

WELL for Education



INTERNATIONAL
BUILDING
INSTITUTE

WELLCERTIFIED.COM

TODAY'S PRESENTER



Dr. Whitney Austin Gray

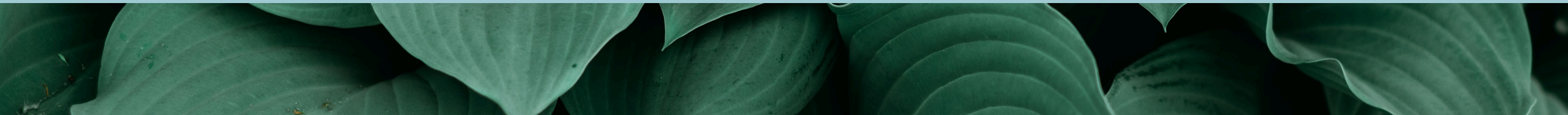
SVP, Research

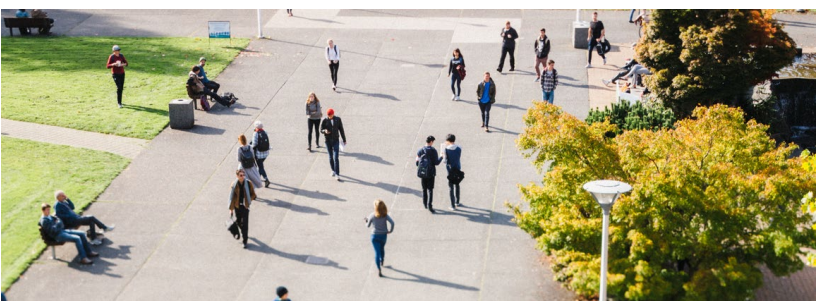
International WELL Building Institute





WHAT'S POSSIBLE



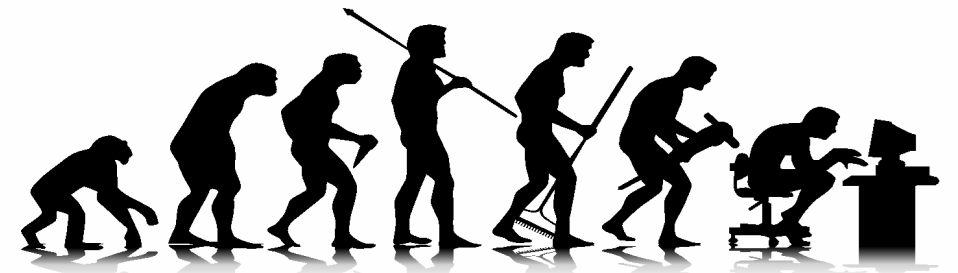


A modern office interior with large windows, people working at desks with computers, and a woman standing and presenting. The scene is dimly lit, with light coming from the windows. The text is overlaid in the center.

OUR ENVIRONMENT IS CHANGING HOW WE LIVE.



CHANGING WORK AND CULTURE.





CHANGING VIEWS.





CHANGING FOOD PRODUCTION AND SOURCES.



CHANGING HOW WE GET AROUND.



Public Health: Past, Present, and Future

Ten Great Public Health Achievements in the 20th Century



Immunizations
Motor-Vehicle Safety
Workplace Safety
Control of Infectious Diseases
Declines in Deaths from Heart
Disease and Stroke

Safer and Healthier Foods
Healthier Mothers and Babies
Family Planning
Fluoridation of Drinking Water
Tobacco as a Health Hazard



**WE SPEND
90% OF
OUR TIME
INDOORS.**

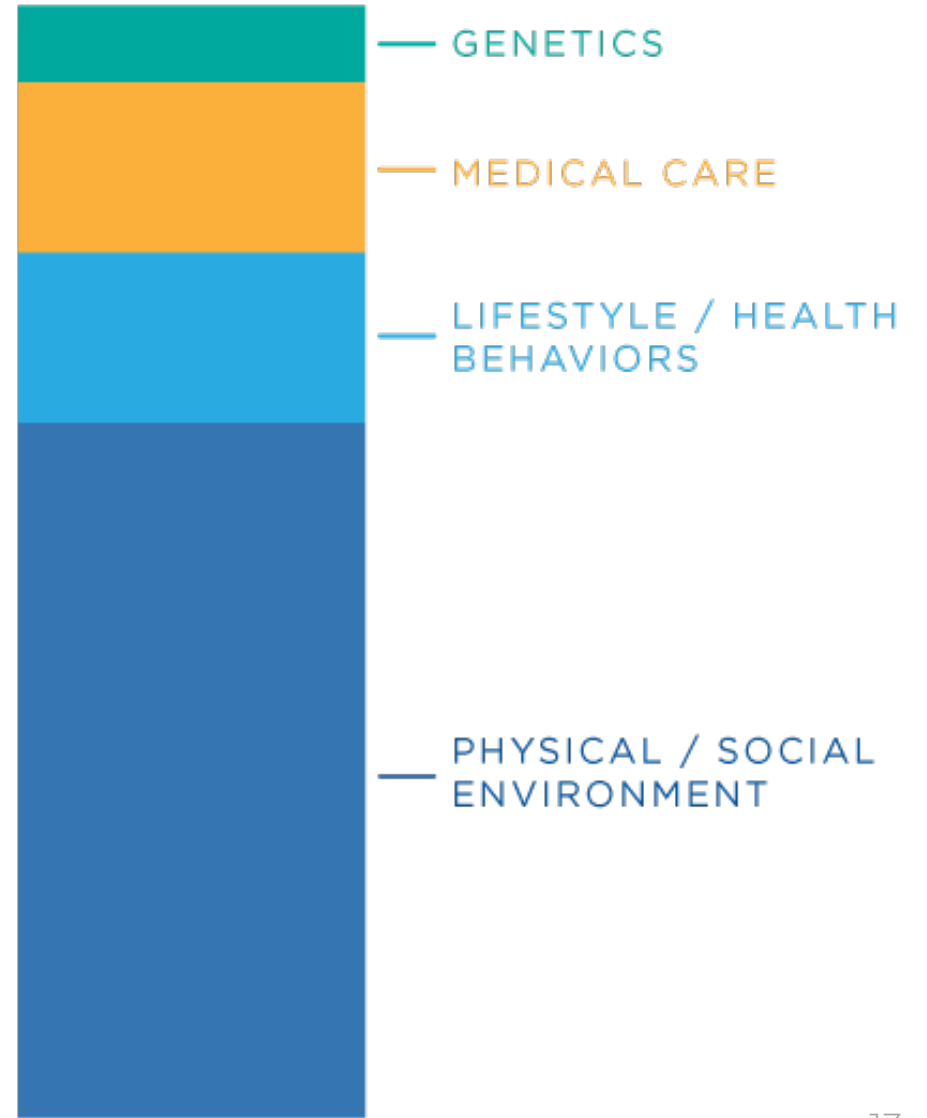
90%





WHAT DETERMINES THE STATE OF HEALTH?

SOCIAL AND PHYSICAL ENVIRONMENT IS THE LARGEST DETERMINANT OF YOUR HEALTH.



What will our moment in history be to shape the future of design?



THE IMPORTANCE OF QUALITY PUBLIC SCHOOL FACILITIES

WHY IT MATTERS

Ending disparities in facilities conditions and quality by income, locale and race, must be prioritized as these gaps will not be closed without an aggressive and intentional plan to eliminate them. As we look to the future, the widening school investment gap will continue to compromise equity in student education and health, while threatening shared sustainability goals.



**Educational
equity**



Health



Sustainability



Resilience



Jobs

PATHS TO A BETTER FUTURE

Build **public will** and **public sector capacity** for:

Effective...PUBLIC GOVERNANCE AND DECISION MAKING

Stable and adequate...FACILITIES OPERATING & CAPITAL FUNDING

Professional...FACILITIES MANAGEMENT

Engaged and collaborative...FACILITIES PLANNING

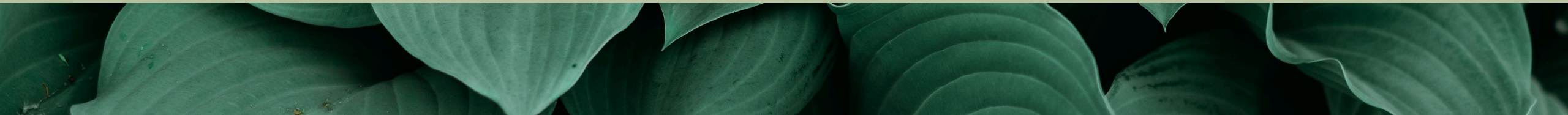
Comprehensive and transparent...FACILITIES DATA & INFORMATION

Regular...ACCOUNTABILITY





WHERE ARE WE TODAY







“

These cherished places house our children and are meant to prepare them for success—but they were not living up to the promise. For a sector that should be a paragon of health, many schools were cheerless places where too often students and teachers alike longed simply for working buildings that could adequately protect them from the cold in the winter and the heat in the summer.”

*Rachel Hodgdon
International WELL Building Institute CEO*

WELL for education

The COVID-19 pandemic resulted in **nationwide school closures in 188 countries** around the world, **affecting more than 87% of the world's student population.**

In the US, 54% of public school districts need to **update or replace multiple building systems** or features in their schools.¹



1. United States Government Accountability Office. *K-12 Education: School districts frequently identified multiple building systems needing updates or replacement*. Washington, DC June 2020. GAO-20-494.

WELL for education

UCAS observed a **450% increase in student mental health declarations** over the past decade¹

One in six children aged five to 16 were identified as having a **probable mental health problem**²



1. <https://www.ucas.com/corporate/news-and-key-documents/news/450-increase-student-mental-health-declarations-over-last-decade-progress-still-needed-address#:~:text=3.7%25%20of%20all%20UK%20applicants,mental%20health%20condition%20than%20men>
2. [Mental health of children and young people in England, 2021: Wave 2 follow up to the 2017 survey](#)



THE COVID-19 PANDEMIC

THE U.S. CONTEXT: SCHOOLS

- Major impact on working parents, women in particular (nearly 3 million dropped out of the workforce, currently 57%, lowest since 1988).¹
- Major impacts on school children; equity issues, digital dropouts.²
- Tentative school re-openings fall 2020; varied by state with ¼ still not in school by July 2021.³

1. Ellingrud, K., Segel, L. H. 2021. [Covid-19 has driven millions of women out of the workforce. Here's how to help them come back.](#) Fortune.com. February 13. Accessed Dec 8th 2021.
2. Hammerstein, S., Konig, C., Dreisorner, T., Frey, A. 2021. Effects of COVID-19 related schools closures on student achievement- a systematic review. Frontiers in Psychology. <https://doi.org/10.3389/fpsyg.2021.746289>
3. Willyard, C. 2021. [COVID and schools: the evidence for reopening safely.](#) Nature. July 7. Accessed Dec 8th 2021.



THE COVID-19 PANDEMIC

THE U.S. CONTEXT: TRANSMISSION AND CHILDREN

- Contrary to early indications, subsequent evidence showed rates of infection in children can be comparable, or higher, than adults.^{1,2}
- Hospitalization rates align with sociodemographic rates of adults- disproportionately impacting racial, ethnic minority groups.³

1.Center for Disease Control and Prevention. 2021. '[Science Brief: Transmission of SARS-CoV-2 in K-12 Schools and Early Care and Education Programs-Updated](#)'.

2.Lewis, N. M., Chu, V. T., Ye, D. e al. 2020. [Household transmission of SARS-CoV-2 in the United States](#). Clin Infect Dis 2020. doi:10.1093/cid/ciaa1166

3.Leeb, R.T., Price, S., Silwa, S., et al. 2020. [COVID-19 Trends among School-aged children- United States, March 1-September 19, 2020](#). MMWR Morb Mortal Wkly Rep 2020: 69(39): 1410-1415. doi:10.15585/mmwr.mm6939e2



THE COVID-19 PANDEMIC

THE U.S. CONTEXT: TRANSMISSION AND CHILDREN

- Rates of transmission vary widely; influenced by single or layered approach, community rates of infection and vaccination.¹
- Low levels of community vaccination + high levels of community transmission + prevention strategies not followed or implemented = some schools being significant sources of community transmission.^{1,2,3,4}

1. Center for Disease Control and Prevention. 2021. [‘Science Brief: Transmission of SARS-CoV-2 in K-12 Schools and Early Care and Education Programs-Updated’](#).
2. Espana, G., Cavany, S., Oidtman, R., Barbera, C., et al. 2021. Impacts of K-12 school reopening on the COVID-19 epidemic in Indiana, USA. *Epidemics*. 37: 100487. <https://doi.org/10.1016/j.epidem.2021.100487>
3. Stein-Zamir, C., Abramson, N., Shoob, H., et al. 2020. A large COVID-19 outbreak in a high school 10 days after schools’ reopening, Israel, May 2020. *Euro Surveill* 2020: 25(29). doi:10.2807/1560-7917.Es.2020.25.29.2001352
4. Ismail, S., A., Saliba, V., Lopez Bernal, J., et al. (2021). SARS-CoV-2 infection and transmission in educational settings: a prospective, cross-sectional analysis of infection clusters and outbreaks in England. *Lancet Infect Dis* 2021: 21(3): 344-353. doi:10.1016/s1473-3099(20)30882-3



THE COVID-19 PANDEMIC

THE U.S. CONTEXT: TRANSMISSION AND CHILDREN

- When prevention strategies in place, multiple studies have shown that transmission in school settings is typically lower, or similar to, community levels.^{1,2,3}

Ashlee Rezin, Chicago Sun-Times, Wisconsin public radio •

1. Ismail, S., A., Saliba, V., Lopez Bernal, J., et al. (2021). SARS-CoV-2 infection and transmission in educational settings: a prospective, cross-sectional analysis of infection clusters and outbreaks in England. *Lancet Infect Dis* 21(3): 344-353. doi:10.1016/s1473-3099(20)30882-3
2. Gandini, S., Rainisio, M., Iannuzzo, M. L., et al. 2021. A cross-sectional and prospective cohort study of the role of schools in the SARS-CoV-2 second wave in Italy. *Lancet Reg Health Eur* 2021:5:100092. doi:10.1016/j.lanepe.2021.100092
3. Goldhaber, D., Imberman, S. A., Strunk, K. O., et al. 2020. [To what extent does in-person schooling contribute to the spread of COVID-19? Evidence from Michigan and Washington.](#) 2020. CALDER Working paper No. 247-1220-2.

“[...Buildings] if managed poorly, they can spread disease. But if we get it right, we can enlist our schools, offices and homes in this fight.”



Joseph Allen, DSc, MPH

Co-Chair, IWBI Special Task Force on Coronavirus
Assistant Professor of Exposure, Assessment Science
Department of Environmental Health,
Harvard T.H. Chan School of Public Health

Opinion

Your Building Can Make You Sick or Keep You Well

Proper ventilation, filtration and humidity reduce the spread of pathogens like the new coronavirus.

By Joseph G. Allen

Dr. Allen is director of the Healthy Buildings program at Harvard T.H. Chan School of Public Health.

March 4, 2020



A BOLDER VISION FOR SCHOOL BUILDINGS

School buildings are an opportunity to model what a sustainable future looks like—for our children, their families, and their communities.

They have direct impact on:

CLIMATE CHANGE

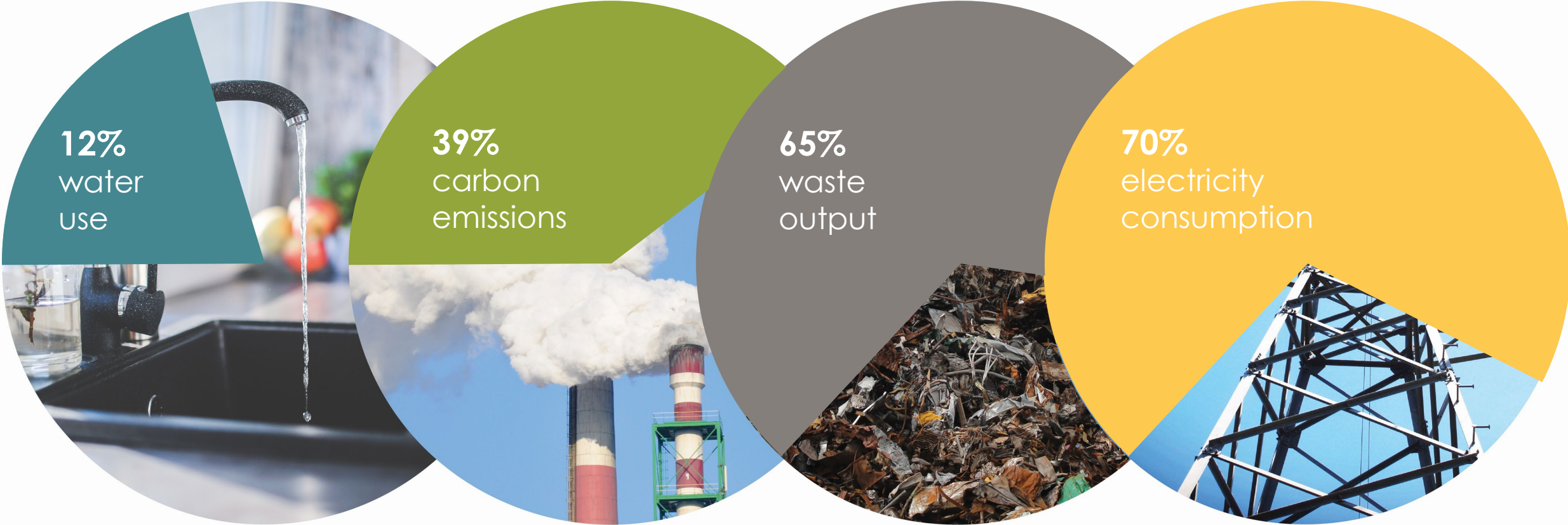
HEALTH


EDUCATION





BUILT ENVIRONMENT IMPACTS





We've looked at [more than] 200 studies. The school building influences student health, student thinking, and student performance, even affecting reading comprehension and test scores. [Things like] higher ventilation rates and better filtration are associated with reductions in headaches, fewer asthma attacks, better performance on cognitive function scores."

Dr. Joseph Allen | Associate Professor of Exposure Assessment Science, Environmental Health, Harvard TH Chan School of Public Health

FEELING WELL



**BIOLOGICAL
AND PHYSICAL
HEALTH**

THINKING WELL

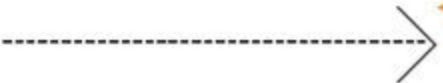


**SHORT-TERM
COGNITIVE AND
MENTAL WELL-BEING**

PERFORMING WELL



**LONG-TERM ACADEMIC
SUCCESS AND
ACHIEVEMENT**



IMPROVE AIR QUALITY

VENTILATION AND FILTRATION

- Air stagnation may concentrate airborne viruses or dust.¹
- Increased ventilation in a building can reduce the chance of influenza.¹
- Without proper maintenance and filtration, heating, ventilation and air conditioning systems can build up mold and particulates that can propagate respiratory diseases.^{2, 3}
- Maintaining a relative humidity between 40% and 60% may help to limit the spread and survival of COVID-19.⁴



1. Smieszek et al, 2020. Assessing the Dynamics and Control of Droplet and Aerosol Transmitted Influenza Using an Indoor Positioning System. Scientific Reports, 9 (2185).

2. Mendell MJ, Mirer AG, Cheung K, Tong M, Douwes J. Respiratory and allergic health effects of dampness, mold, and dampness-related agents: a review of the epidemiologic evidence. Environ Health Perspect. 2011;119(6):748-756.

3. Bekö G, Clausen G, Weschler CJ. Is the use of particle air filtration justified? Costs and benefits of filtration with regard to health effects, building cleaning and occupant productivity. Building and Environment. 2008;43(10):1647-1657.

4. Dietz, L., Fretz, M., Wymelenberg, K. V., Horve, P. F., Coil, D. A., & Eisen, J. A. (2020). 2019 Novel Coronavirus (COVID-19) Pandemic: Built Environment Considerations To Reduce Transmission. MSystems. doi:10.1128/msystems.00245-20.



BUILDING HEALTH MOVEMENT



WELL JOURNEY

PATHWAYS TO ACHIEVEMENT

WELL Health-Safety Rating Seal



WELL Certification Plaque



WELL Portfolio Score





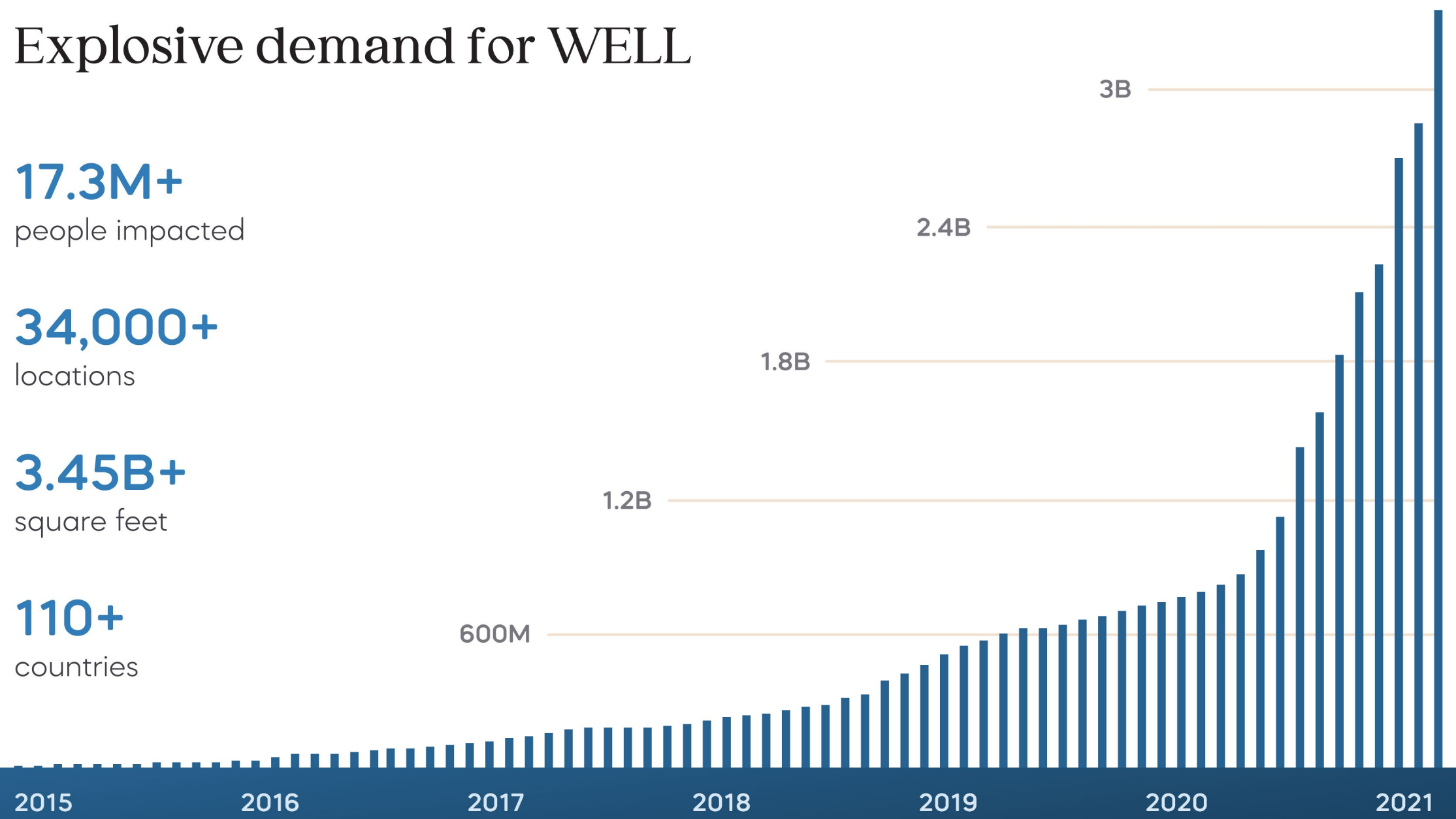
Explosive demand for WELL

17.3M+
people impacted

34,000+
locations

3.45B+
square feet

110+
countries



IMPROVE AIR QUALITY STRATEGIES & WELL FEATURES

Reduce indoor air quality issues by providing adequate ventilation and filtration








- Ventilation Effectiveness, WELL Feature A03
- Enhanced Ventilation, WELL Feature A06
- Operable Windows, WELL Feature A07
- Air Filtration, WELL Feature A12
- Microbe and Mold Control, WELL Feature A14

Manage humidity & control sources of indoor moisture

- Moisture Management, WELL Feature W07
- Humidity Control, WELL Feature T07

WELL Strategies

For common challenges.

-  Monitor and improve air quality across campus.
-  Reduce hazardous materials and maintain quality cleaning products and protocols, especially in laboratory settings.
-  Make the healthy choice the easy choice with nutrition education and responsible food sourcing.
-  Design spaces that encourage physical activity throughout the day, with things like active furnishings and improved ergonomics.
-  Set up restorative spaces and programs for students to manage mental fatigue and stress.
-  Create spaces for community building and design accessible, dorms, to accommodate all students.
-  Manage noise with sound absorbing features, sound barriers and sound masking.



WELL

GOAL

Reopen safely and with confidence



STRATEGIES

- Mental Health Services
- Emergency Preparedness
- Health Services & Benefits
- Hygiene Support
- Smoke-free Environment
- Air Filtration
- Cleaning Products & Protocols
- β Contact Reduction

WELL

GOAL

Reduce employee stress and burnout



STRATEGIES

- Mental Health Education
- Stress Management
- Enhanced Access to Nature
- Health & Well-being Promotion
- Physical Activity Promotion
- Operable Windows
- Circadian Lighting Design
- Mindful Eating

WELL

GOAL

Foster employee engagement & retention



STRATEGIES

- Restorative Opportunities
- Diversity & Inclusion
- Ergonomic Workstation Design
- Drinking Water Promotion
- Visual Lighting Design
- Thermal Zoning
- Nutritional Transparency
- Enhanced Audio Devices



WELL

GOAL

Prioritize diversity, equity & inclusion



STRATEGIES

- Mental Health Education
- Integrative Design
- Occupant Survey
- New Parent Support
- Family Support
- Civic Engagement
- Diversity & Inclusion
- Physical Activity Opportunities

WELL

GOAL

Support indoor environmental quality



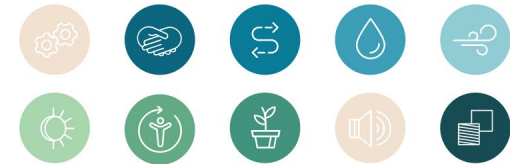
STRATEGIES

- Ventilation Design
- Air Quality Monitoring & Awareness
- Pollution Infiltration Management
- Microbe & Mold Control
- Construction Pollution Management
- Enhanced Air Quality
- Source Separation
- VOC Restrictions

WELL

GOAL

Enhance climate & sustainability



STRATEGIES

- Civic Engagement
- Site Planning & Selection
- Onsite Non-potable Water Reuse
- Combustion Minimization
- Daylight Design Strategies
- Enhanced Operable Windows
- Red & Processed Meats
- Waste Management



Winthrop Middle High School, Massachusetts. LEED Gold.
HMFH Architects
© Ed Wonsek

“I think what is most important about this building is that it allows teachers to think about how we learn and how students learn. Curriculum is just something the state gives to us and you can teach that anywhere, but with this space, we can really get creative, and experiment, and shepherd meaningful experiences for students.”

- Dr. Erin Russo, Principal Discovery Elementary School



Discovery Elementary, Virginia. LEED Gold and LEED Zero Energy.
© VMDO Architects



Photo courtesy of BNIM Architects
Greensburg School in Greensburg, KS. LEED Platinum.
© Farshad Assassi



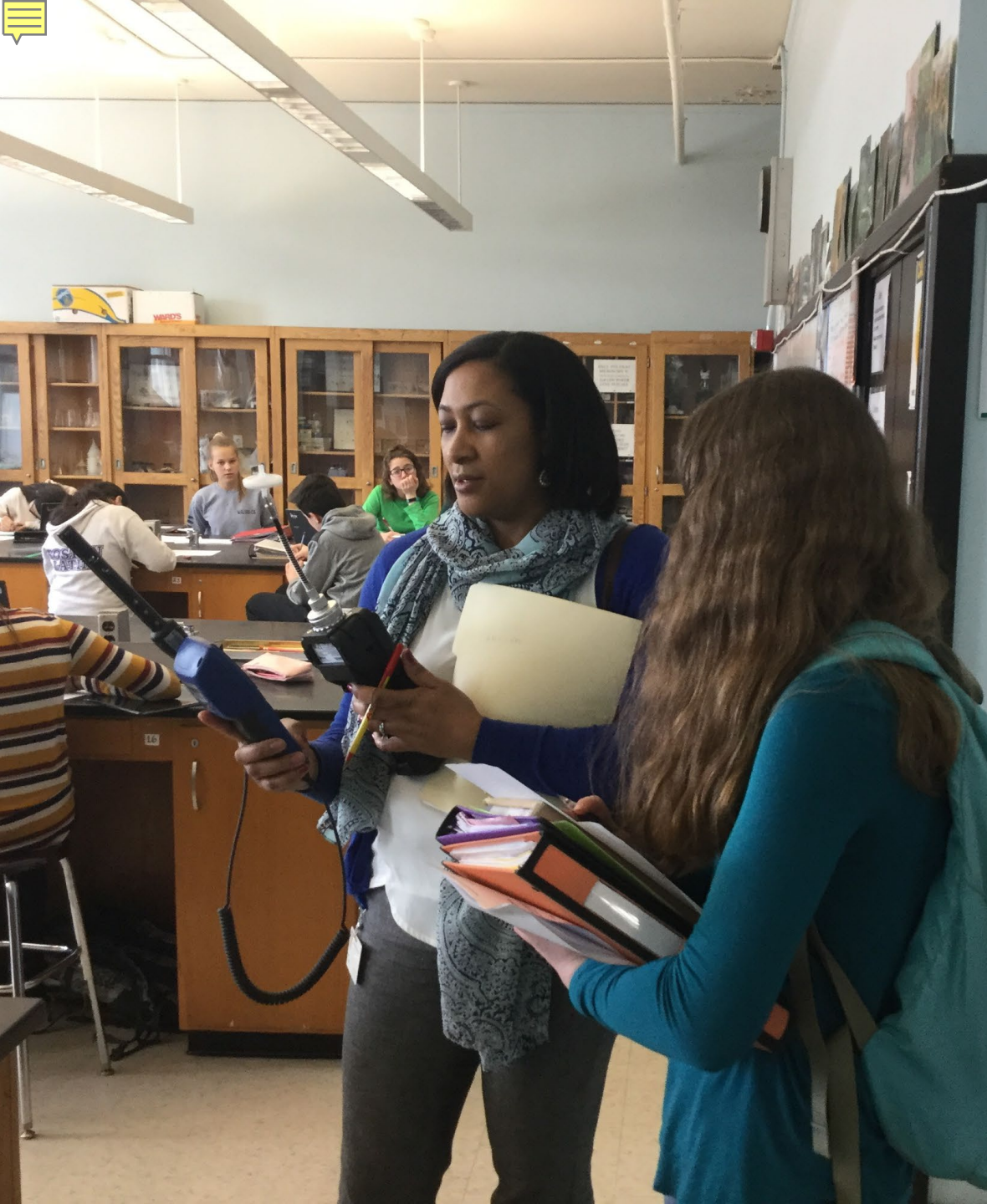
University School New Wing, Ohio. LEED Silver.
Centerbrook Architects and Planners
© Peter Aaron/Esto



Playa Vista Elementary,
California,
LEED Platinum.
© Edmund Barr



Will Rogers Elementary School, Oklahoma. LEED certified.
Selser Schaefer Architects
© Ralph Cole Photography



Students conducting sustainability assessments at Boston Latin School

Healthy schools

WELL Certification: Untitled, No. 1

Preschool

WELL at scale: Orrville School District

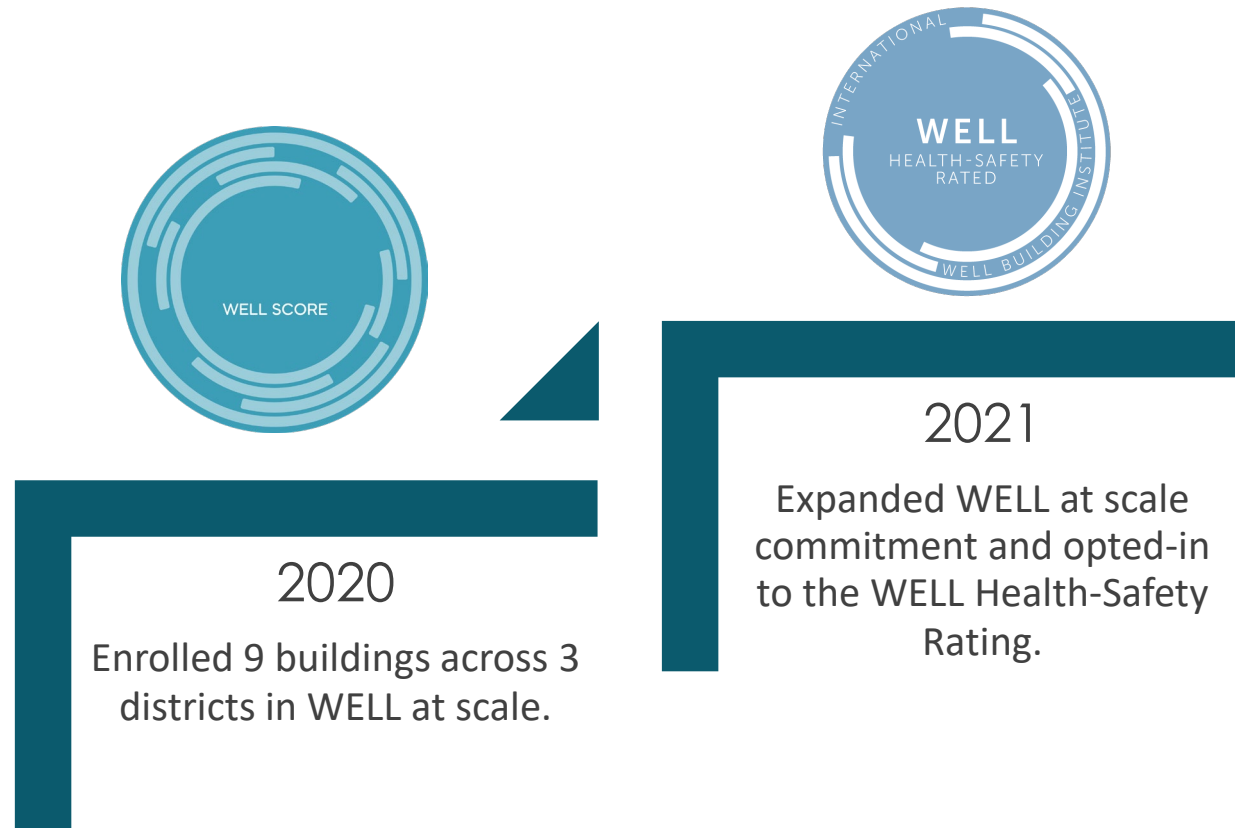
WELL Health-Safety Rating:

- Fairfax County Public Schools
- Hawken School
- Chartiers Valley School District
- Mayfield Junior School
- Upper St. Clair School District



Orrville School's WELL Journey

Goal: Create healthier environments for students, teachers and staff across all schools in the district.



Immediate impacts

- Better air filtration
- More water stations
- Enhanced nutrition
- Access to nature

The first K-12 school district to enroll in the WELL at scale program.



“We have been in this community for 40 years, and we understand the kids walking the halls of those schools are the future of Orrville. An investment in their health and safety is an investment in our community. That really makes this an easy decision. “

JON RITCHIE, Superintendent
Orrville School District

WELL at scale



Through policy interventions and building design, WELL can help create inclusive environments that support individual needs, abilities and preferences.

With a focus on health equity issues and an active Health Equity Advisory, WELL acts as a lever for advancing **a culture of health.**



“The health and safety of our students and staff, as well as others who use our school facilities, remain our top priority...the WELL Health-Safety seal is testament that we are sincere in our efforts to go above and beyond to provide the safest environment possible for teaching and learning.”

DR. JOHN ROZZO
Superintendent
Upper St. Clair School District

WELL Health-Safety Rating



2021 STATE OF OUR SCHOOLS

AMERICA'S PK-12 PUBLIC SCHOOL FACILITIES

21st CENTURY
SCHOOL FUND | Improving Public School
Facilities for All Children



 **NATIONAL COUNCIL**
ON SCHOOL FACILITIES
States Advancing Effective K-12 Policy, Planning, and Practice



WEBCASTS AND ARTICLES



WEBCAST · Jul 23, 2020

Keeping COVID-19 out of the classroom



WEBCAST · Nov 30, 2020

Pass or fail? Educating our students in the age of COVID-19: A conversation with Randi Weingarten



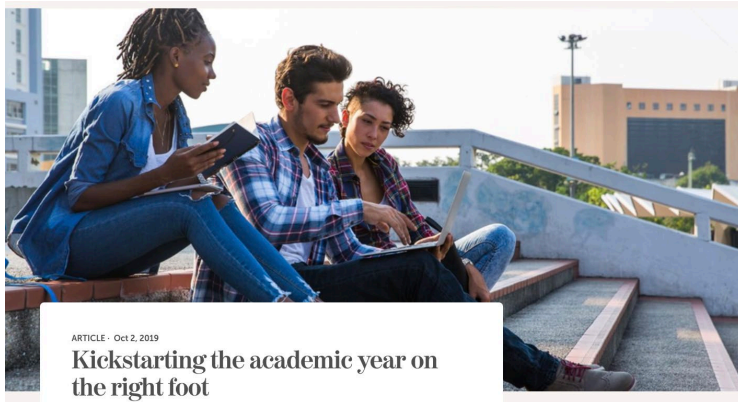
ARTICLE · Aug 22, 2019

Understanding the impact of design on mental health



ARTICLE · Sep 26, 2019

The effects of poor air quality on indoor environments



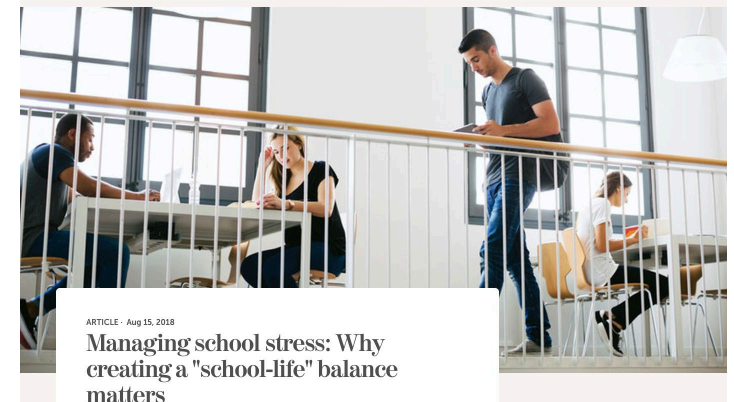
ARTICLE · Oct 2, 2019

Kickstarting the academic year on the right foot



ARTICLE · Oct 4, 2018

WELL v2 and educational spaces: Promoting healthy schools



ARTICLE · Aug 15, 2018

Managing school stress: Why creating a "school-life" balance matters

RESOURCES



ONLINE COURSE COVID-19 Teacher Training

Empowering educators with knowledge and strategies to adapt to new health and safety best practices.

[Access the training](#)

Supporting Organizations



ADDITIONAL RESOURCES

RESEARCH ON HEALTHIER SCHOOLS

[WGBC Better Places for People- Schools](#)

[Impact of School Buildings on Student Health and Performance](#)

[Schools for Health](#)

[Impact of Biophilic Learning Spaces on Student Success](#)

WELL SUPPORTS HEALTHIER SCHOOLS

[WELL v2 and Educational Spaces: Promoting Healthy Schools](#)

[Managing school stress: Why creating a “school-life” balance matters](#)

[Kickstarting the academic year on the right foot](#)

[Understanding the impact of design on mental health](#)

[The effects of poor air quality on indoor environments](#)

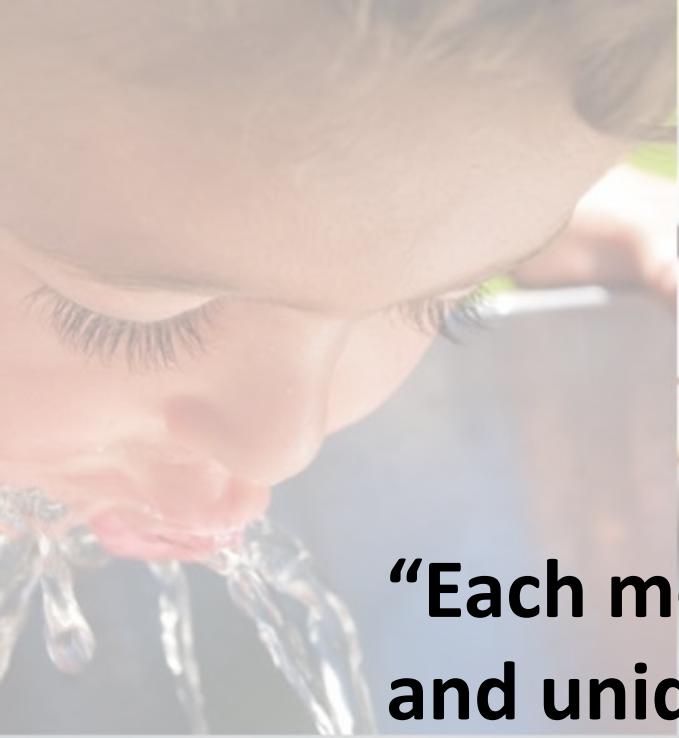
TRANSFORMING RESIDENTIAL LIFE

[Physical Activity, Sustainable Materials Create Healthy Residence Halls](#)

[Rethinking Residence Life to Promote Healthier Campus](#)

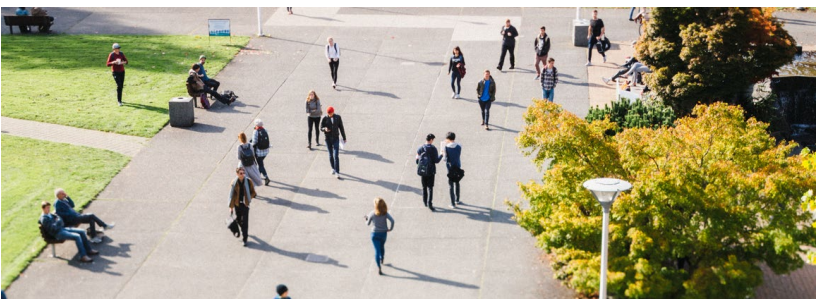
<https://resources.wellcertified.com/articles/university-s-historic-building-reaches-well-certified-gold-a-historic-university-s-new-look-with-well/>





“Each moment in history is a fleeting time, precious and unique. But some stand out as moments of beginning, in which courses are set that shape decades or centuries.”





What will our moment in history be to shape the future of design?



WE ARE
WELL

WELLCERTIFIED.COM

