The Living Building Challenge Grows Up

A stringent standard for regenerative design expands its reach and influence.

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THE TEXT of the Living Building Challenge (LBC) certification system reads more like a manifesto than a green building standard. The document asks project teams to "imagine a building designed and constructed to function as elegantly and efficiently as a flower." It implores users to "think about every single act of design and construction as an opportunity to positively impact the greater community of life and the cultural fabric of our human communities." Extending the flower metaphor, it is organized into seven categories, or "Petals"—Place, Water, Energy, Health + Happiness, Materials, Equity, and Beauty. Jason McLennan, the Challenge's author, and founder and former CEO of the International Living Future Institute (ILFI), which administers the standard, explains the unusual tone. "The Challenge has always been a philosophy first and an advocacy and certification tool second," says McLennan, now head of his own Bainbridge Island, Washington, design firm.

The New Age terminology belies LBC's rigor. The Challenge is widely regarded as the world's most stringent building-certification tool. Its seven Petals are divided into 20 mandatory "imperatives." Many are tough to achieve, including avoidance of products that contain substances on a long "Red List" of hazardous chemicals commonplace in building materials. LBC projects are also required to be net positive for both energy and water—and not just on the basis of modeling. Teams must submit at least 12 months' worth of data demonstrating such performance. The LBC is so difficult, in fact, that only 25 projects have achieved full "Living" status since the launch of its first version in 2006. By and large, these have been small structures, with straightforward programs, such as nature centers. There have been notable exceptions, of course, including the Bullitt Center, in the Capitol Hill neighborhood of Seattle (RECORD, June 2013). Completed in 2013, and certified two years later, the 52,000-square-foot, five-story office building, designed by the Miller Hull Partnership with a projecting roof clad in photovoltaic (PV) cells was, until very recently, the world's largest Living structure.

Now the scale of Living projects is increasing. Currently, 338 projects are registered with ILFI as aiming for living status, and a number of buildings that are certified, or on the path to certification, are meeting or exceeding the size and complexity of Bullitt. Some have surprising programs. Last April, the vintner Silver Oak, in Healdsburg, California, certified a 100,000-square-foot winery and tasting room housed in buildings designed by Piechota Architecture—making it the largest Living project thus far, and the only production facility to achieve this status. An even bigger project, Brickworks—a 140,000-square-foot shopping mall near Melbourne, designed by NH Architecture—was completed in late 2019. The complex, which includes a 27,000-square-foot rooftop farm, is targeting Living status. Teams are also tackling potential Living projects in difficult climates, such as Atlanta, with its heat and humidity, where the Kendeda Building for Innovative Sustainable Design—designed by Miller Hull and Lord Aeck Sargent—opened on the campus of the Georgia Institute of Technology in the fall of 2019 (RECORD, December 2019). The 37,000-square-foot academic facility, which has completed its performance period and is on track for certification, has an expansive PV

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THE BULLITT CENTER, in Seattle (top), and the Kendeda Building, in Atlanta (middle), both by Miller Hull, meet the LBC net-positive energ requirement with expansive PV arrays. A shopping mall (bottom) in Melbourne, pursuing certification, has a rooftop farm.