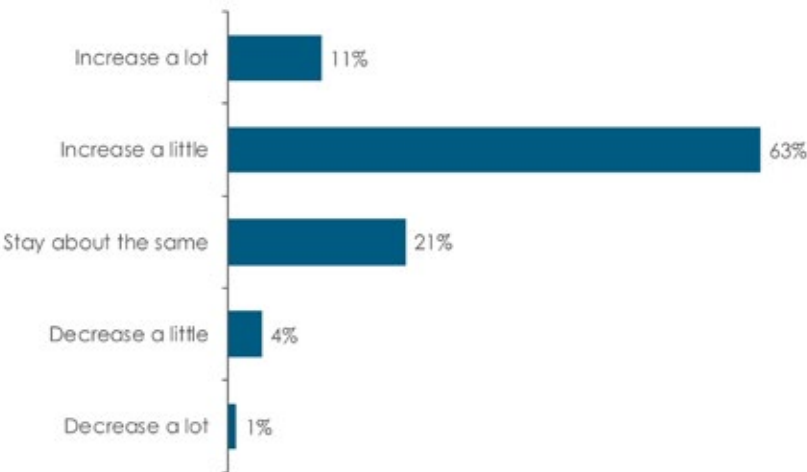


Future Hiring Projections

Due to the anticipated strong economic conditions over the next 12 months, firms expect to expand aggressively. In fact, 74% predict there will be an increase in hiring over the next year at their firms.

- The West is significantly less optimistic about an increase in employment (64% vs. 76% to 80% for other regions), although it is still very bullish.
- Firms with 25 employees or fewer are significantly less optimistic about an increase in employment (54% vs. 72% to 88% for larger firms), but also still signaling a bullish labor market.

Figure 14: Hiring Over the Next 12 Months



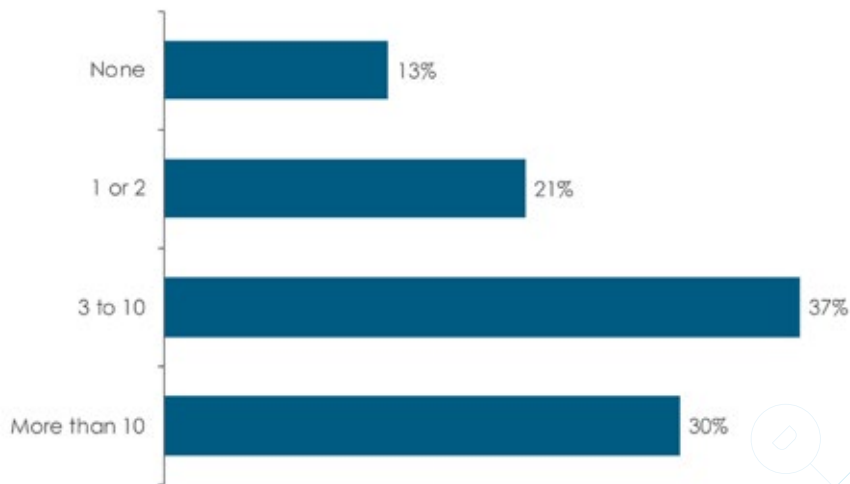
HOT BUTTON ISSUE - WORKFORCE

Current Open Positions

Firms are on a hiring spree at the present time to fill needed positions vacated by workers during the pandemic. The rosy future outlook for the industry is only adding fuel to the hiring frenzy. In fact, 87% of respondents indicate that their organization has at least one current opening. The median number of open positions is five.

- Open positions increase as firm size increases:
 - >500 FTE = 60 (median)
 - 201 to 500 = 17
 - 51 to 200 = 5
 - 26 to 50 = 3
 - 1 to 25 = 1
- Open positions vary by region:
 - Northeast = 10 (median)
 - Midwest = 9
 - West = 4
 - South = 3

Figure 15: Current Open Positions

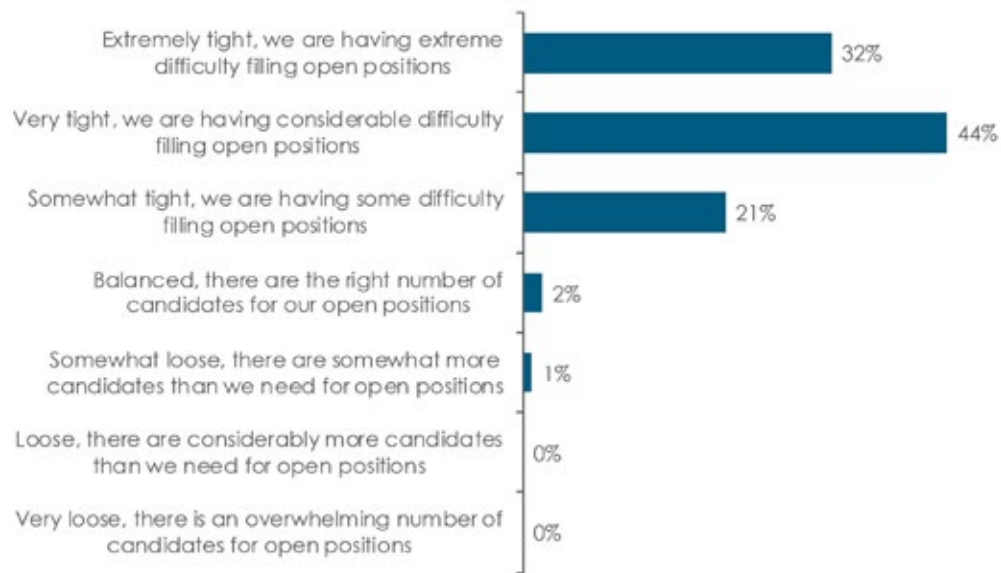


Current Labor Market Conditions

Hiring needs are being hindered by the extremely tight labor market. Not surprisingly, 97% of respondents indicate there is a tight labor market in the industry.

- Firms with 200 or fewer employees are having more trouble filling positions compared to larger firms. 34% to 44% of smaller firms say the market is extremely tight, compared to 21% to 22% among larger firms.

Figure 16: Current Labor Market Conditions

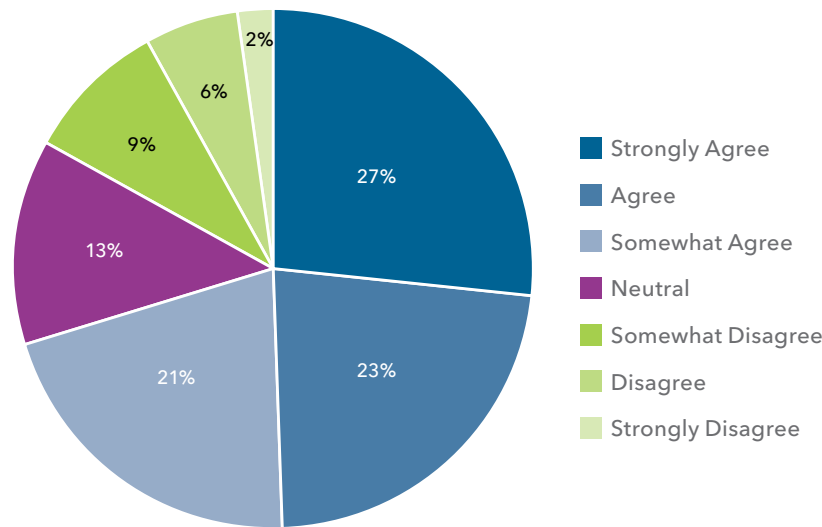


Lack of Qualified Workers

Hiring challenges are likely to hinder growth for firms in the near-term as 70% of respondents agree that the lack of qualified workers is the single largest barrier to growing their firm.

- Lack of qualified workers is especially a problem in the Midwest and West (77% each agree with that statement).
- In the South, it is 62%; in the Northeast, 66% agree with the statement.

Figure 17: Lack of Qualified Workers is Single Largest Barrier to Firm Growth



METHODOLOGY

The ACEC Research Institute sent the survey to the leadership within ACEC member firms. Data collection occurred between September 22 and October 4, 2021.

A total of 11,323 invitations were emailed, although 1,627 bounced and 72 opted-out, resulting in a total of 9,624 potential respondents. Individuals who did not respond to the first email were sent one follow-up reminder, and a final reminder email was sent to the remaining non-respondents.

In all, 598 individuals completed the survey for an overall response rate of 6%.

Throughout this report meaningful, statistically significant differences are noted throughout the text 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

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

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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