

Business Opportunities & Sustainability Trends Amidst a Pandemic



Oldcastle BuildingEnvelope®

A CRH COMPANY

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The ongoing global health emergency continues to upend firm operations, including productivity, planning, communication, and maintaining close relationships. In the short term, as the end of the COVID-19 crisis comes slowly into view, it is clear that the pandemic-induced recession created two contrasting economic realities: a strong residential market and a weakened nonresidential market.

In the longer term, interrelated with the pandemic, we all must continue to focus on how to address and mitigate the ongoing climate crisis. To that end, the findings of this new study, completed in partnership with Oldcastle BuildingEnvelope, examines the impact of the pandemic on sustainable projects.

One of the encouraging findings is that while the pandemic has shifted construction activity away from the most sustainable project types, architects remain optimistic about the future of

sustainability. In fact, most architects denied the pandemic had negatively impacted their ability to innovate, design sustainably, or find more sustainable solutions or products.

While many challenges remain, the data in this report reveal opportunities for firms as demand continues to shift toward existing building projects. Growing concerns over building design from the pandemic and public awareness of public health risks will continue to drive the refurbishment, expansion, and remodeling markets throughout 2021. This study is part of AIA's commitment to support our members by providing economic and market research that helps them navigate challenging times.

Again, we appreciate our partners at Oldcastle BuildingEnvelope for their support on this project and hope that this report, as well as all of AIA's other thought leadership products, help the profession thrive in the years ahead.

Liz Haggerty

President, Oldcastle BuildingEnvelope

Sustainability, in the broadest sense of the word, has never been so important amid changing global priorities. We stand at a tipping point ready to collectively embrace the need for a sustainable, equitable world with a new sense of urgency. As peers and partners, we know it has been difficult to move comprehensive adoption of sustainable design forward. But today's landscape promotes acceptance for change and provides a backdrop for action. We see the status quo challenged as we question the way we work, the way we live, and the way we interact with one another. And, we have an opportunity as an industry, to leverage our role, extend our partnerships, and deliver a built environment that drives sustainability.

Oldcastle BuildingEnvelope is proud to have partnered with The American Institute of Architects (AIA) to publish this report on sustainability and the building products industry. As our research unfolded, a global pandemic emerged, so we quickly adapted to also include data on how the pandemic has affected our outlook and progress in pursuit of environmentally sustainable design.

The following report uncovers an uncertain landscape with some sectors being impacted more than others, concerns for our industry's resilience and projections of a mixed recovery ahead. It also highlights optimism and, more important, a continued commitment to sustainability from clients willing to invest in design that leads to better occupant health and productivity.

The findings spotlight opportunities for us to work together on solutions for the built environment. As a leading global supplier of glass and glazing products, accessories and supplies, we are committed to supporting the architecture community in this journey. Through collaborative innovation, we can continue to make progress and accelerate the acceptance of resilient designs.

Although we are in an unprecedented environment and we do not know what lies ahead, we cannot delay action. I hope you find this report valuable in your practice and encourage you to leverage your building product manufacturer partners to continue driving our industry's evolution.

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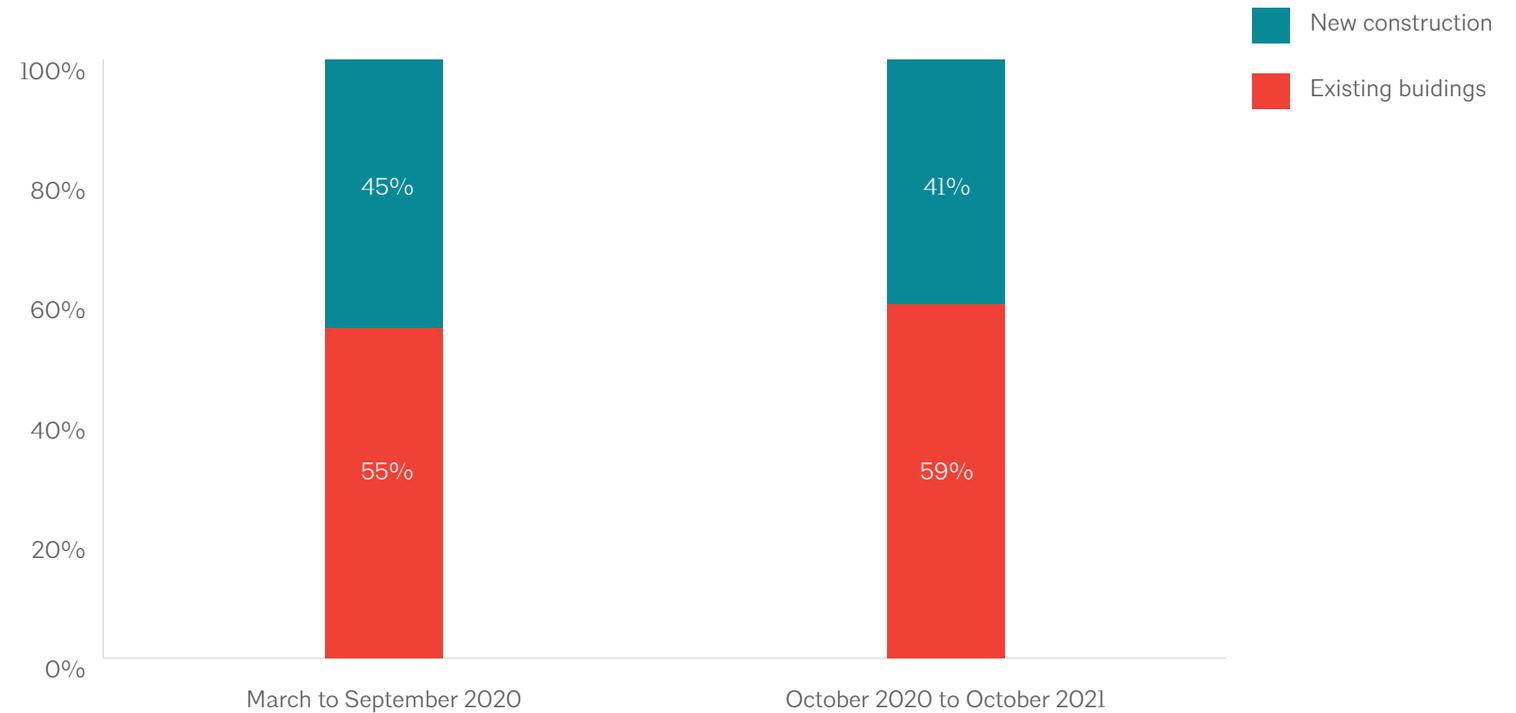
Key findings

Construction activity slowed in 2020 due to the pandemic after a decade of growth. However, architecture firms were impacted differently depending on the type of work they do. Most notably, demand for design services in most sectors decreased significantly in 2020 and construction spending for nonresidential buildings is expected to decline further in 2021. The pandemic led to a tale of two markets: As demand for architectural services on single-family home projects increased, commercial and institutional nonresidential projects were hard-hit.

The pandemic accelerated a shift toward existing building work that had already been underway for architects. With the impact of COVID-19 and the recession, the opportunities for architects will be centered mainly around existing building projects in 2021. Manufacturers and other providers of design tools, educational programming, and products should focus on these areas.

Work on existing buildings is expected to increase through 2021

Units: estimated share of projects



Key findings

Increased work on existing buildings will provide opportunities for most commercial projects, while new construction work will decrease substantially.

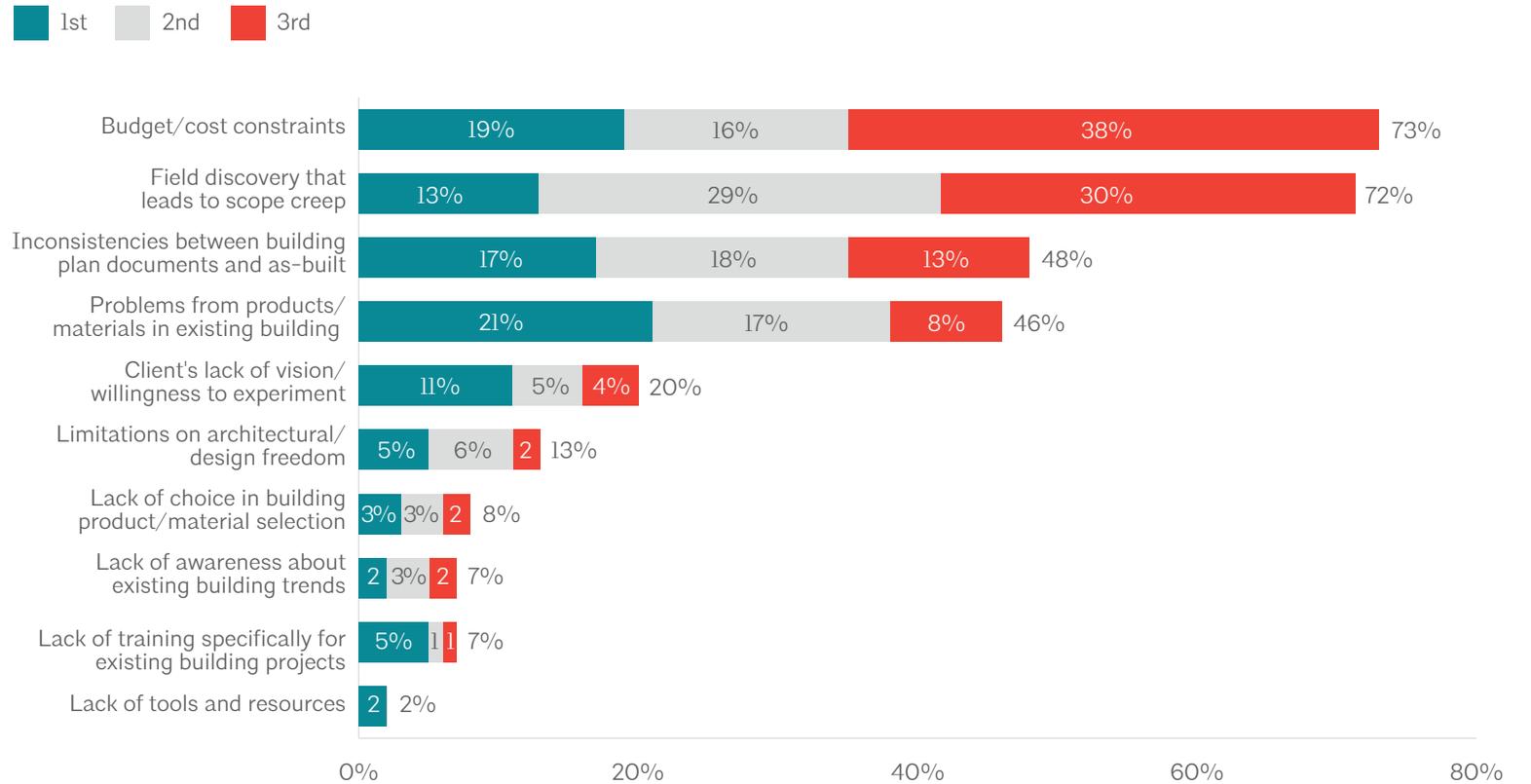
Architectural professionals expect that 2021 will have opportunities for work on existing building projects in the healthcare and education sectors as well as continued strength in the residential markets, most notably single-family, which grew in 2020.

The projected growth in work on existing buildings gives rise to new challenges and support requirements that manufacturers and others can help meet.

Architects, in particular, need more help to address challenges with budget constraints and the unique problems with working on an existing building. Yet, they are not satisfied with the quality or usefulness of the continuing education, tools, and other content available around existing building work, particularly compared with what is available for new construction classes. This is a gap that needs filling.

Budget constraints and unexpected issues are the top challenges for working on existing building projects

Units: % ranking in top 3 challenges faced when working on existing building projects

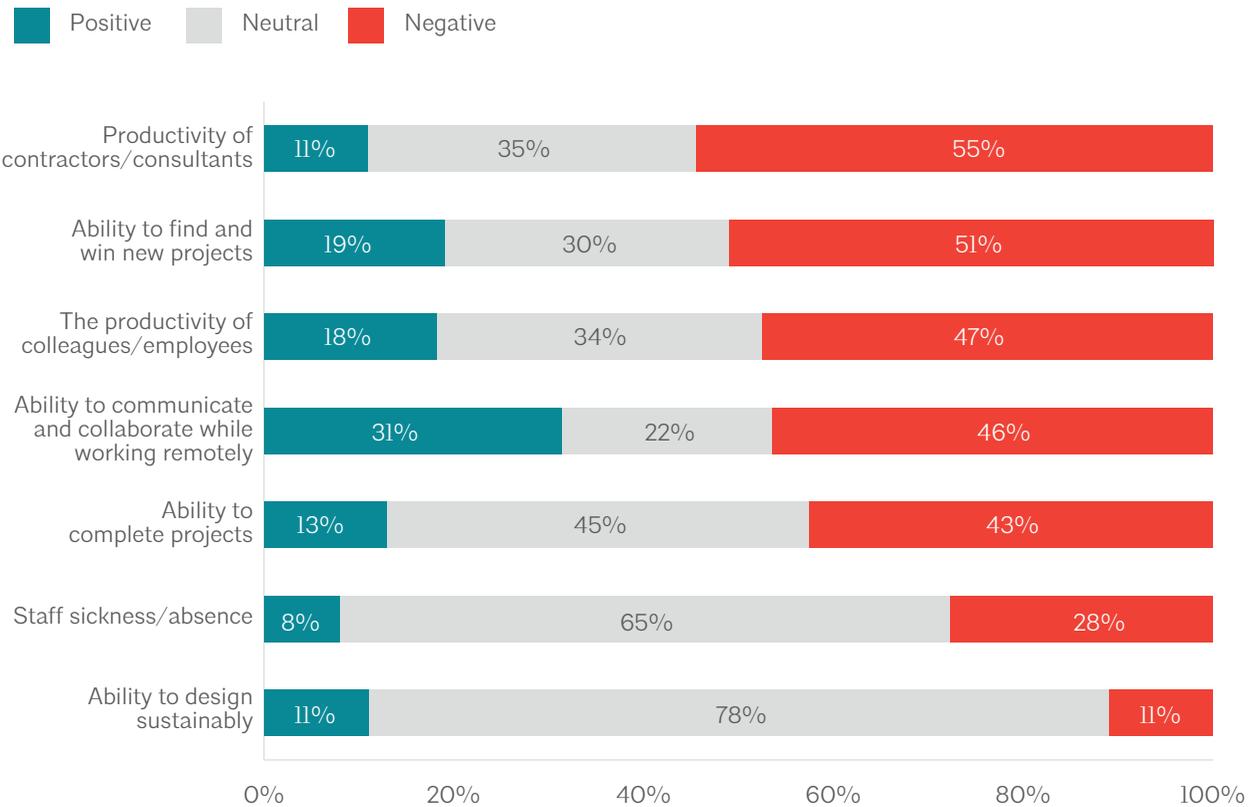


Key findings

Architects face increased challenges with productivity, planning, and communication due to the pandemic. While some firms experienced positive impacts during the pandemic, a majority reported negative impacts on their businesses and processes. Most notable, architects saw the pandemic negatively impact the productivity of their project partners as well as their colleagues, and their ability to find and win new projects. The pandemic both hindered and helped foster communication, and it was cited as a reason for worsened relationships between partners, but also as a primary one for improved relationships.

Productivity and new project opportunities were negatively impacted during the pandemic

Units: % of respondents reporting if their organization was negatively, positively, or not impacted/neutral during the pandemic by each option



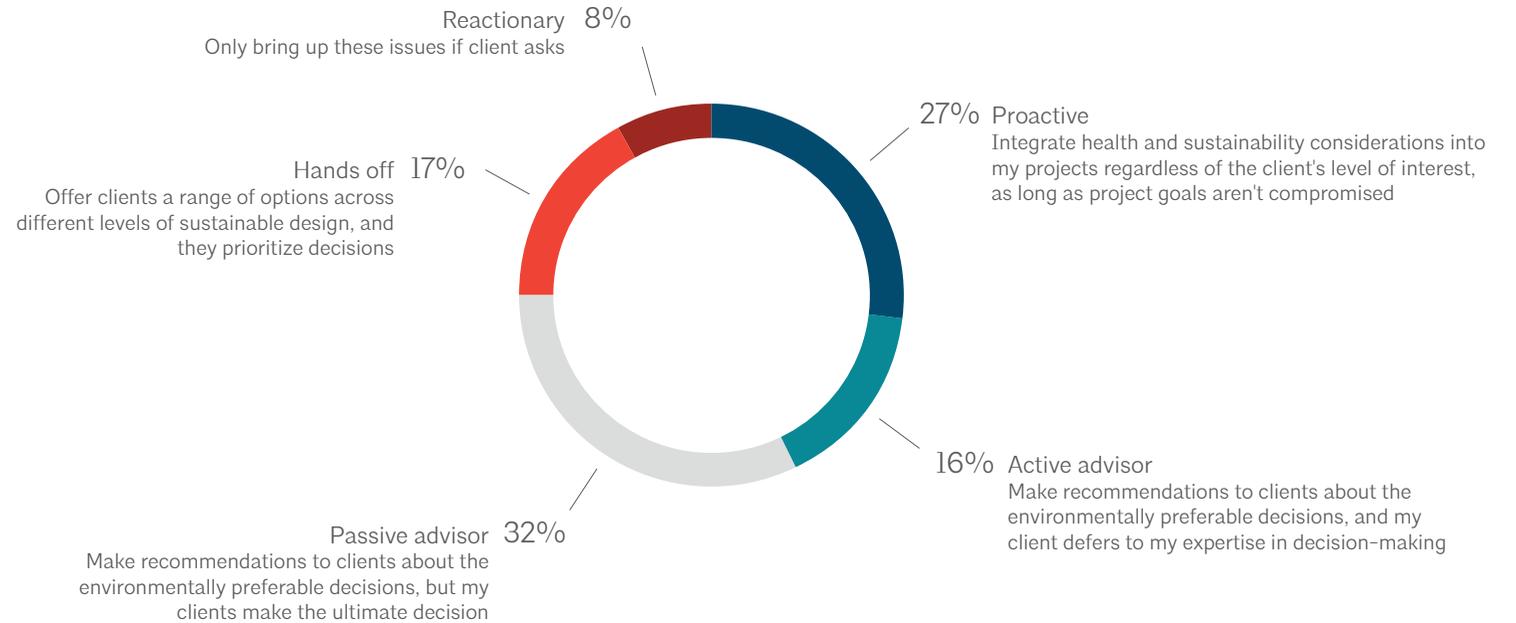
Key findings

The ability to design sustainably and with high quality were not impacted by the pandemic and ensuing recession, according to respondents. Nor did it make it more difficult for firms to innovate, find sustainable solutions, or design with sustainable products. While there was a shift away from talking specifically about sustainability, work in the area continued and shows no signs of slowing.

While architects are optimistic and open to sustainable design, more architects need to be more proactive in the areas of sustainability. There is a widespread distribution, but a large share act as passive advisors in education and product specification, and ultimately leave final decisions to the client.

Nearly half of architects act in an advisory capacity when educating clients about sustainability

Units: % of respondents on the role they take in educating clients about sustainability issues



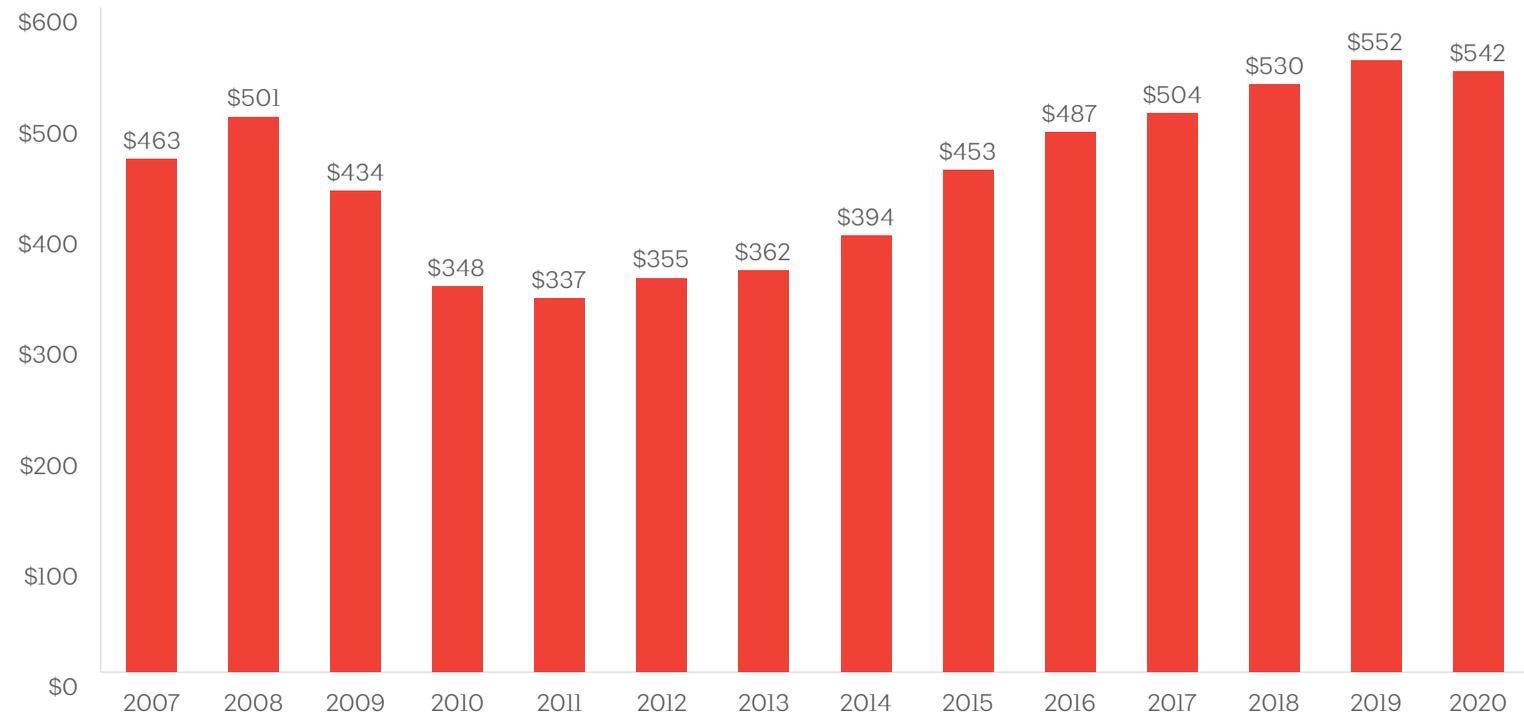
Economic overview

Prior to 2020, architecture firms were operating in an economy with a strong construction market in which construction spending on nonresidential buildings reached over \$550 billion in 2019, after several years of growth (FIGURE 1). Firms were more focused on finding qualified staff as competition for skilled workers heated up in a labor market that was buoyed by healthy business conditions and a national unemployment rate of 3.5%. As the pandemic hit in the spring of 2020, new construction projects slowed precipitously and the demand for design services in most sectors decreased significantly. The AIA’s Architecture Billings Index (ABI) plummeted in March, reporting some of the steepest declines in billings at architecture firms in its 25-year history. Conditions in the broader economy also declined dramatically as nonfarm payroll employment decreased by over 20 million positions during March and April, and the unemployment rate reached 14.7% in April 2020.

While the economy has made great strides toward recovery from the pandemic-induced recession, at mid-year 2021, we have not yet recovered—national nonfarm payroll employment is still about 5% below pre-pandemic levels and unemployment continues to hover around 6%. Construction spending also softened in 2020—nonresidential building construction spending from January through December 2020 was 1.8% below spending at the same time in 2019. According to the AIA Consensus Construction Forecast released in January 2021, nonresidential building spending is expected to continue to decrease with a forecasted decline of 5.7% in 2021. Out of nonresidential building spending, the commercial sector is expected to continue to decline the most in 2021, by 7.1%, compared with 4.0% for the institutional sector.

FIGURE 1:
Building activity remained healthy through 2019 before dropping in 2020

Units: National spending on nonresidential building, billions of \$

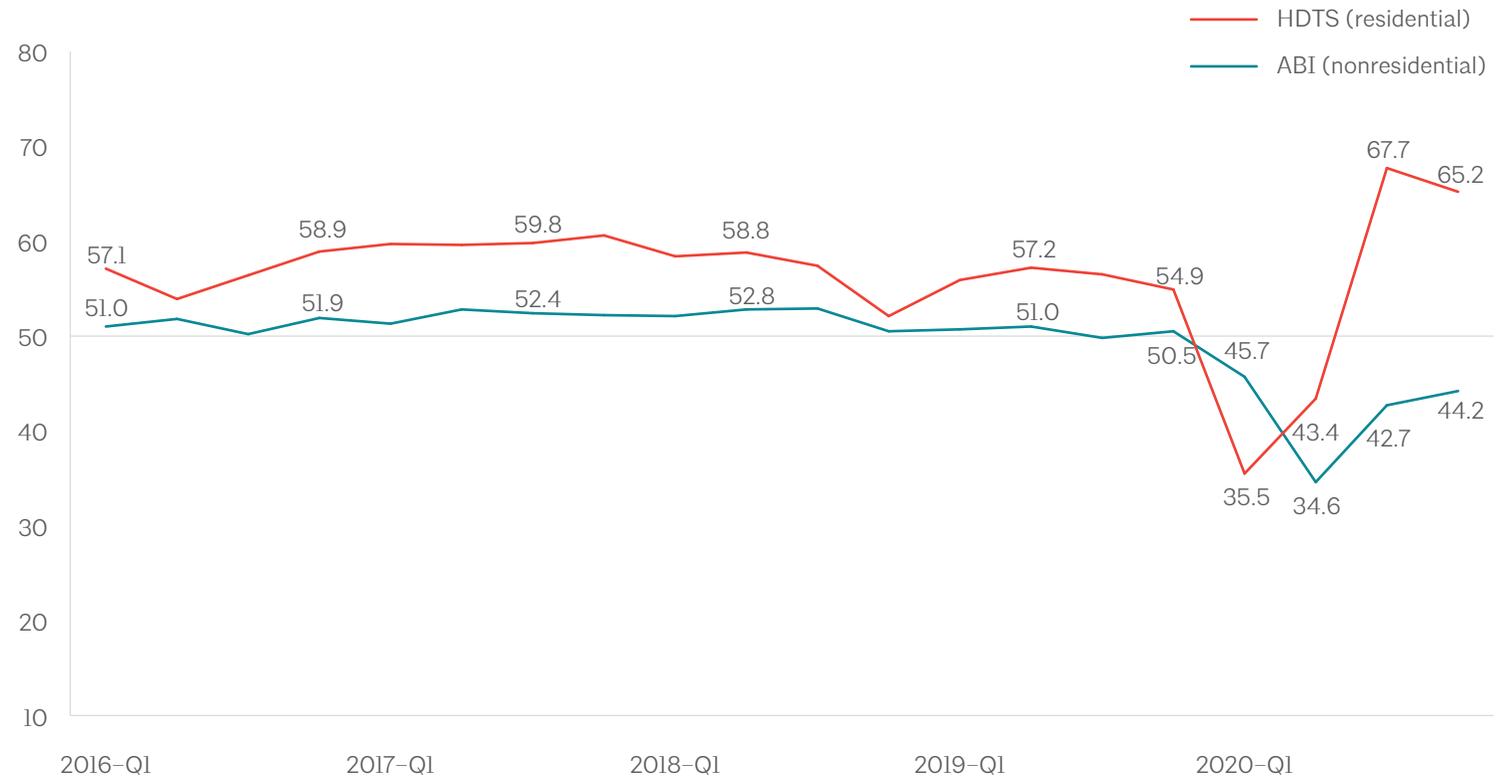


Source: U.S. Census Bureau

While conditions are constantly changing and all sectors reported improvements in the first half of 2021, 2020 revealed a tale of two markets. As most nonresidential sectors saw a decline in demand, firms working in the residential sector, particularly single-family, experienced an increase in demand in 2020 (FIGURE 2). According to the AIA's Home Design Trends Survey (HDTS), while residential firms reported a decline in billings in the first quarter of 2020, during the beginning of the pandemic, by the third quarter, residential firms had recovered and were reporting strong growth in their billings, inquiries, and design contracts. Project backlogs at residential firms also increased in the third quarter with an average increase of around 6% in the value of their backlogs according to the 2020 fourth quarter HDTS.

FIGURE 2:
Residential firms reported strong growth in Q3 and Q4 of 2020 while nonresidential firms reported declines

Billings from the AIA Home Design Trends Survey and the AIA Architecture Billings Index, ABI scores by quarter, Diffusion index: 50 = No change from previous quarter/month; data are seasonally adjusted; data from Q1 2016–Q4 2020



Source: The American Institute of Architects Home Design Trends Survey and The American Institute of Architects ABI Survey
 For more information, visit aia.org/hdts

Data Findings–Section 1

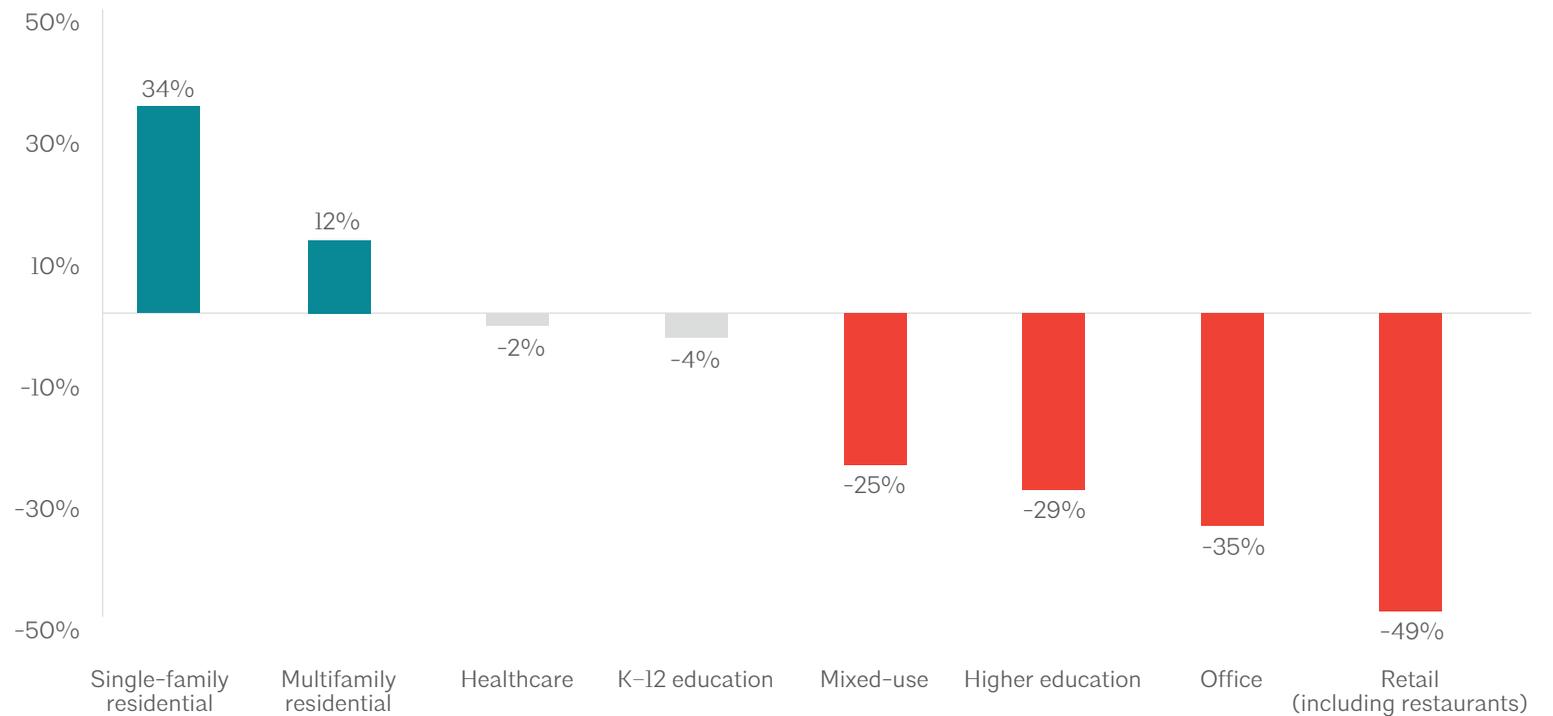
Opportunities and challenges in 2021

Covid-19 Shifted Work Toward Residential and Existing Building Projects

Due to the impact of Covid-19 and the recession, the share of work by building and construction types shifted. During the first six months of the pandemic (March through September 2020), respondents reported that work on existing buildings made up the majority of projects (55%) compared with new construction (45%). There had already been a shift underway in the profession toward an increased share of architecture firm billings on existing building work. AIA's 2020 *The Business of Architecture Report* noted that work on existing buildings, excluding the value of nonconstruction-related services, has been slowly increasing in its share of design billings over the last several years—rising from 35% in 2008 to 49% in 2019. However, the pandemic accelerated that shift.

Residential work also significantly increased from March to September 2020, with a net increase of 34% reported for single-family work and 12% for multifamily according to architectural professionals surveyed, while they report a net decrease in work in the nonresidential sectors, down 49% for retail, 35% for office buildings, and 29% for higher education (**FIGURE 3**). As firms shifted to a virtual/delivery environment, demand for many types of facilities declined. In stark contrast, demand for architectural services on single-family home projects increased, as the remote workforce looked for additions of home offices and more functional spaces.

FIGURE 3:
Demand for residential work increased while nonresidential worked declined
 Units: Net change in work (% working more minus % working less) March–September 2020



Figures that do not include source citations are data yielded from this study.

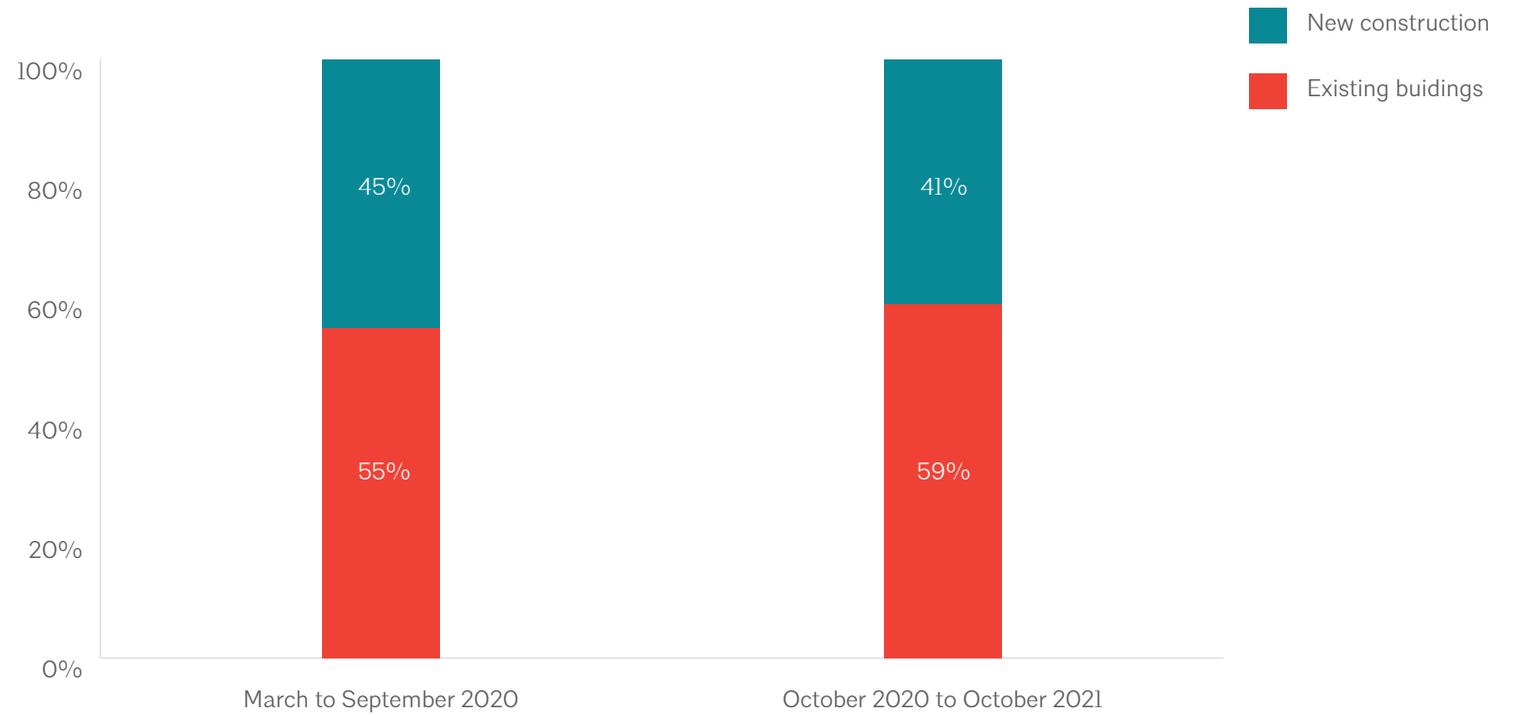
2021 Work Expected to Continue Toward Residential & Existing Building Projects

With growing concerns over building design from the pandemic, awareness of public health risks, and the continued need to work from home, we expect short-term opportunities for architects to be centered mainly around residential construction and existing building projects (e.g., refurbishments, expansions, remodels). Many respondents reported that they expect these trends to continue through 2021 with the share of work on existing buildings to increase to 59% by the end of 2021.

(FIGURE 4)

FIGURE 4:
Work on existing buildings is expected to increase through 2021

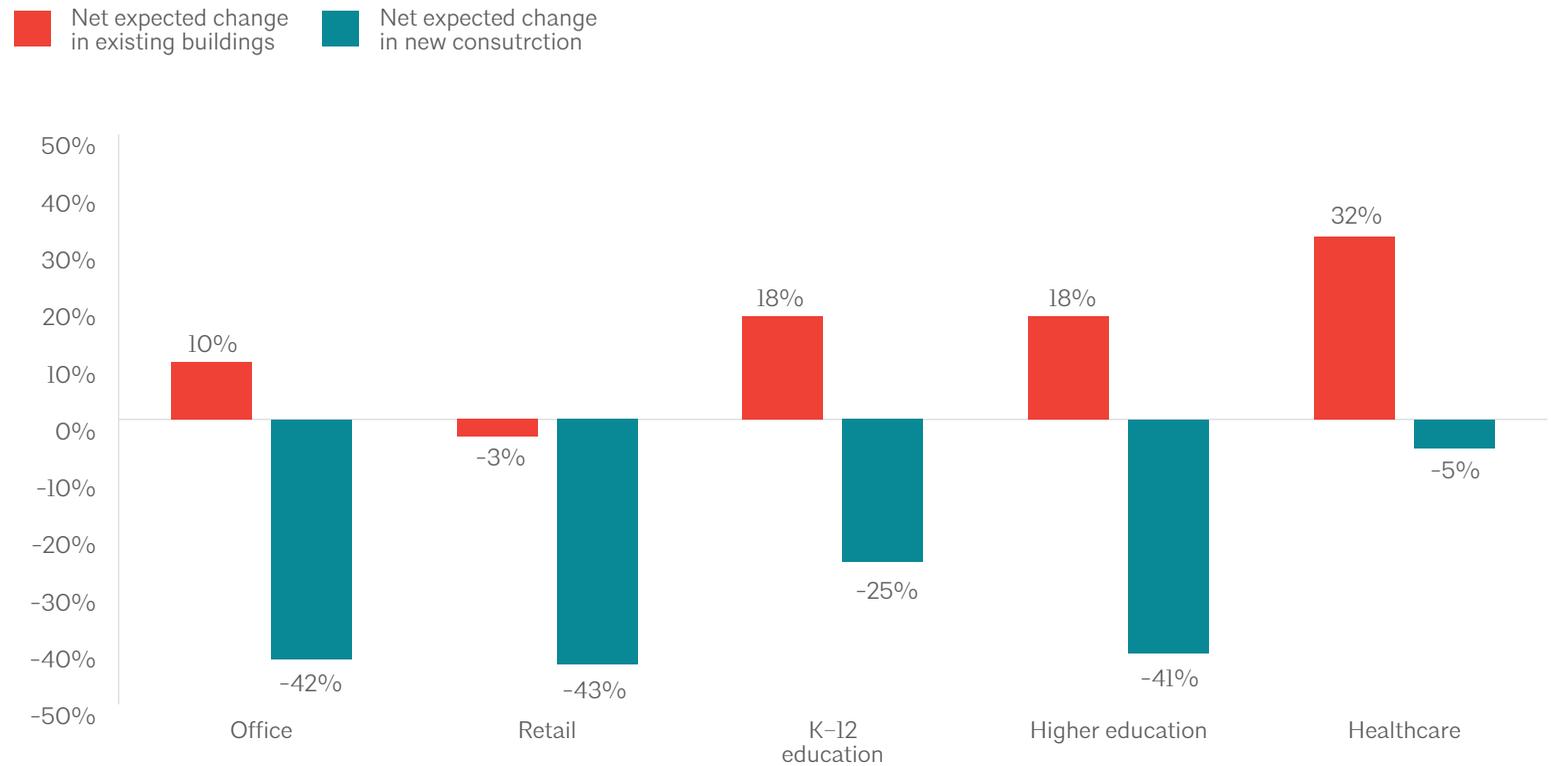
Units: estimated share of projects



In terms of sector activity, healthcare, higher education, and K-12 education are expected to have the greatest opportunities for growth in existing buildings in 2021, whereas there are declines expected in new building projects (FIGURE 5). This shift points to the need for design tools, support, and products focused on these areas.

FIGURE 5:
Expected change in work by building type in 2021 shows opportunities in healthcare and education

Units: Net expected change in work by building type in 2021



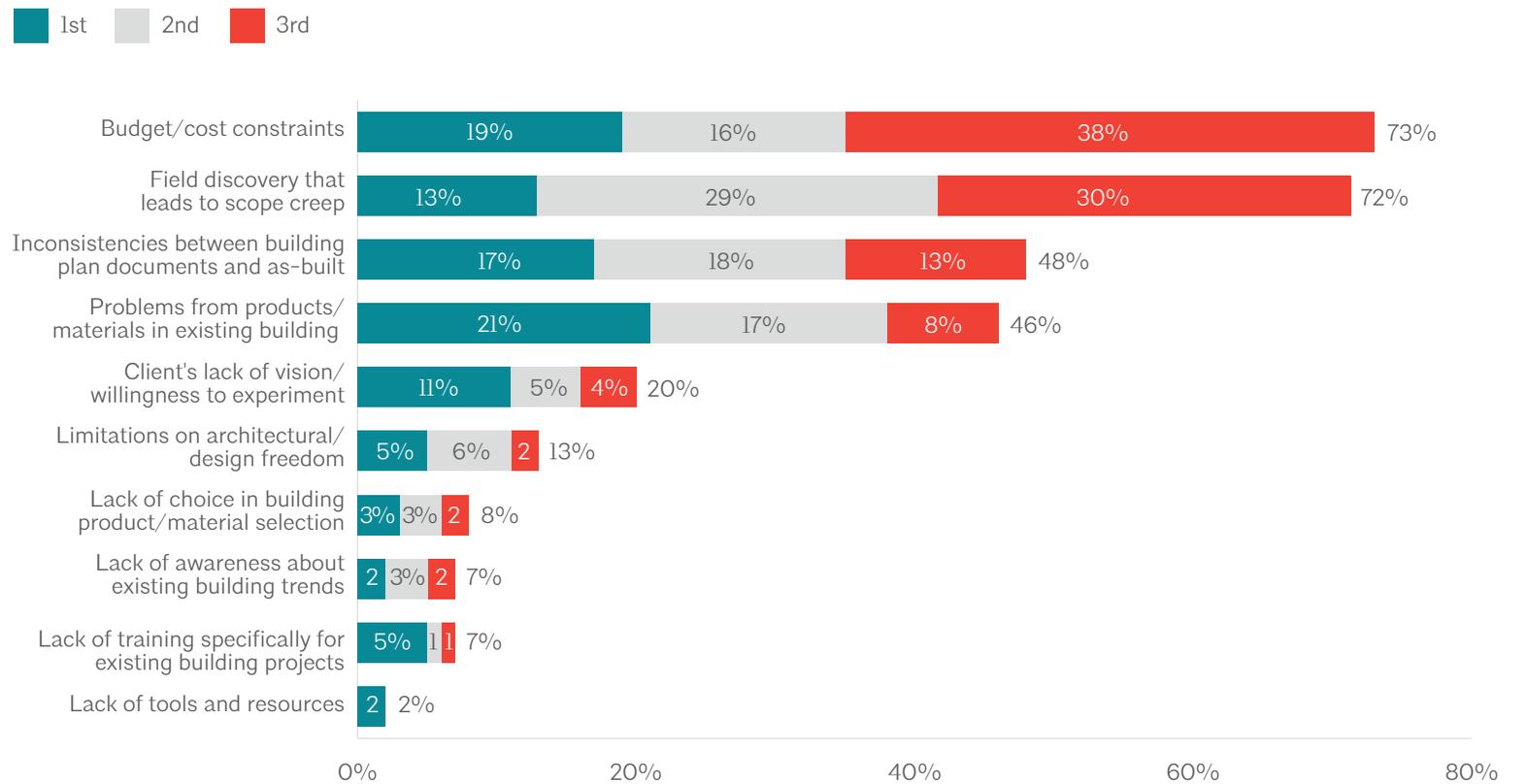
Architects Face Challenges on Existing Building Projects & Cite a Gap in Quality Resources

As growth shifts toward existing building projects, architects need more help to address challenges with budget constraints and the unique problems with working on an existing building. The two biggest challenges architectural professionals reported facing with existing buildings were budget/cost constraints (73%) and field discovery that leads to scope creep (72%). Further, nearly half reported the challenges of inconsistencies between building plan documents and as-built (48%) and problems from products/materials in existing buildings (46%) (FIGURE 6).

There were some differences by respondents at differently sized firms. Respondents working at firms with 100 or more employees were significantly more likely to list inconsistencies between building plan documents and as-built as a top concern (69%) as well as a lack of awareness about existing building trends (17%) than compared with those working at smaller firms.

FIGURE 6:
Budget constraints and unexpected issues are the top challenges for working on existing building projects

Units: % ranking in top 3 challenges faced when working on existing building projects

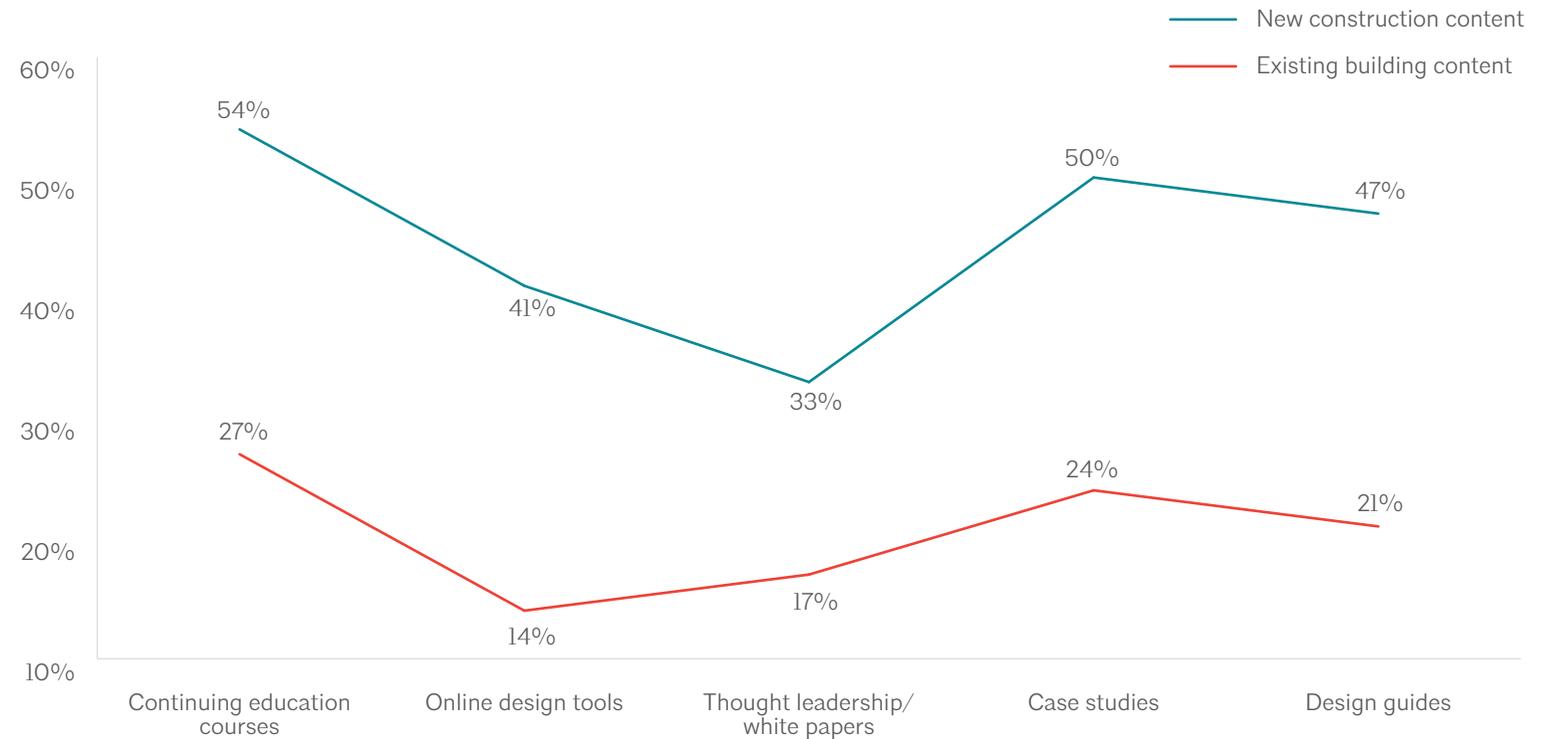


Along with these new challenges, the shift in work to existing buildings revealed gaps in knowledge and available resources on the subject. When asked about content, significantly fewer architectural professionals reported satisfaction with existing building content compared with new construction content across all tools and resources. Continuing education courses and online designs tools had the largest gap in satisfaction, with a 27-point difference—half as many respondents reported satisfaction in existing building continuing education content compared with education for new buildings, and two thirds fewer reported satisfaction in tools for existing building work versus those for new buildings (FIGURE 7). There was also a significant percentage of architectural professionals reporting they didn't know or didn't use the content, including online design tools, thought leadership/white papers, case studies, and design guides.

Given the increase in existing building work and challenges architects are facing related to that work, there will only be an increased need in high-quality and valuable resources focused on existing building projects. This creates an opportunity for manufacturers, design firms, and other stakeholders to invest in and improve programs and resources focused on existing buildings. Those that move swiftly to address these unmet support needs stand to reap substantial benefits in terms of strengthened brand positioning and relationships with architects and other design professionals.

FIGURE 7:
Satisfaction among architectural professionals is lower for existing building content compared with new construction content

Units: % of respondents selecting they are satisfied or extremely satisfied with types of content



Data findings–Section 2

Impact of the pandemic on architectural practice

The pandemic brought new challenges and impacts to firms

As the pandemic spread, firms all over the world had to change their way of doing business. As in other industries, the architecture profession faced new challenges as virtual work and operations became a necessity. While some firms were positively impacted during this time—most notably those working in the residential sector, most reported negative impacts on their business and processes.

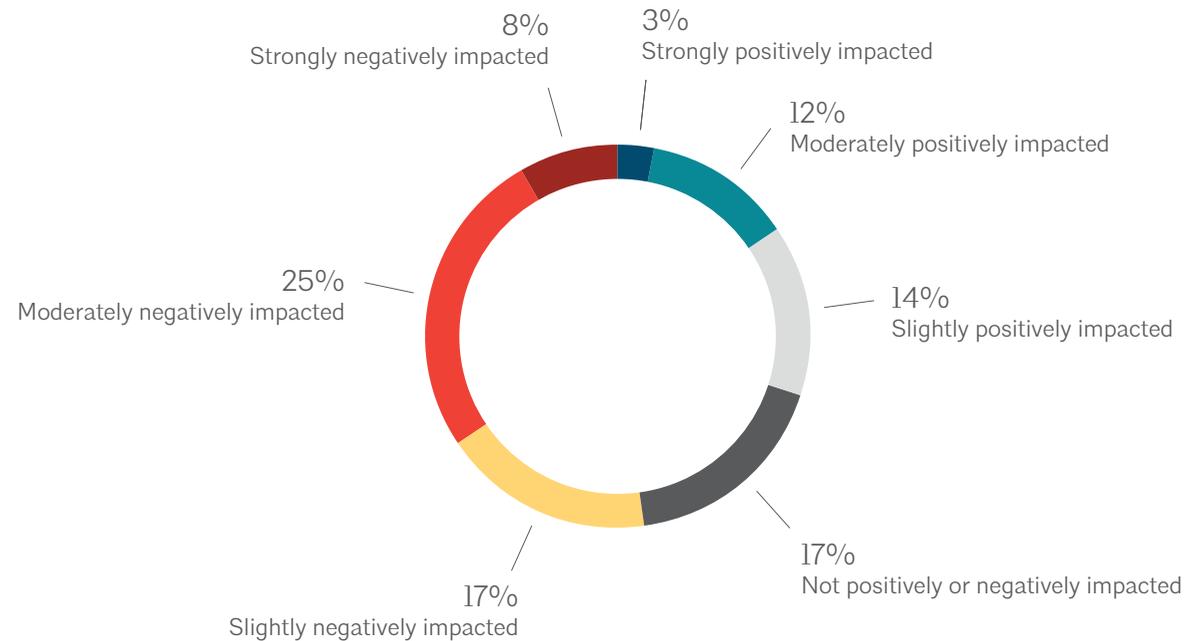
The pandemic caused the profession to experience challenges in the areas of productivity, planning, and communication. The switch to a fully virtual work environment was new for many and made it difficult for firms to maintain productivity levels—some firms not set up for a virtual environment while at others, employees juggled family and other distractions from home. Survey respondents also reported difficulty finding and winning new projects. Given these challenges, many architectural professionals reported that their project timelines fell behind as well as negative impacts to project planning and project management capabilities. Some respondents also reported friction in external relationships with clients, contracts, and consultants. A common issue reported with their external relationships was in communication.

FIRM HEALTH IMPACTS

When looking at architecture firm’s overall health during the recession, not all firms were impacted the same way. Just half (51%) of architectural professionals reported being negatively impacted by the recession to some degree, with 25% reporting they were moderately negatively impacted and 8% that experienced strong negative impacts (FIGURE 8). While the majority reported a negative impact, a significant portion (29%) reported

FIGURE 8:
Firms were impacted differently by the recession

Units: % of respondents



being positively impacted, as work in areas such as the single-family sector increased. Small firms were also significantly less likely to be negatively impacted (42%) than larger firms, likely due to the fact that small firms are those that are more likely to work on single-family residential projects while large firms saw many nonresidential projects decline significantly.

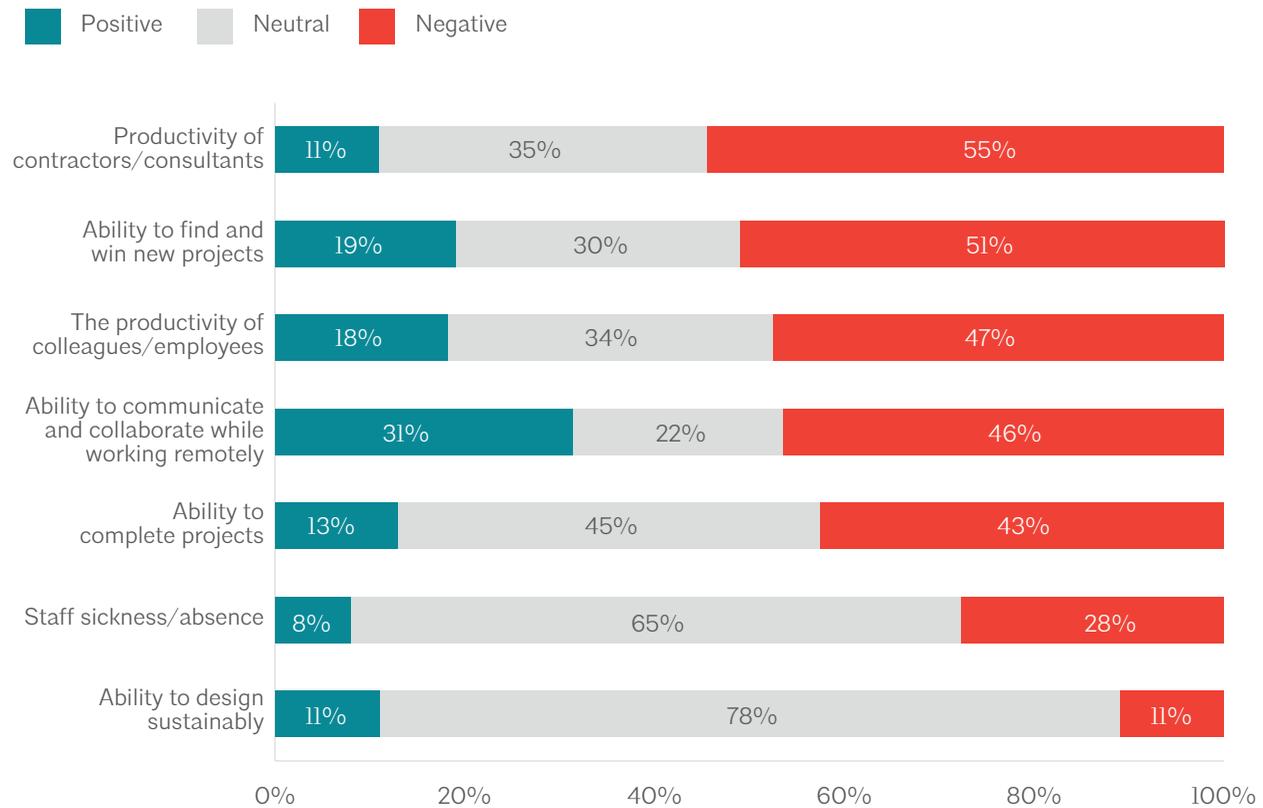
ORGANIZATIONAL WORK IMPACTS

Productivity and new project opportunities were the most common negative impacts of the pandemic, reported by around half of the respondents (FIGURE 9). This is likely due to the new challenges many firms were facing as firms switched to a virtual environment and demand for certain projects declined. The ability to complete projects and availability of personnel also worsened overall during the pandemic. In contrast, 31% of architects reported that the ability to communicate and collaborate while working remotely improved compared with 46% that reported it declined. However, of the 31% that reported improvements, almost two thirds of those reported it greatly improved while those who reported declines were predominantly reported as only slight declines. This difference is likely due to how well setup firms were before the pandemic for remote work as well as the distractions some employees faced in a virtual work environment compared with others with fewer distractions.

There was a reported bright glimmer—the pandemic did not seem to have had any significant impact on a firm’s ability to engage in sustainable design projects, demonstrating that the pandemic’s impact was more around project opportunities and productivity than the design work itself.

FIGURE 9:
Productivity and new project opportunities were negatively impacted during the pandemic

Units: % of respondents reporting if their organization was negatively, positively, or not impacted/neutral during the pandemic by each option



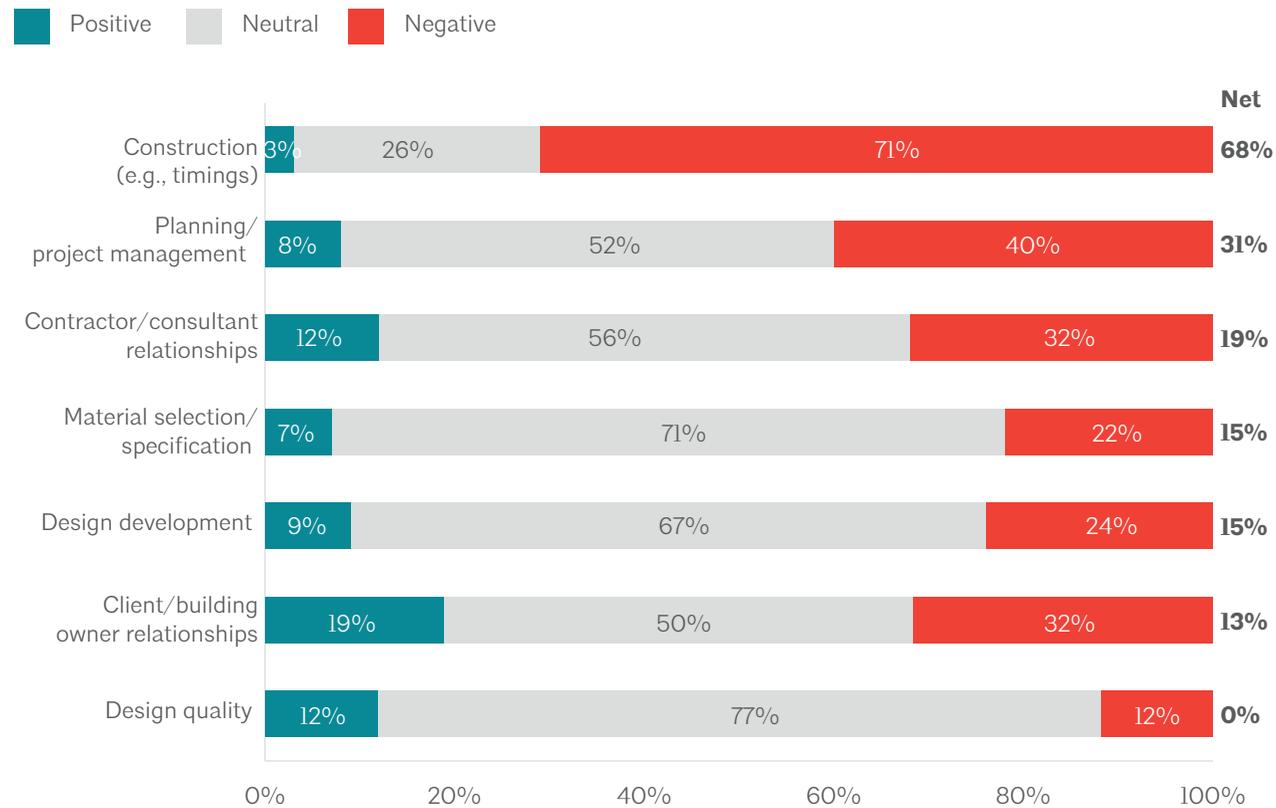
BUSINESS PROCESS IMPACTS

Across nearly all business processes evaluated, there was a net negative impact reported by firms—in other words, more firms reported a negative impact versus those reporting a positive one. Highest among those by far, was the 71% of respondents who noted a negative impact on construction, yet only 3% reported an improvement (FIGURE 10). Another business process area with a substantial net negative impact was in the area of project planning and management, with 40% of respondents reporting a negative impact and only 8% reporting improvements. Of the 71% of architects who reported negative impacts on construction, some of the reasons for this included delayed timelines, price increases for materials or limited materials, lack of workers, COVID-19 restrictions, and difficulties with external communications.

On the positive side, design quality was the only business aspect that showed no notable impact from the pandemic—with a vast majority (77%) reporting no impact. There were a few who reported some negative impacts such as the one who reported “budget constraints” as having a negative impact on quality. Yet others were encouraged by technology, focus on design, and less distraction. On technology, one respondent specifically cited “the use of VR and other cloud-enabled tools with clients and customers.” On focus, one respondent noted that they had “more time focused on design and less on useless meetings.” And as it related to distractions, one respondent noted that working remotely provided “no distractions except things I need to focus on to balance work and life.”

FIGURE 10:
Construction was the most negatively impacted business process

Units: % of respondents reporting if business processes were negatively, positively, or not impacted/neutral during the pandemic for each option (net impact is calculated as the % reporting positive impacts minus the % reporting negative impacts)

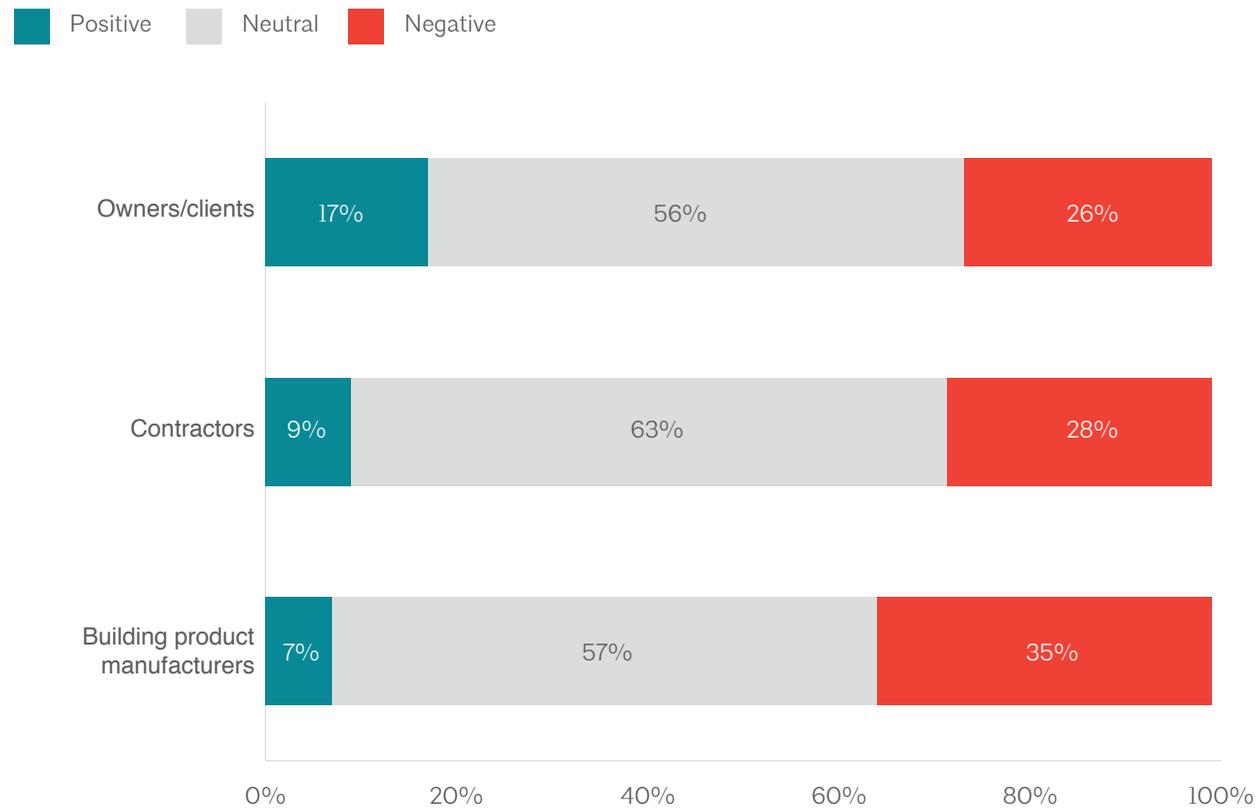


For the partner relationships impacted by the recession, communication was a key reason.

When asked about the impact the pandemic has had on relationships with project partners, survey respondents, for the most part, reported that project partner interactions remained unchanged. Approximately a quarter reported some type of difficulty among different project partners (FIGURE 11). Of those who reported a negative impact, communication was one of the top reasons.

FIGURE 11:
Most project partner relationships and interactions remained unchanged as a result of the pandemic

Units: % of respondents reporting if relationships with project partners were negatively, positively, or not impacted/neutral as a result of the pandemic



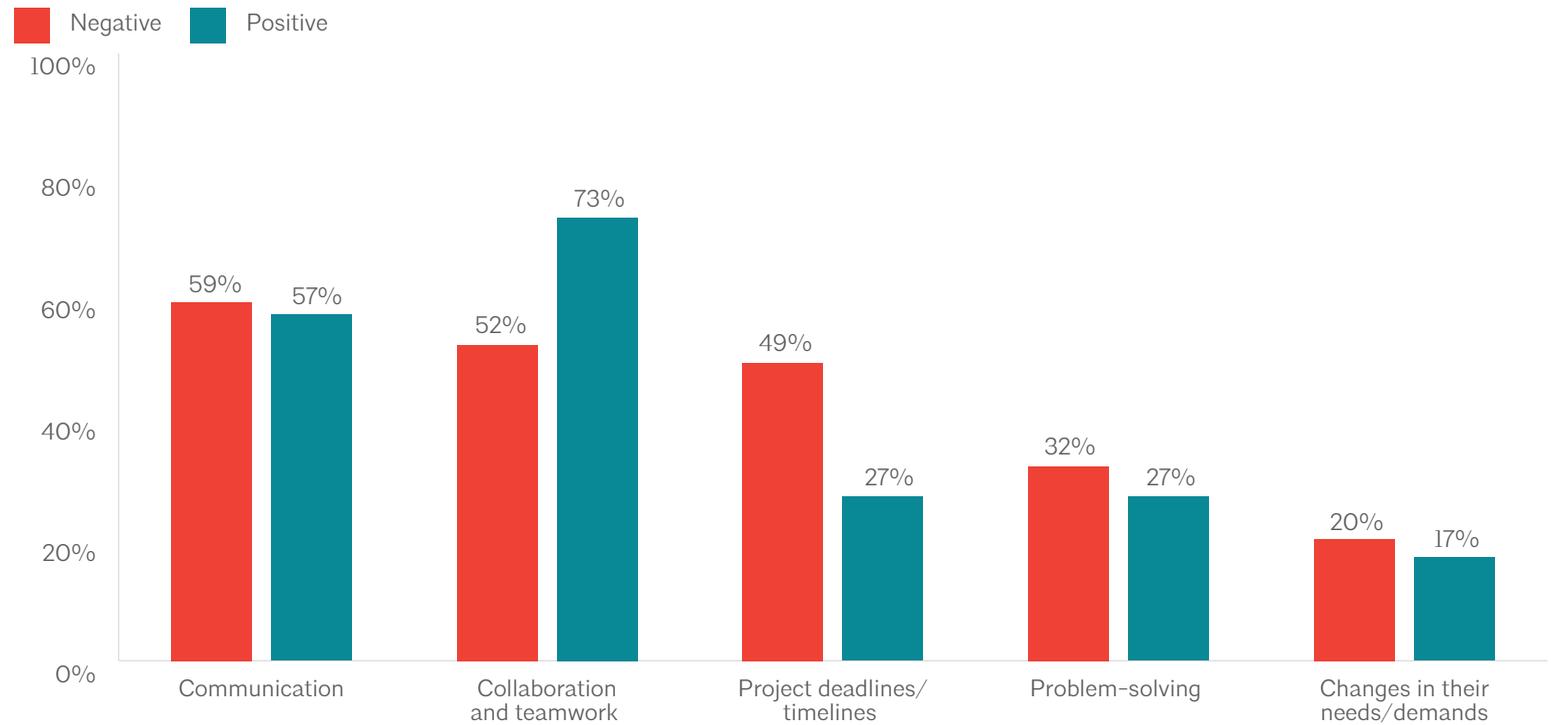
While only a small portion of respondents reported a positive impact of the pandemic on their relationships with project partners, of those who reported a positive impact, the majority listed collaboration and teamwork as having improved or become easier due to improved communication (FIGURE 12).

Whether one reported the impact as negative or positive, the reason behind that impact involved communication. While communication was a challenge for many firms as they adjusted to circumstances brought on by the pandemic, there were also those who were able to use these new methods of communication to improve their relationships, even during these difficult circumstances.

There were some differences in the relationship impacts of the pandemic by partner type.

FIGURE 12:
Communication and collaboration were reasons behind the relationships impacted by the pandemic

Units: Weighted % of respondents who reported negative impacts across project partners and weighted % of respondents who reported positive impacts across project partners by the pandemic

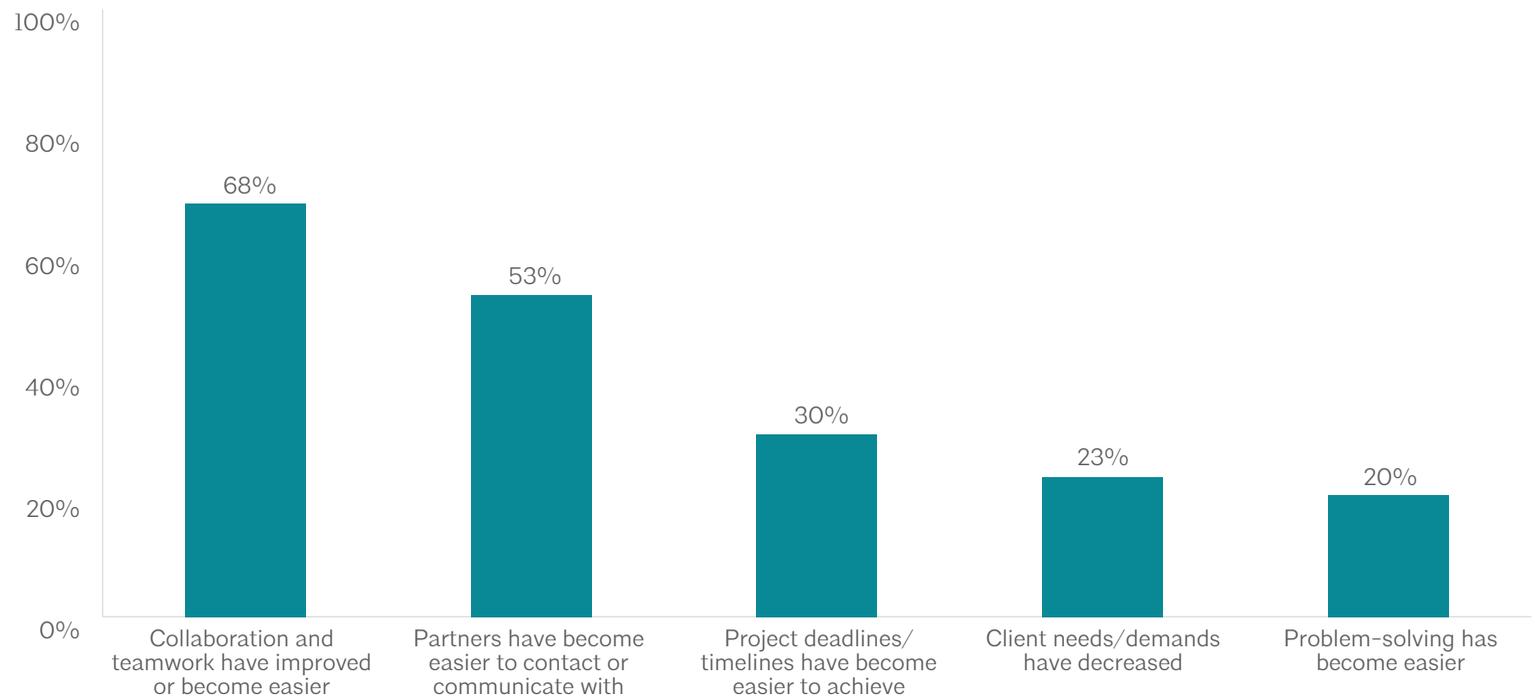


OWNER/CLIENT RELATIONSHIPS

Client relationships are the most crucial for architects at any time, but especially during difficult economic times. This was an area that architect and design professions—and especially firm leaders—focused on in the early days of the pandemic, particularly in those states where construction activity was shut down in the spring and early summer of 2020. Some of this focus on client relations resulted in improved relationships, noted by 17% of respondents. The primary reasons for that were improved collaboration (reported by 68%) and easier communication (53%) (FIGURE 13). Almost a third also reported that timelines were easier to achieve, and more than a fifth reported fewer client demands/needs and easier problem-solving.

FIGURE 13:
Easier collaboration/teamwork and communication were top reasons behind improved relationships with clients

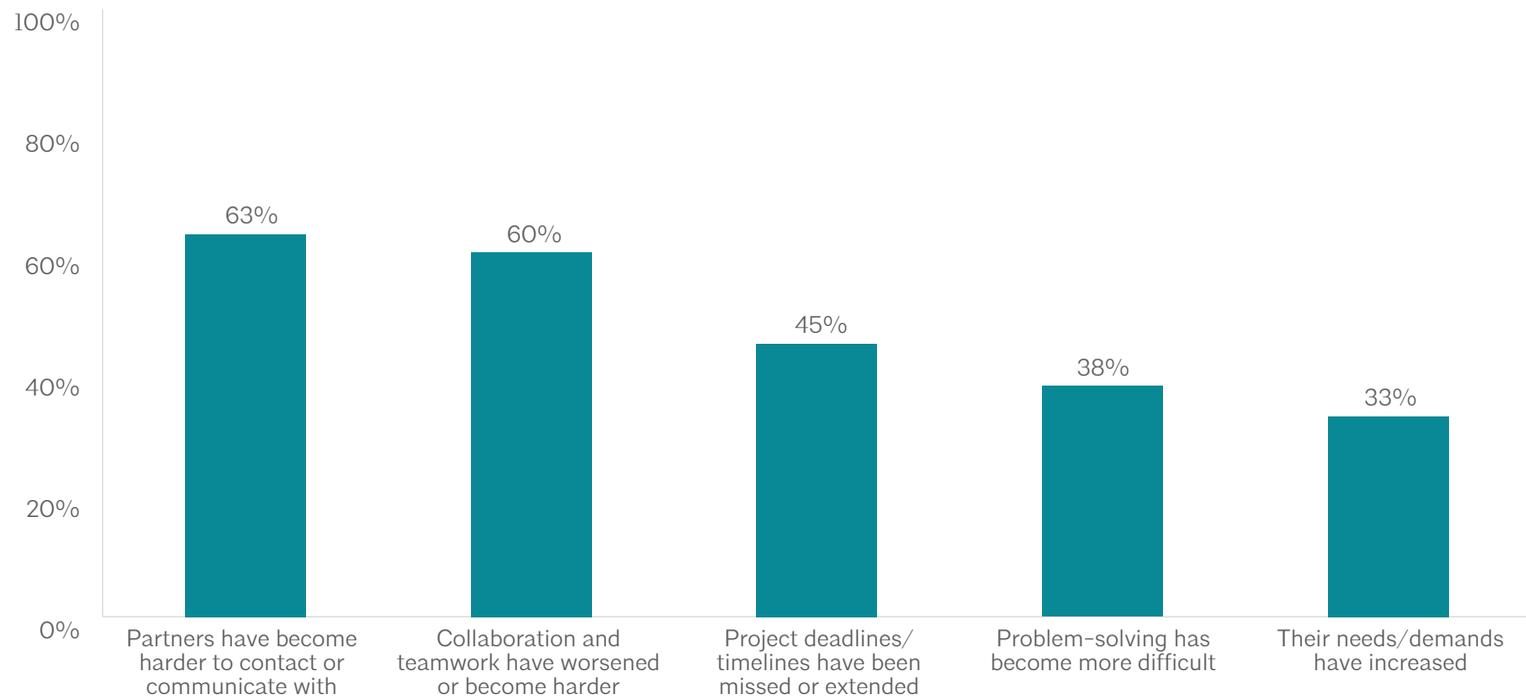
Units: % of respondents who reported positive impacts on client relationships



Conversely, a little over a quarter (26%) reported the pandemic negatively impacted their relationships with clients. The primary reason for that was also communication (reported by 63%, the top reason) but closely followed by more worsened collaboration (FIGURE 14).

FIGURE 14:
Communication challenges and more difficult collaboration were the top reasons behind worsened relationships with clients

Units: % of respondents who reported negative impacts on client relationships



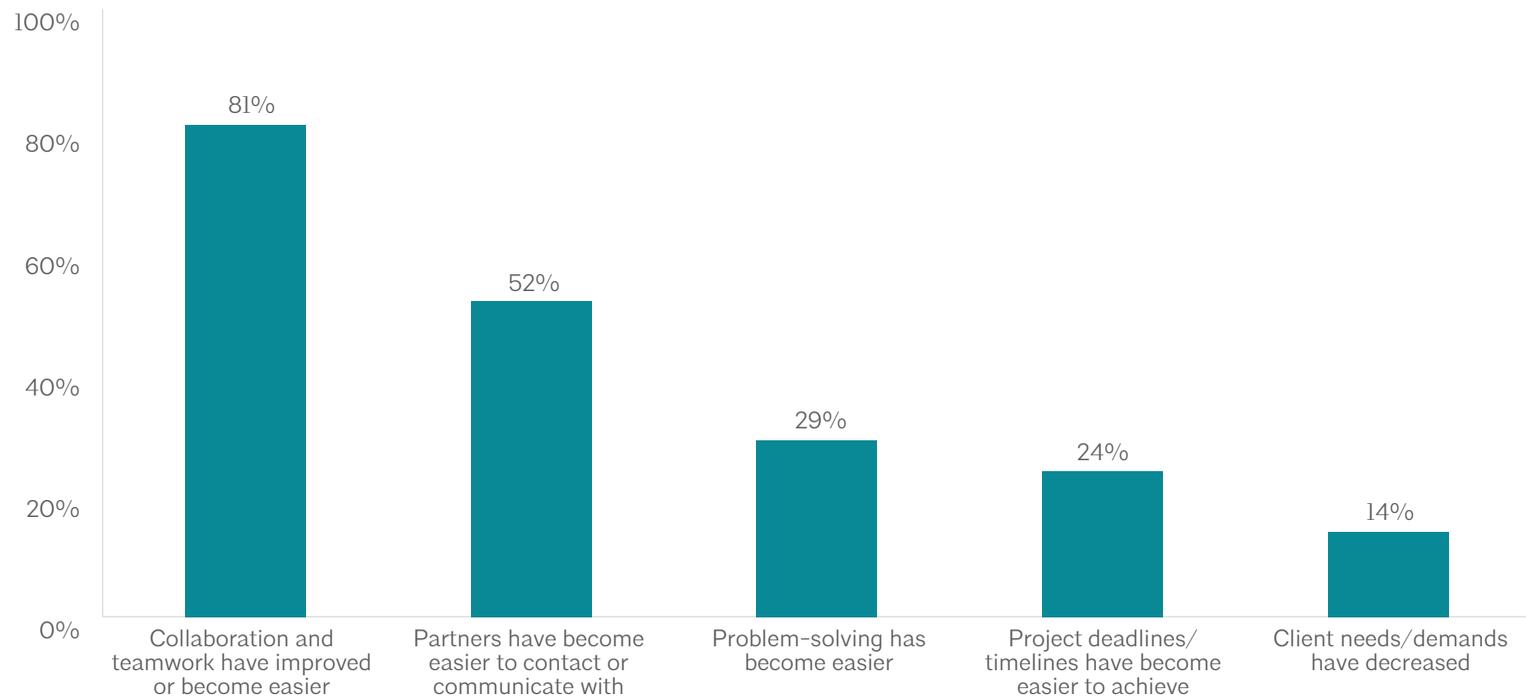
CONTRACTOR RELATIONSHIPS

Contractors are important partners for architects, yet the pandemic impacted the professions slightly differently. As a result, there were more reported negative impacts on architect-contractor relationships from the pandemic than there were with clients, though, still only a little over a quarter. Conversely, nearly a tenth reported improved relationships. Of that 9% of respondents, the overwhelming reason for improved relationships was better collaboration and teamwork (FIGURE 15). More than half also cited better communication.

FIGURE 15:

Easier collaboration/teamwork and communication were top reasons behind improved relationships with contractors

Units: % of respondents who reported positive impacts on contractor relationships

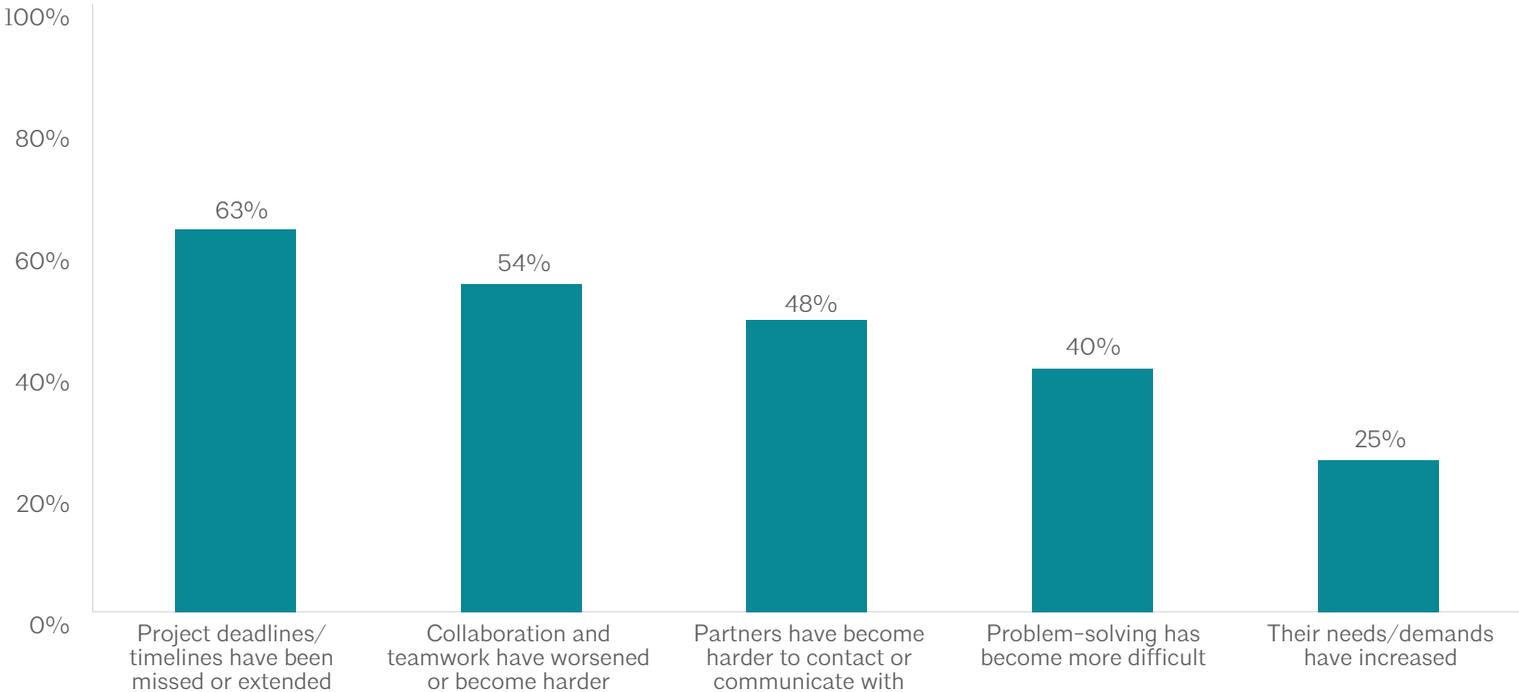


For the 28% who reported worsened relationships, the top reasons were missed deadlines and delayed timelines (reported by 63%), followed by harder collaboration (54%), and more difficult communication (48%)

(FIGURE 16).

FIGURE 16:
Missed deadlines and more difficult collaboration were the top reasons behind worsened relationships with contractors

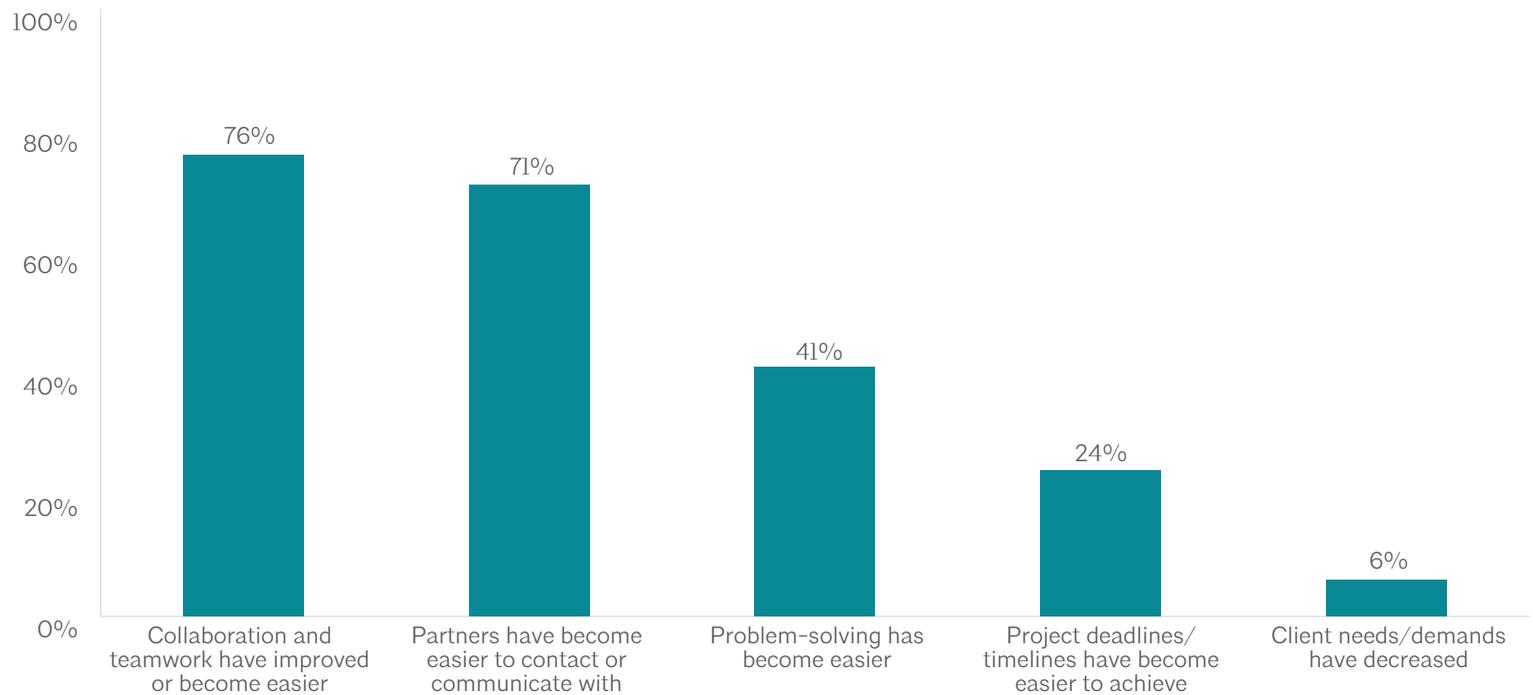
Units: % of respondents who reported negative impacts on contractor relationships



BUILDING PRODUCT MANUFACTURER RELATIONSHIPS
 Building product manufacturers are an important partner for architects as they specify products for their designs. Yet, it can be a relationship that is deprioritized during a recession. However, there were a few respondents who noted improved relationships. For that 7%, the primary reasons were easier collaboration and teamwork and better communication (**FIGURE 17**).

FIGURE 17:
Easier collaboration/teamwork and communication were top reasons behind improved relationships with product manufacturers

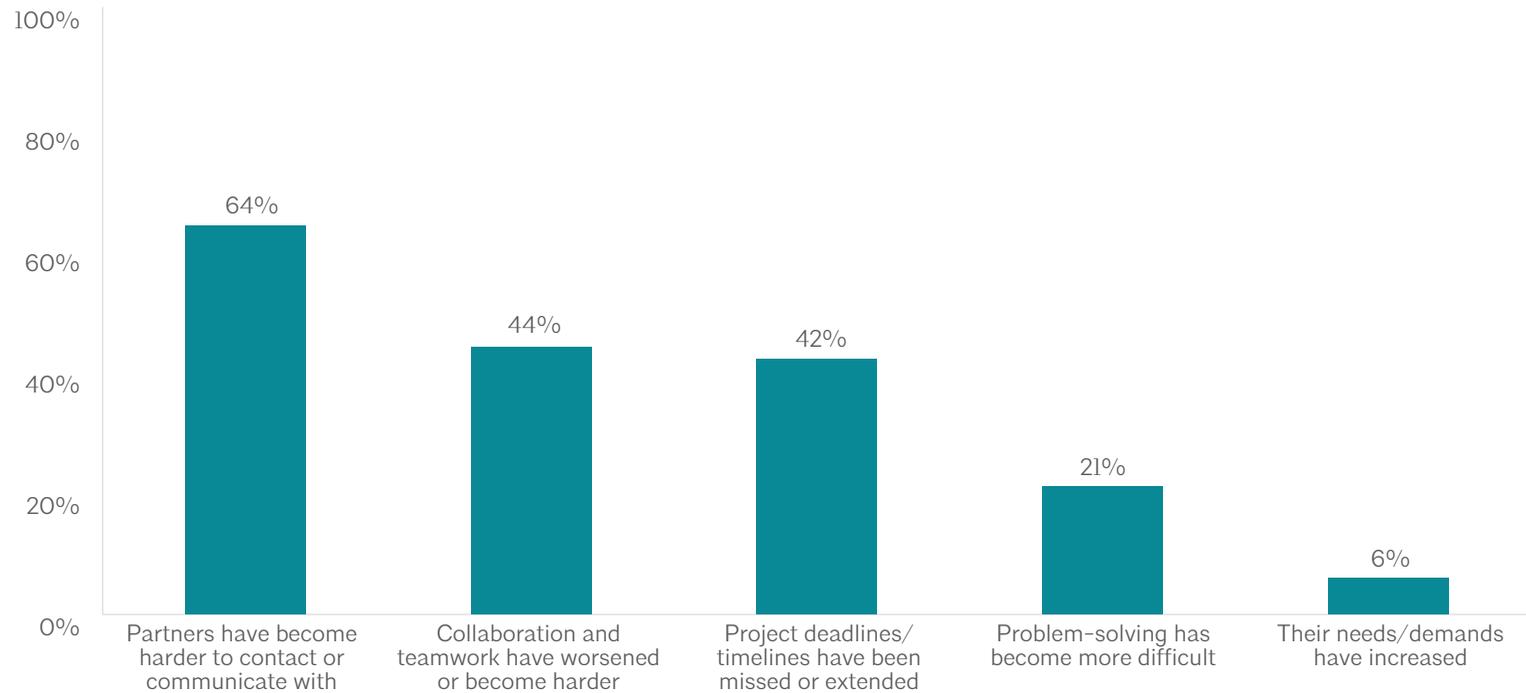
Units: % of respondents who reported positive impacts on manufacturer relationships



Out of the 35% who reported a negative impact of the pandemic on their relationship with building product manufacturers, the top reason was more difficult communication, reported by 64% (FIGURE 18). Though noted by far fewer respondents, a notable share also reported harder collaboration and missed deadlines as other reasons behind worsened relationships.

FIGURE 18:
Communication challenges were the top reason behind worsened relationships with building product manufacturers

Units: % of respondents who reported negative impacts on manufacturer relationships

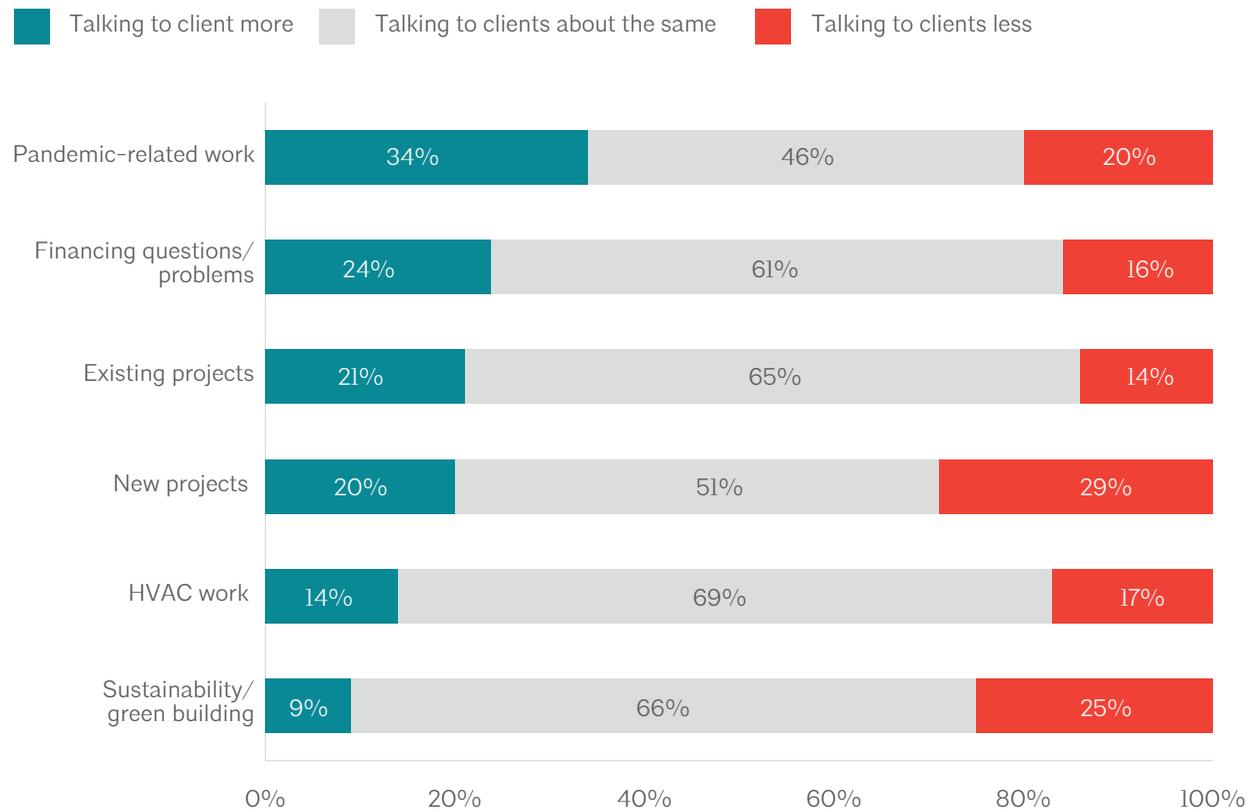


CLIENT COMMUNICATION

Not surprisingly as the pandemic continued, discussions with clients shifted more toward pandemic-related work and existing building projects, as owners grappled with adapting their spaces to reduce contagion spread or find strategies to adapt spaces for other uses (FIGURE 19). Discussions around financing also increased slightly during the pandemic. Other types of conversions, most notably discussions on new projects and sustainability, took a backseat with other more urgent discussions moving to the forefront.

FIGURE 19:
Discussions with clients in 2020 shifted toward pandemic-related work and existing building projects

Units: % of respondents reporting if discussions with clients increased, decreased, or remained the same in 2020 vs 2019



Data findings–Section 3

The future of sustainable design

Pandemic Shifts Construction Activity Away From the Most Sustainable Project Types

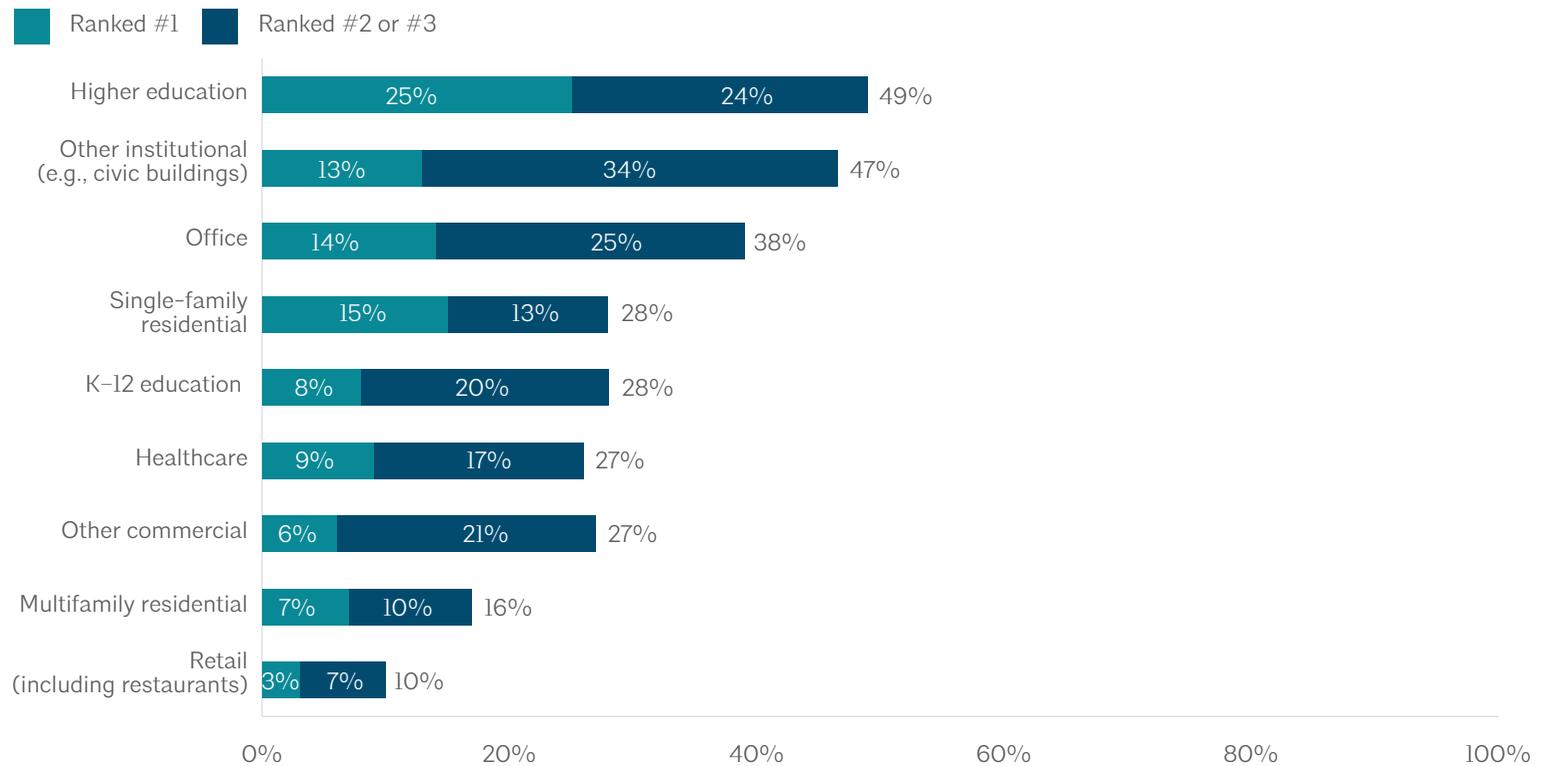
Buildings where owners occupy and operate their spaces over the long term are those that have more readily adopted high performance and sustainable design practices. Those buildings are also the ones that respondents acknowledged are the most innovative when it comes to sustainability. Specifically, they cite higher education, government-owned buildings, and office buildings as those most innovative (FIGURE 20).

Unfortunately, these are among the sectors most hard-hit by the pandemic and its ensuing recession, and slower in expected recovery. In higher education, resources are diminished with lower enrollments and fewer opportunities for booster and fundraising, primarily around athletics. Offices remain empty as white-collar workforces shifted to remote/home offices. And budget cuts in cities, municipalities, and towns across the US have constrained investment in government buildings.

Instead, growth is expected to continue in the single-family housing marketplace, as well as in the least hit nonresidential sectors of healthcare and multifamily housing. While not traditionally the most innovative or expansive sectors for sustainability investments, significantly more respondents from small firms and single disciplinary firms report sustainability innovation in the single-family residential market—reported by 42% of small firms and 48% of single disciplinary firms, compared with only 28% of all respondents. More single discipline firm respondents also rated multifamily residential as innovative for sustainability. For those firms doing work in the residential sector, they do see sustainability innovation occurring, which suggests we may continue to see expansion of sustainable, resilient, and high-performance buildings.

FIGURE 20:
Most innovative sectors for sustainability tend toward owner-occupied buildings

Units: % of respondents ranking projects for innovation in environmentally sustainable design

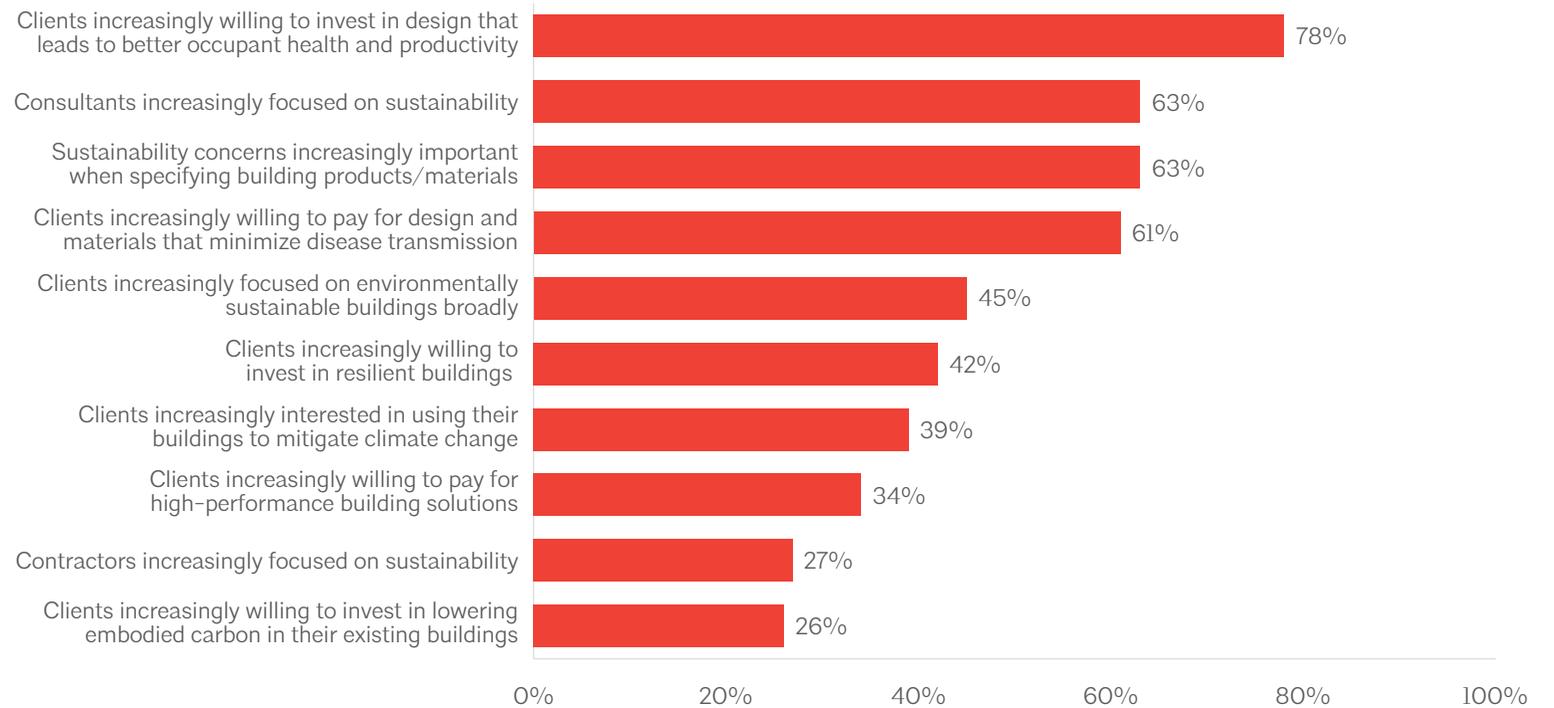


Architects Report Sustainability Increasing in Areas of Health and Well-Being—and Product/Material Specification

Architectural professionals are upbeat about the future of sustainable design, particularly as it relates to health and well-being. The majority reported that clients are increasingly willing to invest in design that leads to better occupant health and productivity (78%) and are willing to pay for design and materials that reduce disease transmission (61%). Additionally, 63% of respondents reported that sustainability concerns are increasingly important when specifying building products/materials and that they are seeing consultants increasingly focused on sustainability. While not the majority of respondents, more than a third also reported clients increasingly focused on sustainability (45%), investing in resilient design (42%), mitigating climate changes through their buildings (39%), and paying for high-performance building solutions (34%). (FIGURE 21)

FIGURE 21:
Sustainability trends show clients and consultants focused on sustainable design, with health the prevailing focus

Units: % of respondents reporting they agree with each statement based on the impacts they have seen due to the pandemic



There is further evidence of a positive outlook related to sustainable design. Across nearly all these measures, significantly higher shares of respondents from the largest firms (500 or more employees, which comprise a substantial share of architectural billings) reported client interest in sustainability:

- 70% report increasing client focus on sustainable buildings broadly
- 70% report an increase in willingness to invest in resilient buildings
- 61% report an increase in willingness to pay for high-performance building solutions
- 57% report an increased interest in using buildings to mitigate climate change

While health and well-being have always been big drivers to clients for sustainable design and construction, they are likely amplified as a result of the pandemic and owner concern about occupant health amidst ongoing exposure risks to COVID. Even after the pandemic is controlled, data and history suggest that this concern will remain strong, given both owners' desire to mitigate future risk and the historical strength of improved health outcomes as a driver to green building and sustainable design.

VOICE OF THE CLIENT

“Our clients—mostly corporations—are surprisingly proactive about responses to climate change. This is driven by employees’ interests and corporate social/environmental responsibility values.”

Commercial owner, National

“Sustainability and wellness are core principles for the group, and climate change is a fundamental consideration. Looking forward, our future projects will have similar sensitivity to the impacts of climate change.”

Commercial owner, Southeast

“Given our large volume of tenant representation and commercial property management, there’s significant focus on embodied carbon in office furnishings and other products.”

Commercial owner, National

“As a company, environmental responsibility and sustainability have been a large part of our projects for many years.”

Corporate/Commercial owner, East

“Looking out over the next decade, it is clear we will set aggressive but achievable goals. We will take carbon seriously. Also, healthy materials. Levels of prioritizing; health and well-being.”

University, Midwest

When looking more specifically at the 63% that reported sustainability becoming increasingly important in specification of building products and materials, the aspects of sustainability that are becoming more important are a familiar list. Energy-efficient products, one of the stalwart aspects of a green building, topped the list, reported by 88%, as did durability (77%), and nontoxic materials as it relates to occupant exposure (68%). (FIGURE 22) It is likely that the high percentage of respondents that noted transmission of disease/infection increasing (43%) is related to current conditions. However, the third of respondents who reported increased import in lower embodied carbon materials likely points to existing buildings as a focus—and the increased attention on the climate impact of buildings as it relates to more than just energy efficiency.

VOICE OF THE CLIENT

“We’ve had opportunities to tear down buildings, which would be cheaper, but we chose to renovate. Embodied carbon is a motivator.”

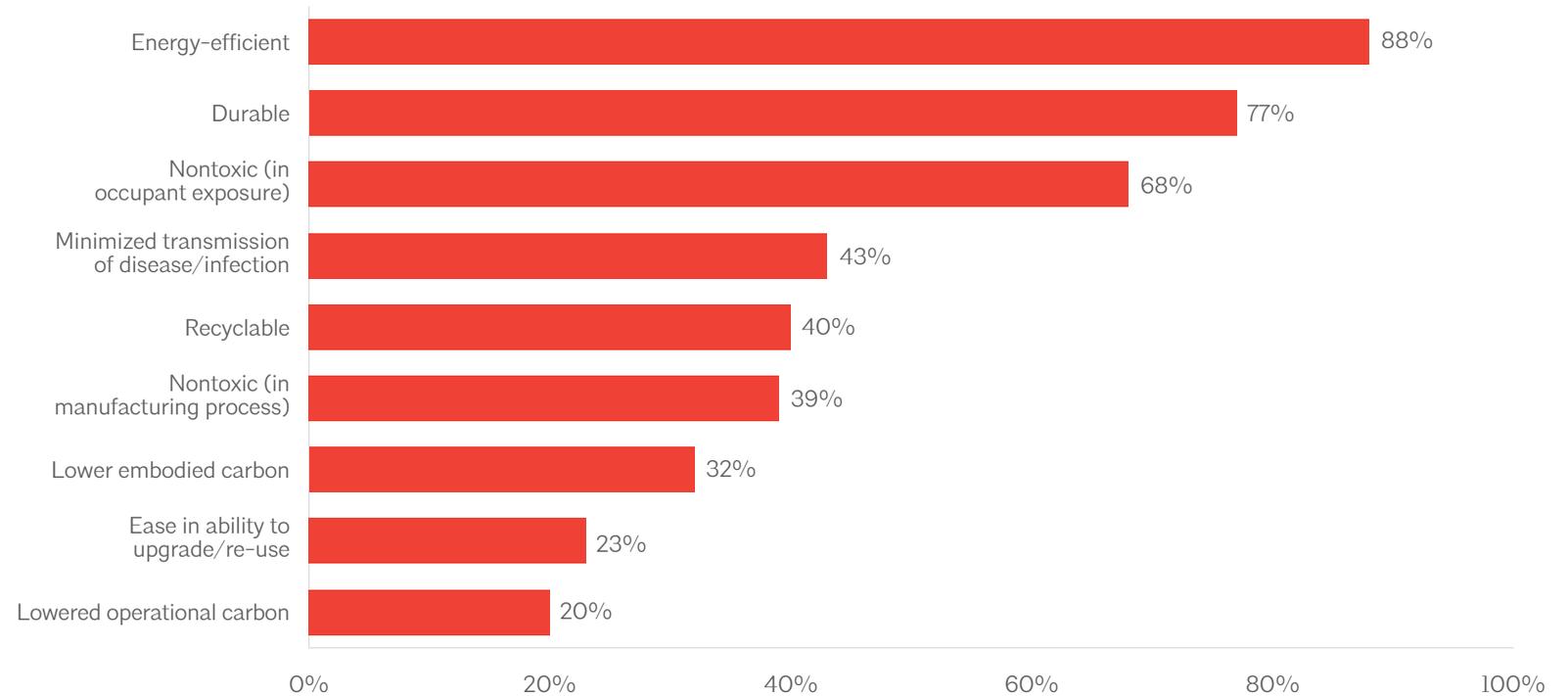
University, Southwest

“We will make decisions for materiality based on carbon. We avoid concrete or low embodied carbon. We use local materials. Recycled materials tend to lean toward steel.”

Corporate owner, Pacific

FIGURE 22:
Energy-efficient, durable, and nontoxic products are increasingly important aspects of sustainability in product specification

Units: % of respondents reporting this aspect becoming more important



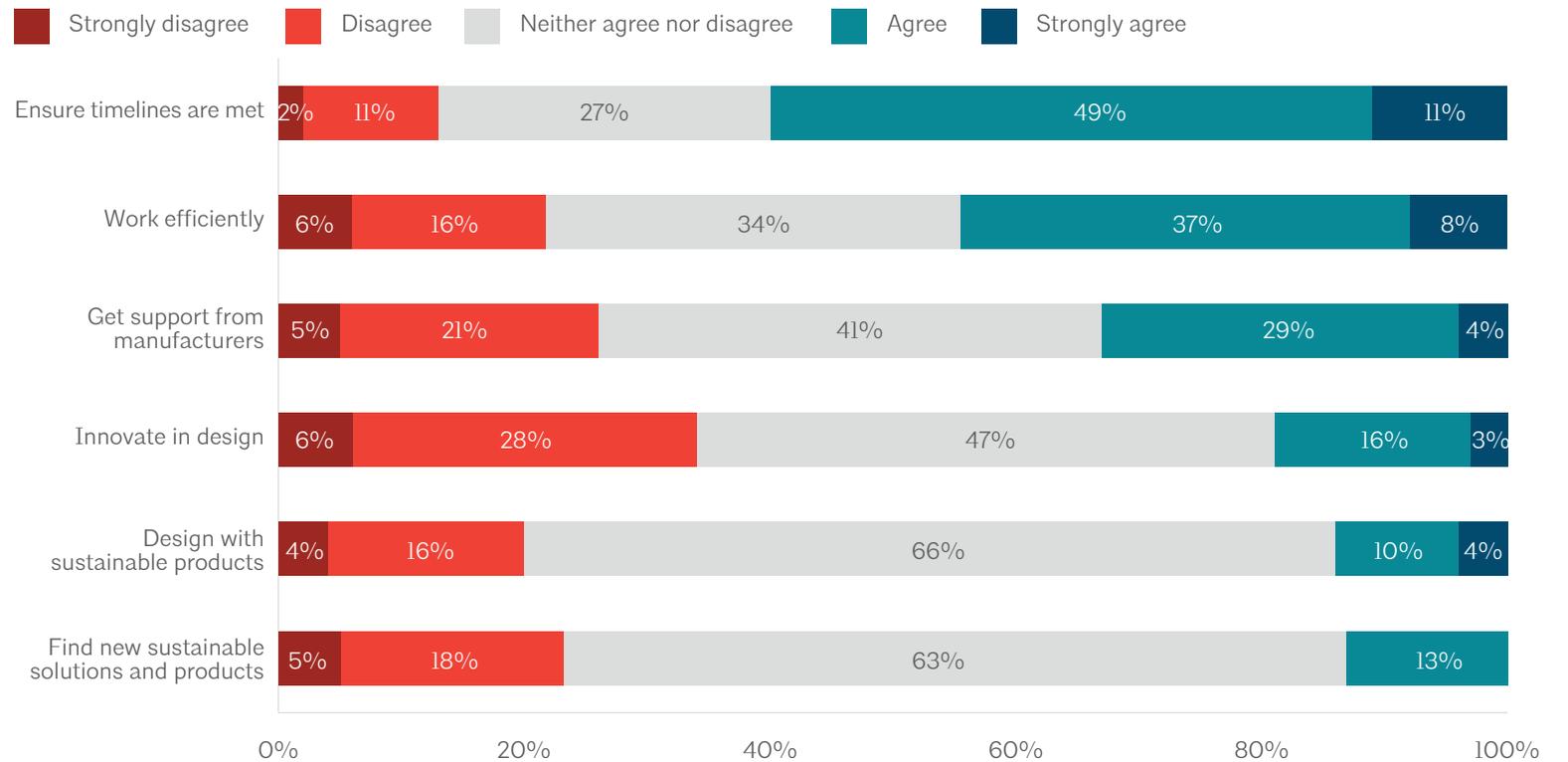
Pandemic Has Limited Effects on Sustainable Design

While the economy and pandemic made it difficult for firms to meet timelines (reported by 60%), most architectural professionals denied it had negatively impacted their ability to innovate, design sustainability, or find more sustainable solutions or products. **(FIGURE 23)** Only a small percentage (14%) reported that the economy and pandemic made it more difficult to design with sustainable products, which was more than balanced by the 20% that reported the economy and pandemic made it less difficult. Similarly, there was a net positive impact of the pandemic on innovation and finding sustainable solutions, with 34% of respondents reporting that the pandemic helped make it less difficult to innovate and 25% noting that it made it less difficult to find new sustainable solutions. This is consistent with the 89% of respondents who said their ability to design sustainably was either unaffected or helped by the pandemic **(SEE FIGURE 9 ON PAGE 16)**.

There was more of a mixed response when it came to the effect of the economy and pandemic on work efficiency and manufacturer support. While around a quarter reported less difficulty in both areas, greater shares reported difficulty. This confirms our findings that the pandemic has not affected all firms the same—some firms found productivity gains and efficiencies, while others struggled, and while some were able to improve relationships with manufacturers, others were unable to, given the need to focus on clients and work more exclusively.

FIGURE 23: Difficulties posed by economy and pandemic have made timelines more difficult, but there is disagreement on whether it has hindered innovation

Units: % of respondents reporting that they disagree/agree the factor was made more difficult by the economy and pandemic



Architects Have Room to Be More Proactive Leaders in Sustainability

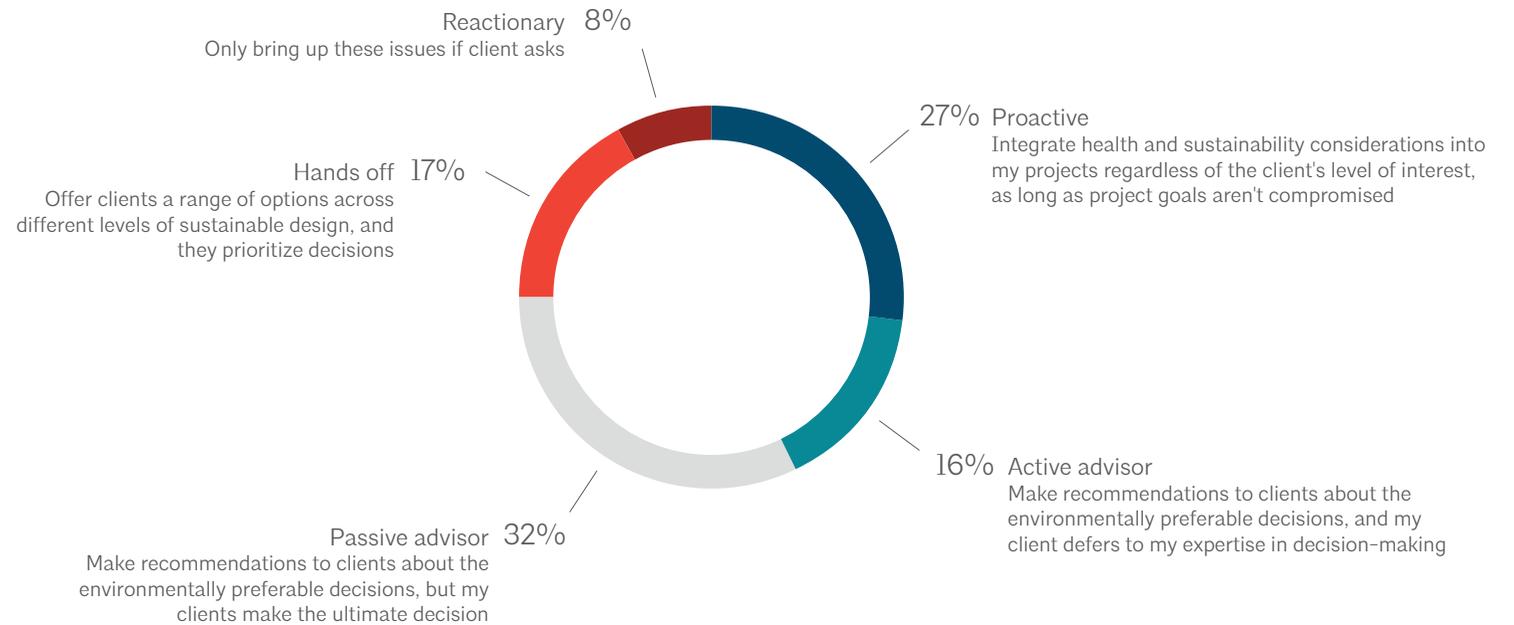
Architects are strong advocates of sustainability—whether it be in active or passive roles. However, there is a wide spectrum within those roles, with room for architects to take on more leadership opportunities—as it relates to their role as designer, educator, partner, and specifier.

When it comes to their role educating clients about sustainability, more than a quarter (27%) are on the forefront—integrating health and sustainability considerations into all projects. Nearly half (48%) act in more of an advisory capacity, with that split between those who serve as the decision-maker (16%) and those who defer decisions to clients (32%). However, there is still a quarter who are either hands-off, offering options but not prioritizing sustainability, or reactionary.

(FIGURE 24)

FIGURE 24:
Nearly half of architects act in an advisory capacity when educating clients about sustainability

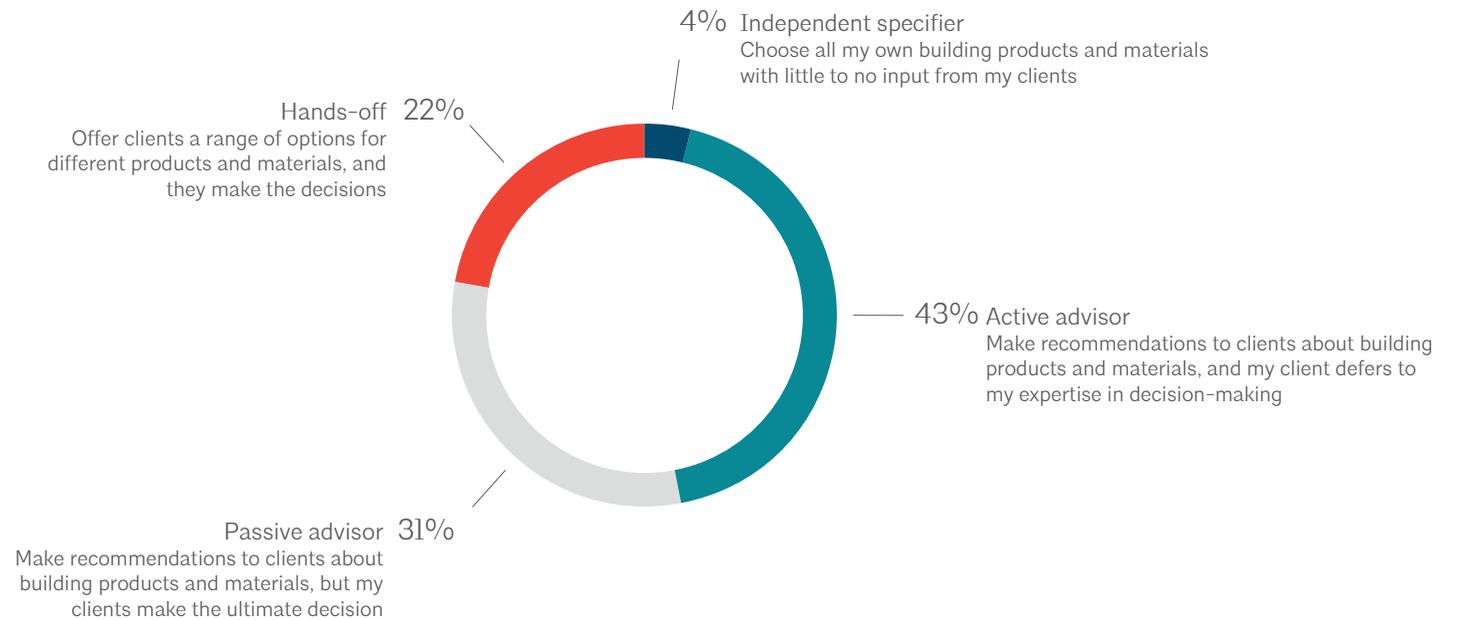
Units: % of respondents on the role they take in educating clients about sustainability issues



As it relates to specification and product decisions, there is more interactivity between clients and architects—43% are active advisors with clients deferring to their expertise while 31% are passive advisors where clients make the decisions. However, there is a consistent share that is hands-off (22%). (FIGURE 25)

FIGURE 25:
Architects split between those who take a more active role with clients when specifying sustainable building products and materials, and those who are more passive and hands-off

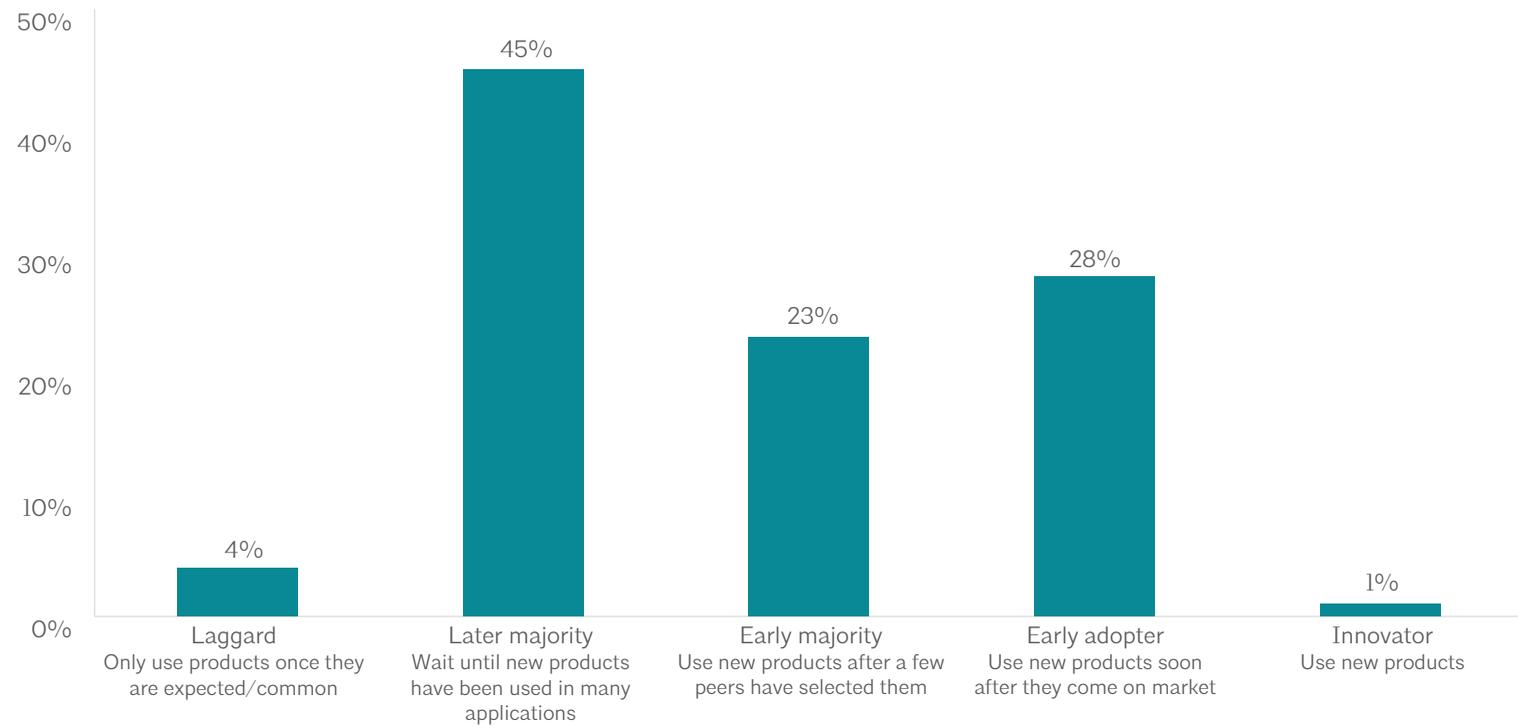
Units: % of respondents reporting how they work with clients to specify building products and materials



These findings are consistent with architects' general approach to new product and material use. While there are a very small percentage of innovators and laggards, most fall into the middle, with 28% of respondents identifying as early adopters and 23% identifying as being in the "early majority," or using new products after some use. (FIGURE 26) However, by far, the greatest share identifying as being in the "later majority" category or using new sustainable products when there has been some demonstrated use in the marketplace.

FIGURE 26:
More than a quarter of architects consider themselves innovators or early adopters of new products and materials

Units: % of respondents



Methodology & respondent profile

The survey that yielded the new data presented in this report was developed by a project team comprised of AIA staff, subject matter experts, Oldcastle BuildingEnvelope leaders, and B2B International, an independent research company with AEC (architecture, engineering, construction) industry experience. Survey programming and finalization, data collection, and tabulation were handled by B2B International. Data from other AIA surveys (including the *2020 Business of Architecture Firm Survey Report*, Architecture Billings Index, Home Design Trends Survey, and sustainability metrics survey), as well as government data, are included for context and to provide additional insight. Owner quotes were from a qualitative interviews of owners conducted for the AIA in December 2019 and January 2020 by the Cameron MacAllister Group.

AIA sent B2B International a random sampling of 10,000 contacts, representative of AIA’s membership composition, which itself is representative of the architecture profession. The study fielded from Oct. 20 to Nov. 17, 2020, with a total of 229 completed surveys. This number of completes represents a confidence level of 95% +/- 6.5%.

A majority of the respondents were firm leaders (51%), followed by 34% licensed architects, 7% project managers, and 5% emerging professionals. Accordingly, nearly all respondents (91%) were licensed architects, with 83% in traditional practice and 8% in nontraditional practice. From a personal demographic perspective, there was a wide distribution by age (**FIGURE 27**), and a gender split that is consistent with the share of women who are licensed architects—72% of the respondents were men and 24% women (4% preferred not to say).

FIGURE 27:
Age distribution

Units: % of respondents

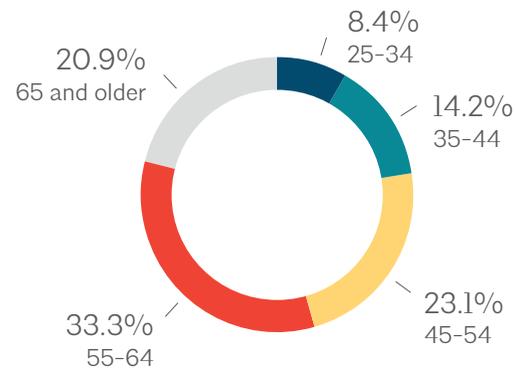
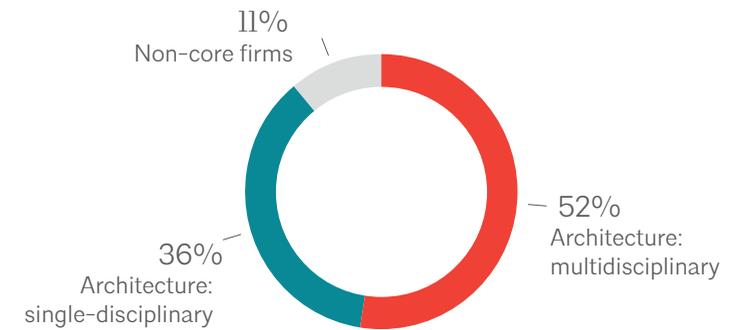


FIGURE 28:
Firm type

Units: % of respondents



In terms of firmographics, a majority were from multidisciplinary firms (FIGURE 28) and from small firms (FIGURE 29), while there was a wide distribution of work by project type (FIGURE 30). Respondents also had a wide geographic distribution, with 27% in the West, 18% in the Midwest, 33% in the South, 22% in the Northeast, and 1% in the US Territories.

FIGURE 29:
Firm size distribution

Units: % of respondents; firms were rolled into the three size categories based on their firm size

■ Small firms ■ Midsize firms ■ Large firms

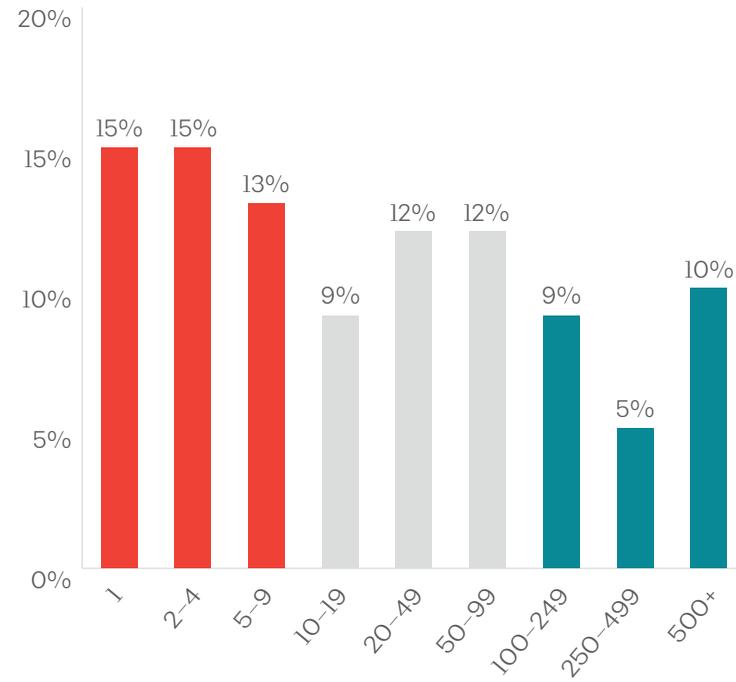
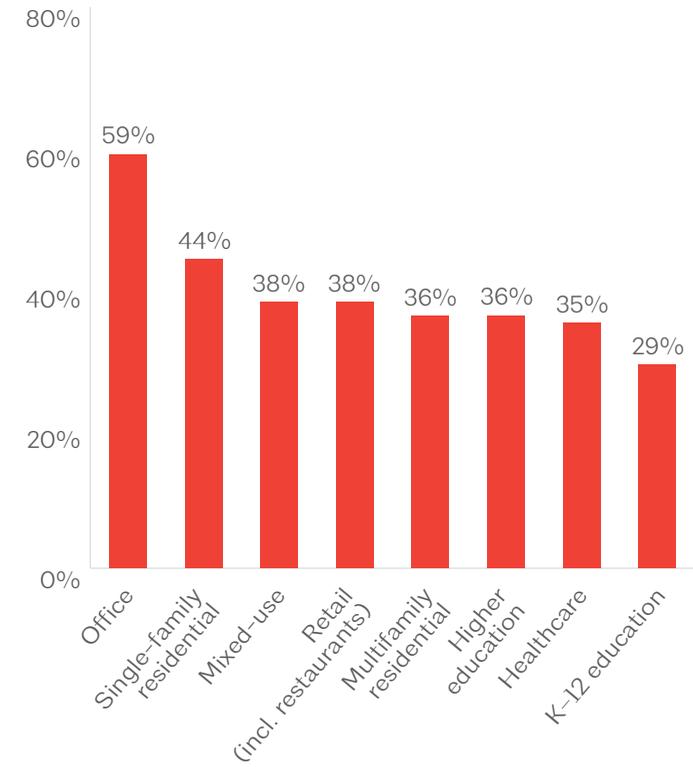


FIGURE 30:
Project types worked on from October 2019 to September 2020

Units: % of respondents





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