STO BUILDING GROUP

Back to Basics:

STO's 2019 Survey on Sustainability, Wellness, and Resilience

2019

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For four years running we have reached out to end users and members of the AEC community to find out what they consider important when it comes to sustainability, wellness, and resilience in the built environment. In just the last year since our survey, the discussion around sustainability's impact on the environment has only continued to intensify. It is more apparent than ever that human health is tied to our environment, and the health of both must be addressed in tandem. Our study looks directly to our industry colleagues to provide their take on that link and on the impact the changing face of sustainability is having on commercial real estate.

In this report, we track our findings over time and cite new findings on issues that address the shifting landscape. We've shared the highlights and unpacked the trends that are most salient here. Thank you to those that took the time to participate and contribute to this ongoing body of knowledge about our industry.

Sincerely,

Robert Leon
Senior Vice President, Global Services

Jennifer Taranto
Director of Sustainability

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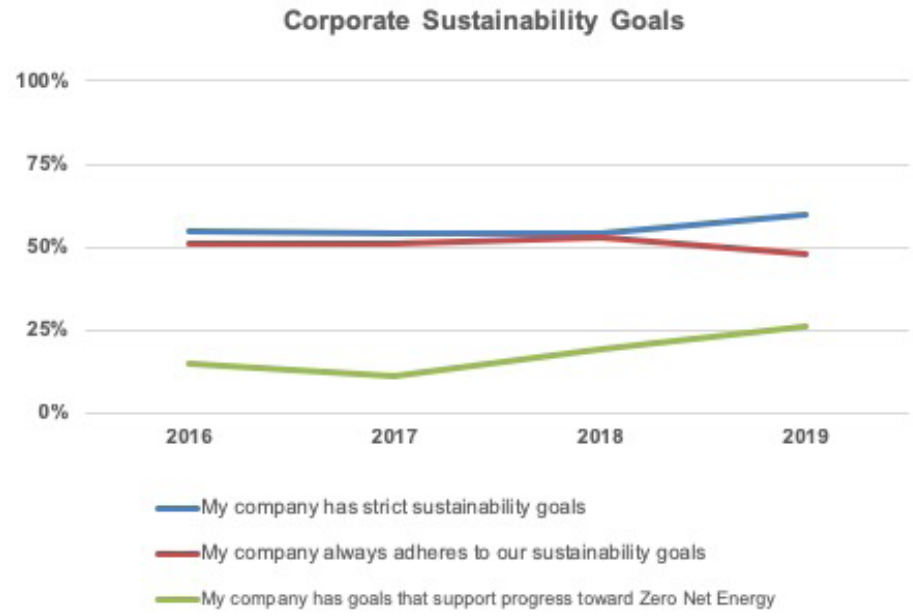
TOP FINDINGS from the 2019 STO Sustainability Survey

After many years of growth and recent talk of recession, the big real estate question, "What will happen to sustainability?" is more relevant than ever. In our fourth year of collecting survey data, participants still identify the costs of adding sustainability, health, and wellness amenities as the biggest challenge they face, along with education on how to design and build for the future. One end user in particular cited the "knowledge base" across the industry as a top barrier to adoption. The following report further summarizes how our industry perceives the state of sustainability, wellness, and resilience in the built environment and what factors may be influencing those perceptions.

Sustainability

According to respondents, the demand for more stringent sustainability standards is high. This year 69% stated that current standards for sustainability are not enough, which is 24% higher than last year—a remarkable increase. Although it has held flat through the years of our survey at around 54%, this year the number of companies who report having stricter sustainability goals for their organization saw a bit of a lift to 60%, while those who report adhering to their goals have fallen off slightly this year to 48%. These findings may indicate that it's time to dust off those organizational sustainability plans and recommit to education and accountability around the goals that have been set.

Conversely, a growing number of companies (26%) are making strides toward Zero Net Energy (ZNE) goals by creating policies that support these kinds of projects. This—coupled with new legislation in many municipalities and a recent report from USGBC MA showing that "many types of ZE buildings can be built with no added upfront costs and some commercial buildings can see return on investment in as little as one year"—tells us that ZNE buildings are within our reach.



Though several cost studies over time have shown that third-party certifications add little to no hard costs to a project, our study shows that teams and primary decision makers are under the impression it is expensive. Within project teams, and with some end users, this perception can be hard to combat. We need more communication about these robust cost studies, more education on where the costs lie within projects, and more tools in the industry on how to talk about the true costs and paybacks of adding sustainability, resilience, and wellness features.

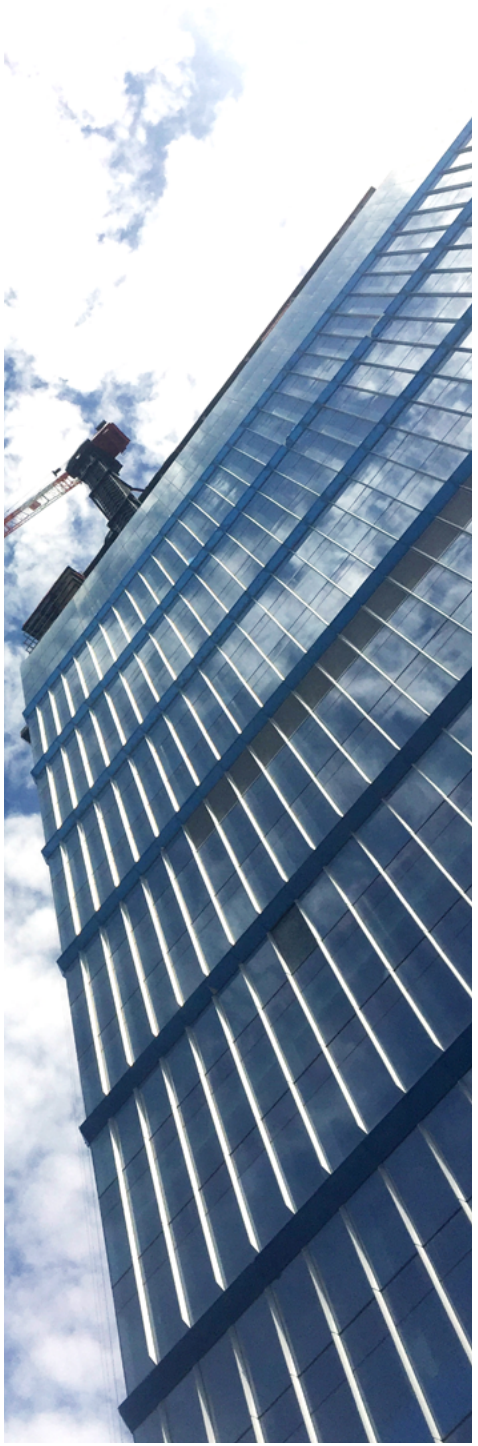
69%

of respondents stated that current standards for sustainability are not enough

Those stating that they use energy modeling (55%) and daylight modeling (48%) as standard practice on key projects has fallen this year, while use of post-occupancy evaluations (56%) has remained flat. This is troublesome because modeling and post-occupancy evaluations are critical. They lead to overall better-informed designs, code compliance, and pathways toward green certifications, and they help project teams better understand how they can improve performance to support sustainability goals, productivity, and wellbeing.

When we look to trends concerning building materials, opinions seem to have plateaued. This year 36%, as compared to 38% in 2018, report looking to require the elimination of red-list materials—materials designated as harmful to living creatures, including humans—and begin material transparency reporting on projects. Those who think their companies have a general understanding of what is involved in eliminating red-list chemicals remained at 52% this year. Education is still required here among product specifiers and designers to increase the understanding that building products, like carpet, furniture, protective coatings, and sealants, contain chemicals of concern.

This year the FDA announced that they have found substantial levels of PFAS—one of the six classes of chemicals of concern—in our food supply and are considering making the potential effects of PFAS exposure a national priority.



New to our survey this year, 52% claim that they have a general understanding of embodied carbon, and 48% will begin to require embodied carbon accounting on projects within the next two years. In context, when talking about new buildings, operational and embodied carbon emissions each make up nearly half of the total carbon, according to Architecture 2030.

Addressing existing buildings proves to be a much more complex problem. As mentioned in previous reports, very little of the existing building stock is addressed year over year through major capital improvements or renovations, and most energy is lost through a building's facade. Many municipalities are looking to reduce their carbon emissions, but none have been as bold as New York City's Climate Mobilization Act (Local Law 97), which sets an emissions cap on buildings larger than 25,000sf and will affect 50,000 buildings in their city.

The majority (61%) of end users confirmed that they find it important to incorporate sustainable features and amenities in projects to lower real estate operating costs, which roughly matches the 64% of all other survey respondents—architects, engineers, owner's reps, and consultants—who agree. Meanwhile, 74% of end users stated that they are concerned where their buildings, leased or owned, will rank in public energy disclosures. This concern may be particularly elevated compared to last year (63%) now that countries like Ireland and cities like New York have begun rating building energy efficiency with a letter scale and mandating that it be displayed in a prominent, visible location.

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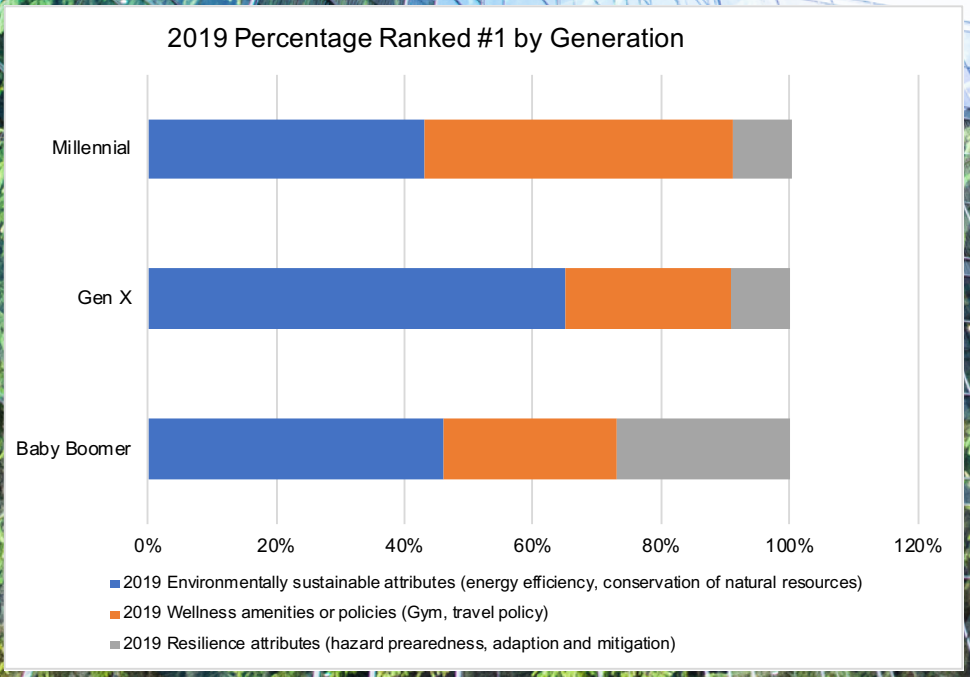
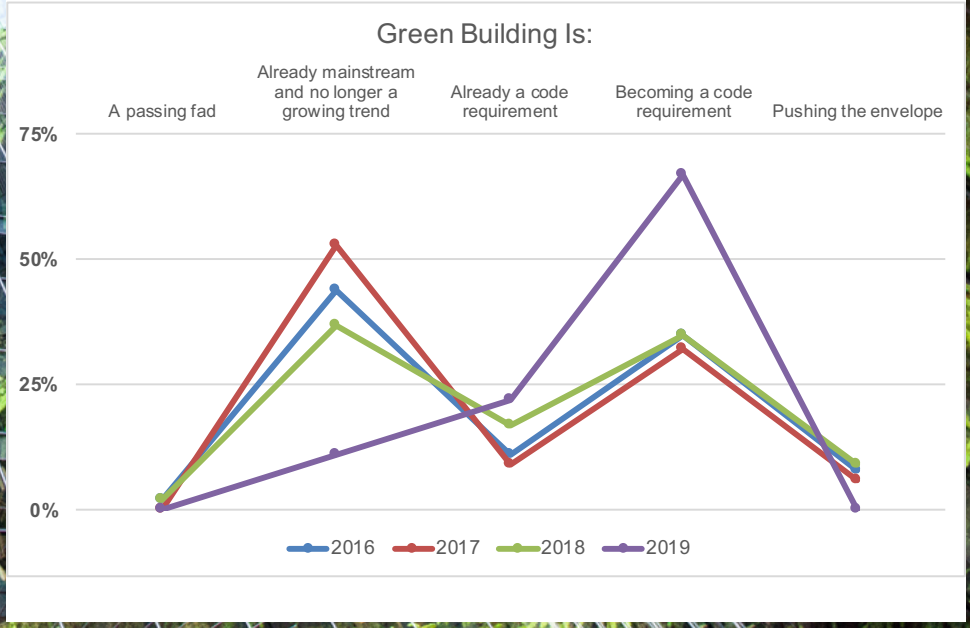
With this external pressure potentially heightened, 82% of end users stated that it is important that their service providers have a robust environmental sustainability program. Why? This number could indicate that companies value being in business with those with environmentally friendly operations and services. Or, it could correlate to the idea that end users see the AEC community as uneducated about the possibilities of designing and building sustainably.

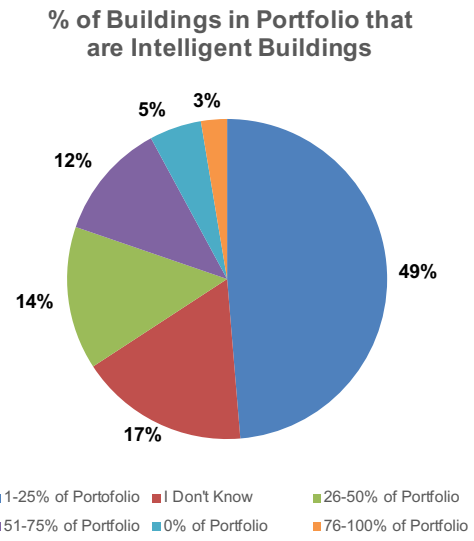
This perception of impact may also be due to generational differences—or a combination of all of these factors. But according to our survey results, GenXers—primarily in key influencer roles—are putting increasing importance on wellness and the environmentally sustainable attributes of their workplace, though they indicate an overall decrease in the importance of resilience since last year. One respondent writes that "there are prevailing attitudes of GenX and Boomers that the workplace is for work—only." Millennials, on the other hand, put more importance on workplace wellness attributes above environmental or resilience.

Similarly, this year 0% of end users believe that green building is a passing fad. Yet 0% also think that it is pushing the envelope—a drop from previous years' single-digit values. Though many municipal building codes fall short of green building certification requirements, there has been a steady uptick over the last three years of end users who believe green building is becoming or already is a code requirement (89%).





Nearly half of respondents state that one-quarter or fewer of the buildings in their portfolios are "intelligent" buildings—those equipped with sensors and other technologies that help optimize building performance and management. These technologies are new and untested, leaving risk and uncertainty about actual performance of the buildings that incorporate them. However, 72% state that their companies believe that intelligent building technologies will help buildings perform more sustainably, and 60% plan to incorporate sensors and technologies into their project to track sustainability measures in the next two years.



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Wellness

Half (50%) of our respondents state that the current industry standards for wellness are not enough, a large segment (44%) thinks they are just right, and a small minority (6%) thinks they are too stringent. When asked, 88% of end users say that incorporating wellness features and amenities, such as easy access to a gym and healthy foods, into the built environment is an essential requirement. None of the respondents in the entire survey answered this as "not applicable," meaning that no matter the business type, wellness should be accessible to all. 81% of end users think that wellness is a strong component of their employee retention and recruitment plans, and 50% of end users plan to tap into external expertise in wellness to plan their real estate needs.

When it comes to the drivers for wellness, there is a discrepancy between what end users think is driving the decisions (attracting and retaining employees) and what their design partners and consultants believe drives their client's decisions (increasing employee satisfaction in the workplace). Both sets of respondents agree that the second most important driver is increasing employee productivity.

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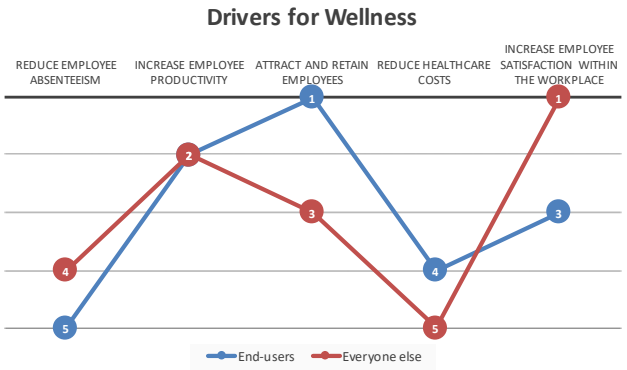
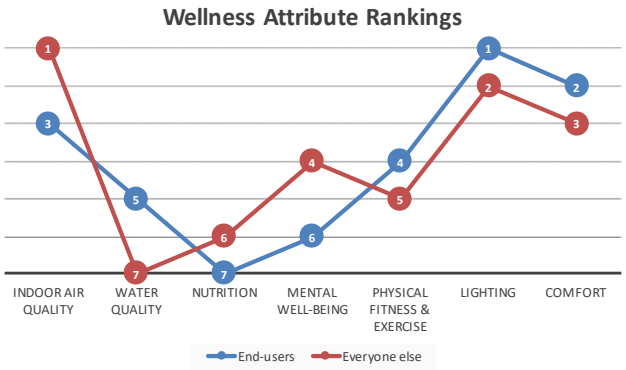
For four years running, indoor air quality is seen as the most important wellness attribute within a space, although this year light takes back the number two slot and mental well-being ticks up to take third place. Consistently at the bottom is nutrition.





Resilience

58% of respondents say that industry standards for resilience are not enough (45% in 2018), while 34% state they are the right amount, and 7% state they are too much. Buildings that are designed to withstand extreme weather and climate change however, were noted as an essential requirement by 69% of end users and 72% of all other respondents believe it is important to their clients. Passive survivability, a building's ability to maintain critical life support conditions if services such as power, heating, and water are lost, is also an essential requirement to 63% of clients when they evaluate a building. However, only 44% of end users plan to seek external expertise in resilience to evaluate and plan to meet their real estate needs.

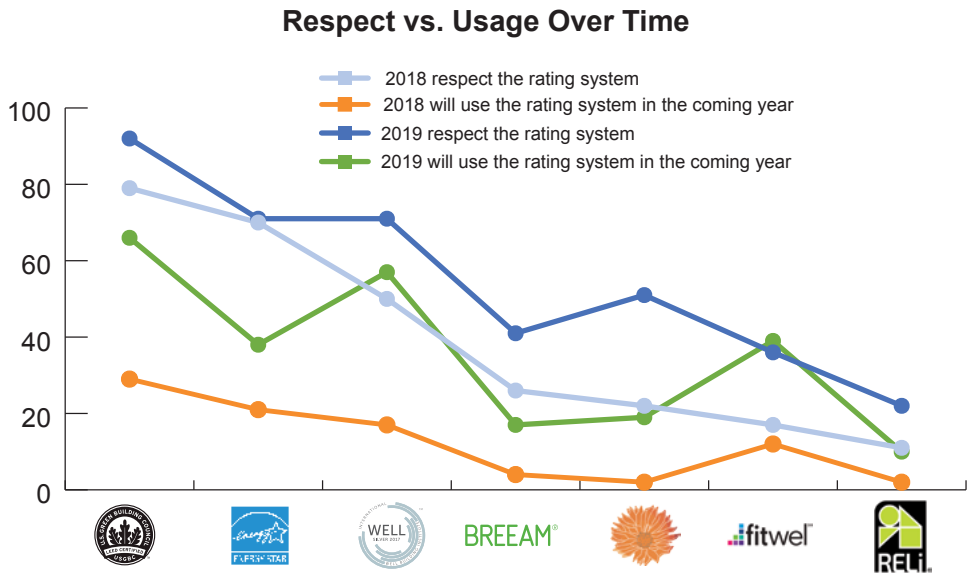
Given the feedback in this survey that resilience standards are not enough, one might ask why we aren't seeing more projects incorporating resilience features. One survey respondent sums up the prevailing factors: "One [reason] is cost and the other is our belief, as people, that it will happen everywhere but here." Another end user states that, "as a tenant, we would look towards landlords in this effort."

Third-Party Certifications

While last year looked dire for third-party certifications, this year they seem to have made a resurgence. USGBC states that LEED registrations have increased, and our results validate that. The overall respect for LEED as a third-party rating system has jumped, as has the percentage of those stating that they will complete a LEED project in the next year. The greatest gains for those stating they will pursue projects seeking third-party rating systems came in LEED, WELL, Fitwel, and Living Building Challenge.

Nearly one-third (30%) of respondents expect to design or construct to passive house standards in the next one to two years. This number nearly doubled from last year (16%). The trigger may be that plans are coming together for those with measurable carbon reduction goals, especially municipalities, states, and institutions, and they see passive house as a pathway toward meeting those goals. Oddly, even though more people plan to implement passive house, 35% of the respondents believe that they have a general understanding of the passive house standard, which is trending downward slightly from the year prior.

In the big picture, to determine which third-party rating systems are showing the highest adoption ratings, we asked how well respected each of the systems were.



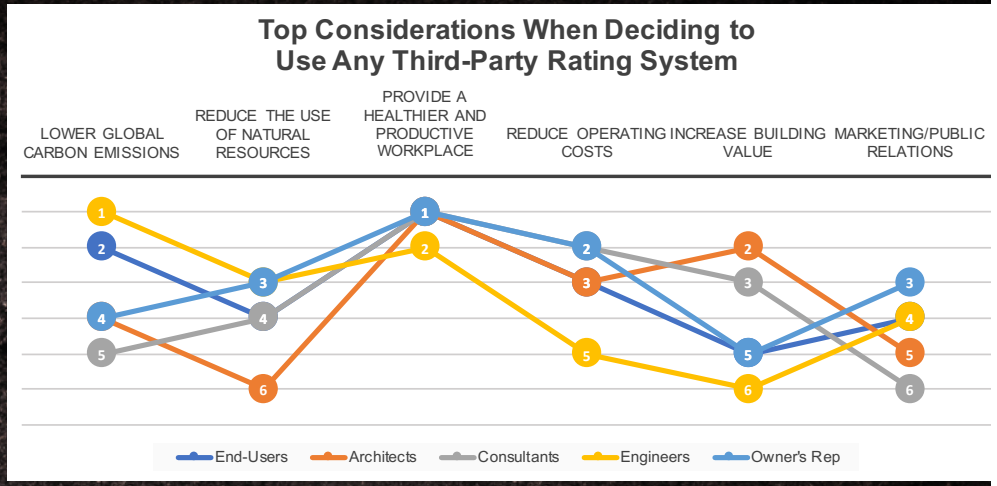
74% of respondents state that LEED is a valuable market differentiator, again a significant uptick from last year's 62%. Other increases around LEED specifically include that an additional 10% of people (38%) agree there is an expectation among their employees that their office is LEED certified, while an additional 12% over last year (44%) agree there is an expectation among their executive management that their office is LEED certified.

A minority (12%) prefer a rating system other than LEED. When further pressed, that minority prefers WELL, Living Building Challenge, and ENERGY STAR, apart from LEED.

Outside of LEED, multiple rating systems are rapidly evolving to increase their positive impact on the environment. Conversely, this also further muddies the water of understanding around what each rating system's goals and requirements are. WELL was updated in 2018 and released a pilot WELL v2.0. 34% state that they understand the differences between WELL v 1.0 and WELL v2.0. The survey shows that any lack of adoption of WELL is attributed to being too costly and time intensive, followed by being too difficult to understand and lack of market adoption.

At the end of the day, 59% of respondents state that there are too many third-party rating systems.

According to our survey, the reasons most end users seek to use any third-party rating system is to provide a healthier and more productive workplace and to lower global carbon emissions. Most of their partners agree, with the only outlier being engineers, who said the top reason is to lower global carbon emissions. When it comes to the number-two reason, opinions are more split; end users say they are doing it to lower global carbon emissions, consultants and owner's reps are looking to lower operating costs, architects are looking to increase a building's value, and engineers think it is to provide a healthier and more productive workplace.



The percentage of projects that are third-party certified are higher than last year (31%) while the projects that are built to certification standards but not certified remain flat at 37%. The projects that have no intentional sustainability goals have fallen since last year (32%).

Methodology & Demographics

Of those who responded, 11% self-identified as C-suite, 31% as executive management, 42% as mid-level managers and 16% as line managers or staff. 51% of the respondents work in companies with greater than 500 employees, while 25% work at companies with over 10,000 employees. 50% of respondents stated that their square foot responsibility was greater than 1 million square feet.

Respondents could choose multiple sectors that fall under their purview and the geographies where they do business. The top five sector responses came from commercial office (corporate, finance/legal), education, government, and healthcare. The top four geographies were the United States (Northeast), United States (East Coast - Mid-Atlantic/West Coast) tied for second, United States (East Coast – Southeast/Central – Midwest/Central – Southeast) tied for third and Europe – UK. This year respondents were also asked to identify their generation, with 0% reporting in as the Silent Generation (born between 1925 and 1945), 29% as baby boomers (born between 1946 and 1964), 44% as GenX (born between 1965 and 1980) and 27% as Millennials (born between 1981 and 2000).

The survey was sent to long-standing, key clients and partners across the multiple geographic locations where STO performs work. All participants were uncompensated volunteers. These contacts were primarily at the director level or equivalent senior position in their organizations.

We believe this survey offers a snapshot of what our clients are doing when it comes to sustainability. The survey was conducted from April 17, 2019 to July 19, 2019.

For more information on STO's sustainability and wellness expertise, please contact

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