



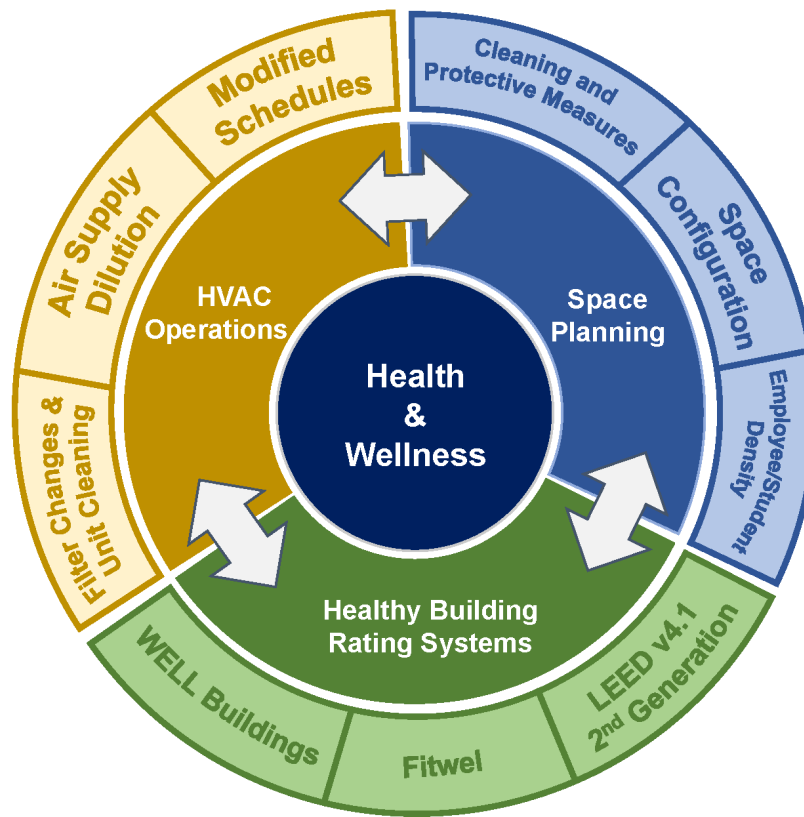
THE HEALTHY BUILDING MOVEMENT

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THE STONE HOUSE GROUP

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The industry of higher education has often led the sustainability movement by shaping platforms for comprehensive strategic planning and ranking institutions by the level of commitment and dedication to sustainability as seen in their programming, facilities, and overall campus culture. How will the concept of sustainability evolve as students return to the academic year in the current pandemic environment? And as we eventually move to a post-pandemic world, what long-term changes will be made? A parallel movement is dawning as these questions are asked constantly by business officers and program managers at educational institutions; a movement that recognizes a typically undervalued component of high-performance buildings, the health and wellness of building occupants.



THE STONE HOUSE GROUP developed a comprehensive Healthy Building Service Plan that incorporates HVAC Operations, Strategic Space Planning, and Rating Systems, to deliver a complete guide.

Re-prioritizing the 3 Pillars of Sustainability

The COVID-19 pandemic has placed a new emphasis on health and wellness in our school buildings. Most immediately, healthy buildings begin with short-term HVAC Operations and space planning strategies that support their reopening plan this fall. These efforts can be extended with Healthy Building Rating Systems.

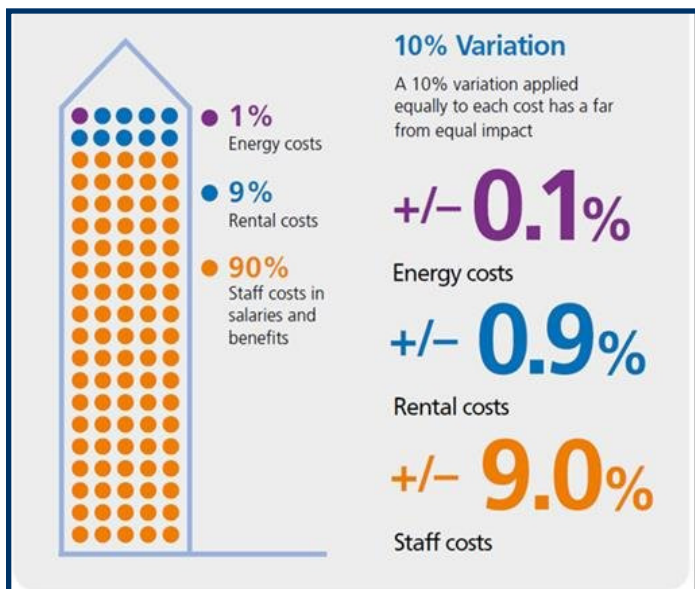
A longer-term outlook will lead us to consider what makes a building healthy beyond the pandemic. While the primary standards for ranking high performing buildings used to be energy based — for example, ENERGY STAR or LEED ratings — we may soon be evaluating buildings with a broader focus on health and wellness. Rating systems like WELL and Fitwel, which reward measures that improve health and safety, may soon be as prevalent as LEED buildings.

Financial Implications

One of The Stone House Group's foundational philosophies has been that "Energy is a barometer of facilities stewardship." We often found that educational institutions with low energy costs

were also well maintained with minimal deferred maintenance. Pre-COVID-19, a key focus for building operators was to reduce energy consumption. The pandemic has resulted in a radical shift in our approach in what defines sustainable and well operated facilities; the health and wellness of building occupants. The graphic on the following page provides a financial rationale for focusing on health and wellness. The cost of people – salaries and benefits – generally represents 90% of a facility's operating costs. Therefore, strategic investments in facilities can reduce health care costs and absenteeism, better test scores in schools, increase productivity in offices, and result in earlier discharges from hospitals. Studies such as Haverinen-Shaughnessy's "Association between substandard classroom ventilation rate and students' academic achievement" support the concept that improving indoor air quality (by increasing HVAC ventilation rates) results in improved academic achievement of students.

How much more will it cost to operate facilities focused on the health and wellness of occupants? Many facilities over the summer of 2020 were unoccupied, and astute building operators set back



*Courtesy of the World Green Building Council

HVAC systems to ensure they did not operate at full capacity while empty. This type of facility likely consumed 30% less energy compared to a pre-COVID baseline. As facilities prepare to open this fall, we recommend that operators implement higher filtration standards and increase air changes per hour to improve air quality, reducing the risk of airborne COVID-19 transmission. A facility with improved air quality will likely consume 30% more energy when compared to a pre-COVID baseline. Campus operators should be prepared for a large swing in energy costs from the summer to fall months, and year-over-year energy cost comparisons will likely show significantly higher energy costs in the Fall of 2020 as compared the Fall of 2019. This tradeoff: higher energy costs in exchange for healthier faculty,

staff, and students, is one that Business Managers will gladly make in today's environment. In a post-pandemic world, we envision campus operators will have a continued focus on health and wellness while operating as energy efficiently as possible.

Health and Wellness Building Rating Systems

Throughout the U.S and abroad, green building certification programs continue to catalyze increasing sustainability and performance in building design and construction. These solutions take one of two forms: prescriptive- or performance-based certification programs. Whereas prescriptive-based programs target the materials and equipment that comprise a building design, performance-based programs specify particular performance thresholds for the building. Prescriptive paths are a rapid, definitive, but conservative means towards verification compliance, and performance-based programs typically require a year of monitoring and verification following construction completion to demonstrate compliance.

Sustainability also extends beyond high-performance buildings into the culture, policies, and programming of the institution. With the abundance of opportunities to demonstrate dedication to the sustainability movement, the industry has developed several platforms for competitively ranking these institutions by how "green" they are. The table below summarizes these key points.

Program Type	Sustainability	Health and Wellness
Prescriptive Project	LEED, Green Globes	LEED v4.1 / Fitwel
Performance Project	Passive House, Net Zero Energy	WELL
Institutional Ranking Platforms	Princeton Review, STARS, Climate Leadership Challenge	TBD, <i>this is the future of the Healthy Building Movement</i>

The outset of the Healthy Building Movement will begin similarly to the Sustainability Movement, with prescriptive programs, often project-based, such as LEEDv4.1 and Fitwel that provide a guided method to a high-performance building that emphasizes the health of its occupants. Performance-based programs such as WELL provide an opportunity to meet aggressive goals in much the same way Passive House prioritizes the contiguous building envelope and airflow of a building, and Net Zero Energy focuses on the energy consumed and produced through a performance period.

LEED v4.1 (Second Generation)

In response to COVID-19, the U.S. Green Building Council has declared a “second generation” of the organization and has announced that it will update its rating systems to prioritize health. The updated rating system is set to be released at the end of 2020. Several immediate plans include four new LEED pilot credits designed to help building teams provide healthy spaces and safe re-entry. This shift in focus from one of the most well-recognized green rating systems in the world encapsulates the essence of this movement, and will undoubtedly signal other organizations to follow a similar path, thus paving the way forward for a broader shift in high-performance buildings overall.

Fitwel

The Fitwel rating system, developed by the Center for Disease Control (CDC) and the General Services Administration (GSA), aims to help employers evaluate all design factors to create a healthy space for building occupants and visitors. Fitwel incentivizes certification with low registration and certification fees, and a lack of prerequisites. Common categories of project evaluation include proximity to public transit, outdoor spaces, indoor air quality, access to healthy foods, and workspace design. Fitwel is well-positioned, having launched in 2016. Fitwel recently introduced their Viral Response Module, which provides annual, third-party certification of policies and practices informed by the latest public health research on mitigating the spread of contagious

diseases. Academic facilities can be Viral Response Certified or Certified with Distinction.

WELL

WELL is a rating system for measuring, certifying and monitoring features of the built environment that impact human health and wellbeing, through air, water nourishment, light, fitness, comfort, and mind. Unlike Fitwel, the WELL rating system takes a performance-based approach to certification, which moves the Healthy Building Movement forward one step on our table. Projects pursuing WELL certification are required to be evaluated and inspected by a WELL Assessor. WELL was developed by Delos, a wellness real estate and technology firm, and launched in October 2014. It is managed by the International WELL Building Institute, a public benefit corporation. Similar to LEED, WELL is third-party certified by the Green Business Certification Incorporation. WELL just recently began offering their WELL Health-Safety Rating for Facility Operations and Management, which is an evidence-based, third-party verified rating for all new and existing buildings focusing on operational policies, maintenance protocols, stakeholder engagement and emergency plans.

The arrival of this movement is further evidenced by the creation of subsidiary certifications within Fitwel and WELL focused entirely on the mitigation of infectious diseases.

Fitwel’s Viral Response Module provides annual, third-party certification of policies and practices to mitigate the spread of infectious diseases within facilities. In two months, buildings can be certified by the Center for Disease Control to effectively combat the spread of disease, and safeguard building occupant’s health.

The introduction of the WELL Health-Safety Rating again provides evidence-based, third-party verified certifications that demonstrate the building owner’s commitment to the health of building occupants. Moreover, the description of the certification on WELL’s website reads “[the certification] was

informed by the COVID-19 pandemic, but has broader applicability for supporting the long-term health and safety needs of people in a given space.” Both certification programs discuss the importance of cleaning and sanitization strategies, air and water quality management, and communication of building changes to occupants. Furthermore, both certifications introduce measures that impact tenants long-term, including emergency preparedness plans, mental health training, and sick leave policies. Anthropogenic policies and standards such as the ones identified in these certification programs will likely be as prevalent as energy consumption reduction measures.

Institutional Ranking Platforms

As more institutions pursue certifications signifying their commitment and dedication to their occupant’s well-being, a need will arise among consumers to identify and rank these institutions by the number of certified facilities, or policies for new construction, or the culture promoted within the facilities. For example, SecondNature has led this need for higher education institutions, by creating the Climate Leadership Challenges and pushing a higher standard for carbon emissions reductions. The Sustainability Tracking and Rating System (STARS), used by Climate Commitment institutions, ranks institutions on a five-tiered scale to identify the sustainability

performance of participating institutions. Notably, STARS requires institutions to provide feedback on the following question: Are school buildings that were constructed or underwent major renovations in the past three years LEED certified? Industry growth suggests that this question will be broadened to include healthy building rating systems such as WELL and Fitwel. Reopening facilities with a healthy building certification assures building users that measures have been taken to prioritize human health and wellness during these uncertain times.

Join the Movement

The pandemic has presented us all with a unique opportunity to prioritize the health and wellness of occupants and promote a somewhat undervalued component of sustainability – people – and building owners are encouraged to modify their operations and spaces to demonstrate this commitment. Just as the sustainability movement launched from within college campuses, the health and wellness movement will similarly grow within educational institutions. This movement begins with immediate modifications to HVAC systems and space reconfiguration, culminates in healthy building certifications such as WELL, Fitwel, or LEED v4.1, and will be followed with a platform to measure performance and rate peer institutions. How will your facilities compare?

[THE STONE HOUSE GROUP](#) is a facilities and environmental consulting firm dedicated to strengthening the mission of institutions. Since our foundation in 1999, we have served over 150 educational clients across the United States through Facilities Audits, Space Planning, Commissioning, LEED Administration, and others.