

# Professional Development: Five Emerging Building Types to Master

TEXT BY ALISON GREGOR

For architects looking to expand their portfolios, vying for the longstanding building types—libraries, theaters, office towers—against a litany of established firms can seem futile. But, to take the road less traveled, here are five increasingly important typologies with room for more design experts.

## Bioclimatic Buildings

By maintaining a connection to the outdoors and climate zone, bioclimatic buildings enhance occupant comfort with little need for energy-intensive HVAC systems. They are often oriented to leverage daylight and wind patterns, utilize local or site-sourced materials, and incorporate ancient, low-impact construction techniques adapted for modern use, says Andrew Lee, a senior consultant with Seattle-based Paladino and Co. But the big challenge, he says, is “connecting bioclimatic design to something financially beneficial, such as attracting better talent.”

## Data Centers

The desire for ever more computing power drives the demand for these specialized facilities. Getting a foot in the door can be daunting. “The clients tend to be quite savvy, so they do value a track record of experience,” says Garr Di Salvo, a New York-based associate principal at Arup. Architects must also anticipate a client’s future needs—retrofits are tricky in buildings that operate 24/7—as well as “densification,” or the evolution of more powerful

servers, he says. “That has implications on the facility’s cooling systems.”

## Net-Zero Energy Buildings

All roads in sustainable design are leading to net-zero energy buildings: Title 24 of the California building code mandates that new commercial buildings be net-zero energy by 2030, the price of solar panels has plunged, and concern for the environment is up, says Brad Jacobson, AIA, a senior associate and sustainability leader at EHDD. Successful architects need to work in partnership with the owner from pre-construction to post-occupancy. Verifying building performance requires an exceptional level of diligence because tools for obtaining post-occupancy data remain “fairly archaic,” he says.

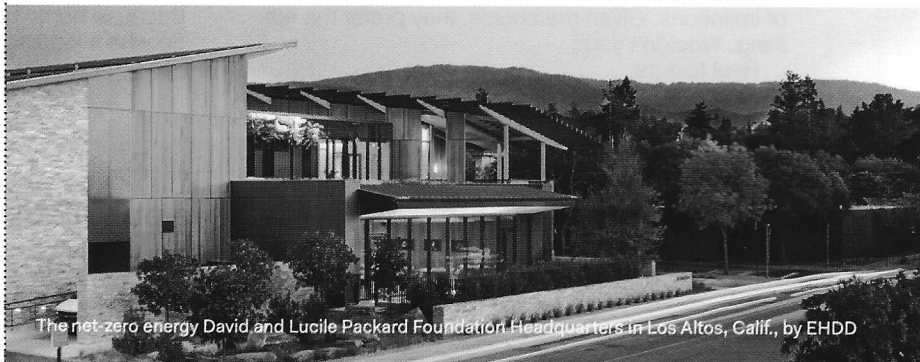
## Vertical Farms

At the juncture of architecture and agriculture, vertical farms, in which produce grows in multistory racks using hydroponic or aeroponic systems,

are the wave of the future, says Jason Chmura, AIA, an associate at Princeton, N.J.-based KSS Architects. “The efficiency in their design is the small footprint,” he says. The lack of available land in cities means that vertical farms are often also adaptive reuse projects, which adds complexity to their technical design and permitting process.

## Resilient Buildings

In the face of extreme weather, resilient buildings are designed to maintain functionality or bounce back quickly in the aftermath. Strategies range from elevating crucial building systems to avoid floodwaters, to specifying materials that allow ground floors to flood, dry out, and return to service, says Robin Guenther, FAIA, a principal of Perkins+Will. Designing for events that may never happen and that vary by region add to this project type’s complexity, she adds. “We need to take the science seriously and lead our clients, even when they are skeptical.”



The net-zero energy David and Lucile Packard Foundation Headquarters in Los Altos, Calif., by EHDD

> To learn more about how these five project types can deepen your firm’s portfolio, visit [bit.ly/5bldgtypes](http://bit.ly/5bldgtypes).