A group of healthcare designers is finding ways to ensure healthcare spaces are generative and can grow with users for many years to come. What’s more, they’re learning to definitively measure success and apply principles across all design practices.

evolving

spaces

ILLUSTRATION BY SUZANNE CABRERA

BY STEVE HENDERSHOT
Part of the allure of Interior Design — and perhaps part of the allure of the profession for many designers — is longevity, the idea that the built environment will be an important, positive part of people's lives for many years. Clearly, it can't last forever: still physical spaces convey a sense of permanence, of importance. Interior Designers plan for how their work will be used years, even decades, from now.

It can be both disappointing and unsettling for designers to visit a space they created years prior, only to find it's not reaching its intended potential, not working for its inhabitants or even that it's in total decay.

But of course, there are those projects that perfectly fulfill the designer's vision years after the fact — spaces that are alive, that are perfectly suited to the needs of the people who use them, and that seem to have grown even more beautiful and functional than when the work was completed.

The name for such environments is "generative spaces," a term Wayne Ruga, Ph.D., FIDIA, AIA, Hon. FASID, uses to define spaces that improve over time and convey an ongoing sense of growth and vitality to the people who use them. Ruga is fascinated by the concept of generative spaces, and even more so by the idea of replicating them. After years of research, he believes he's closing in on the secret.

Leading by Design

Ruga, along with a small group of design and healthcare professionals, is in the midst of a long-term research project called Leading By Design, which spans the globe and is aimed at determining whether a formula for consistently creating generative space "really works for anyone, anywhere, regardless of what kind of project they're doing," Ruga says. "We want to see if the changes are sustainable, if they are systemic and if the improvements that we make are not just temporary improvements, but are continually progressive over time."

Based on early results from the project, Ruga thinks the answer is yes. But the "formula" isn't simply a matter of choosing certain materials, or even of replicating successful generative spaces already created. Instead, Ruga's solution involves learning and mastering design principles that are rooted in both social science and physical design. One of the keys, he says, is learning about the community being designed for — discovering its personality and its priorities, and understanding the kind of space it needs in order to flourish. Often, this is different from what a client thinks he or she wants.

"What's really important to clients isn't building something faster or cheaper, even though that's normally what they want to talk about," Ruga says. "But they also have a dream, an aspiration, and if you focus your attention on that big idea, then it's really easy to deliver successful design projects."

Ruga, who lives in Manchester, U.K., and is founder of The Center for Health Design based in Concord, Calif., focuses specifically on healthcare design. His work on generative spaces follows decades of research on how healthcare design can influence patient outcomes. Ruga's goal is to elevate healthcare design beyond healthcare to what he calls the "health industry," a broader term that reflects his belief that generative design can influence wellness.

One of the early experiences that influenced Ruga's generative space theory was with Planetree, a network of healthcare centers based in Derby, Conn. Ruga was friends with the executive director of a San Francisco Planetree center. Visiting the center, he observed the Planetree facility seemed to improve with time, unlike most design projects that gradually decay. Ruga noticed small things: an absence of the typical gradual accumulation of stains and "rogue signage," and plenty of signs of life and vitality, such as balloons, photographs and the smell of fresh cookies baked by employees. He visited several Planetree centers and found the pattern was repeated each time. Ruga was determined to replicate the phenomenon, and the Leading By Design research project was born.

His nine partners in the Leading By Design research project come from all walks of design, including Interior Designers, architects and manufacturers. Each participant has made an annual commitment to develop a case study in the area of generative space — first by incorporating Ruga's ideas into the design process, then by tracking those projects over time.

An Early Win

One of the early successes is the Arlington Free Clinic (AFC), a project to create a new facility for a free health clinic in Arlington, Va. The project was led by Tama Duffy Day, FIDIA, FASID, LEED AP, a Principal in the Washington, D.C., office of Perkins+Will.

Initially, the Perkins+Will project team created a spreadsheet of rooms needed, quantified those rooms and created an adjacency diagram to understand the flow of patients, volunteers and staff — in much the same way as all projects. In the initial plans, three components were included: the reception area, the clinic with pharmacy and the office area with a conference room dedicated to patient education.

Next, the team split and diverged on two different paths. One half of the team reviewed the initial test fit provided by AFC, visited the shell space and created the first plans. Day, in the meantime,
Day realized that in order to create a truly generative space, she would need to survey the people who received care at the clinic, as well as staff and volunteers, a diverse group that collectively speaks a total of 17 languages.

She asked patients, staff and volunteers about their expectations for the space, both visually and experientially. As a result of the findings — patients wanted light, beauty, comfort and visual interest, as well as an emphasis on community — Day altered her plans. The spaces allocated for health education classes, conferences and group counseling sessions grew, as did the waiting area and the space devoted to examination rooms. The pharmacy shrank from 28 percent of the total space to 12 percent.

“You might look at this and say it was a normal process for work, but I changed,” Day says. “My ability to be inquisitive has become more front and center, and I’m more willing to go out on a limb with a client and find that space that really would be an incredible space, something that will change lives, not just a competent solution.”

Day will continue to study the clinic’s performance as a generative space, to see whether the facility and the community it houses improve and coalesce. But the early results are promising: The clinic’s director loves the new facility, and more than that, she believes the AFC has opened the new clinic for the communities around them and improve over time.

“Unfortunately it can take years of study to determine whether a project qualifies as generative, and most Leading By Design case studies are still in their formative stages. But some of the participants have successfully applied generative space principles to their own operations: One business owner renovated his factory’s bathrooms and is upgrading the outdoor break area, and has noticed a change in employees’ work and attitude toward the environment. A design firm owner in San Diego asked her employees how well the company’s ideals matched their own, a process that led first to regular massages and bake offs, then to a tripling of company revenue.

As more people add their work to the generative space ideal, Ruga knows the theory will evolve in ways he can’t anticipate. One thing he insists on, however, is that designers not take too much credit.

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Ruga expects generative space to gradually work its way to the forefront of healthcare design. He predicts that within three years, it will be “significantly on the radar screen and influencing mainstream practice.” Five years later, it will be mainstream, underpinned by a body of supporting research.

To speed along the process, Ruga’s CARTAS Project is sponsoring an award in recognition of healthcare organizations that cultivate generative spaces. The first award was presented to Fayette for the design of the Pennsylvania State University Hershey Medical Center Cancer Institute in September at the Healthcare Facilities Symposium & Expo, an annual conference that Ruga started 23 years ago.

The Measure of Success

“This can be measured. This can be tracked,” Ruga repeats again and again. It encapsulates his idea that such spaces are not only real and can be cultivated, but can be empirically analyzed to evaluate whether they are, in fact, generative. Spaces can most definitely be measured to determine whether they contribute to the communities around them and improve over time.

Ruga’s theories have been developed both through his own study and the work of colleagues like Day, who have not only implemented his ideas but also refined them as a result of their own experiences. Leading By Design participants hope that the case studies they are pursuing will form the basis for a reliable model of how to create a generative space.

“You don’t make a generative space. You cultivate one, like a garden,” he says. “It takes some very thoughtful care about creating the right conditions for the place, and developing a mastery in cultivating these spaces is a continuous process of learning and improvement.”

Raber takes the garden analogy to heart. “If you continue to work on your garden, every year it gets better, and every year it’s more fun,” he says. “If you don’t work on it, it gets full of weeds and becomes a tangled mess. And healthcare buildings and organizations can become just like that where there isn’t continuous improvement.”

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CEU: EVOLVING SPACES

How well do you understand the concepts behind generative design? Find out in this issue’s CEU on pg. 43.

Wayne Ruga, Ph.D., FIDA, AA, Hon., FASID, Founder of The Center for Healthcare Design, Concord, Calif.