

new visions of home

rob luntz and joe tanney
resolution: 4 architecture
new york city

vision: customize modular typologies

It all started with a loft. Dozens of lofts, actually. For 15 years, the New York City firm Resolution: 4 Architecture has relied on a steady diet of loft renovations. "Doing a lot of high-end residential work in New York, we've learned to maximize each and every inch of space," says co-founder Joseph Tanney, AIA. Hearing his loft clients bemoan the lack of Modern housing options outside the city gave him and partner Robert Luntz, AIA, some food for thought. If they could design a minimal box within an existing building, they reasoned, why couldn't they do the same thing on its own—a free-

standing loft? And, for that matter, why couldn't they repeat the module over and over again, offering home buyers an affordable Modern housing option? "It's a natural extension of our work to be designing within a box," Tanney says. "We've been doing this since we started."

Tanney and Luntz, whose combined resumes include stints with

Gwathmey Siegal, Peter Eisenman, FAIA, and Perkins & Will, knew they weren't the first to imagine mass-produced Modern housing.

"Most architects over the age of 40 will say they've been interested in it at some point," Tanney says. For several years the idea was just that to them—an interest, rather than something they actually pursued. But around 2002 the revitalized prefab movement caught the attention of the media, and the deluge of press spurred Tanney and Luntz to stop dreaming. After researching all aspects of the prefabricated housing business, they decided to focus on modular designs. And they came up with an angle most of their failed predecessors hadn't tried: working within the system, rather than trying to change it from the outside. Instead of expecting manufacturers to adapt to their ideas, they decided to design houses that could be built using established factory procedures. Since the industry wasn't seeking out Modern designs, they'd bring Modernism to the industry.



Steven Freeman



The next test for Resolution: 4 will be the completion of 20 or so prefab homes it's now designing, including the House for Fire Island (above), whose modules will be delivered by barge.

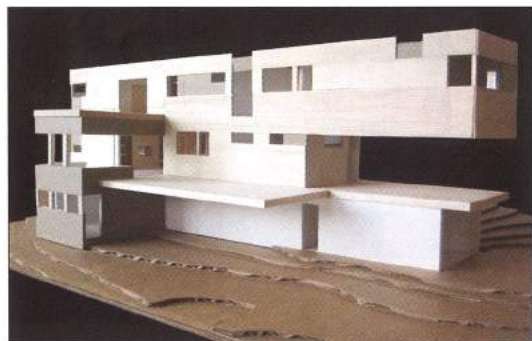
"it's a natural extension of our work to be designing within a box."—joe tanney



The key to the firm's modular program lies in its site specificity. The Hawk Ridge Residence will contain a customized central dining porch that opens up to the outdoors.



Renderings courtesy Resolution: 4 Architecture



Each modular home by Tanney and Luntz's office represents an adaptation of their modular typologies. The Mountain Retreat (above) is a cross between the Lifted Bar and Two-Story Bar, and the Retreat House (left) is a customized blend of the Offset T, 3-Bar Bridge, and Two-Bar Slip.

where it can fill a functional niche and doesn't rely so much on its aesthetic appeal. England has some remarkable prefab housing projects that work within a tight economic bracket and look good, but have a conservative aesthetic. Ikea in Sweden is marketing a prefab housing complex called BoKlok, which aims at a market I think is important for the U.S.—newlyweds, recently divorced, mixed and transitional families, single parents—people who can only afford a communal situation. I think that's pretty smart."

Allison Ewing, AIA
William McDonough + Partners
Charlottesville, Va.

"Modularization can tip the scale toward mass-producing building materials that can be disassembled and turned into something else. If you start to do something at a certain volume, the potential for controlling the process is increased, whether it's construction waste management, getting the HFCs out of the Styrofoam, or finding sources for sustainably harvested woods."

James Cutler, FAIA
Cutler Anderson Architects
Bainbridge Island, Wash.

"High design is not as important to me as the question of whether we can achieve a benign relationship to the landscape and a clear expression of materials through prefab housing. We've embarked on a journey with Lindal Cedar Homes' house kits. Our best work being a 10, we're getting about a seven on the use of materials and the fit with the land. Most buildings out there rank two or three, so there's some level of success. But the jury is still out."

Larry Scarpa, AIA
Pugh + Scarpa Architecture
Santa Monica, Calif.

"There is nothing more cost-effective than local/regional technologies and local labor. Despite the renewed interest in prefab, it's still very difficult to make it affordable. Prefab homes work because they have a system, a plan, and a dimension. But I don't think there's a homeowner who doesn't want to have a say in what his house looks like."

Kevin Culhan, AIA
Vice president of architecture
Donald A. Gardner Architects
Greenville, S.C.

"We've seen an increased interest in panelized construction but are not aware of a renewed interest in prefab housing. High design will always require a level of craftsmanship and uniqueness that a standardized system will not be able to offer, although aspects of prefabrication will surely

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"architecture needs to be site specific. you can't just plop down mcdonald's everywhere."

—joe tanney

Once the pair had established their course of action, they designed a series of six modular housing typologies. Several variations exist within each typology, and each one can be customized and combined with other modules to create a house tailored to its site and client. For example, the Dwell Home, Resolution: 4's winning entry in *dwell* magazine's 2003 prefab invitational, is a modification of the Two-Bar Bridge, a subset of the Standard Bar typology. And the firm based a just completed 2,500-square-foot home in Annapolis, Md., on the Z Series typology, adapting it to fit a narrow site, channel waterfront views, and save an existing tree. The system refutes the notion that prefab doesn't take the site into account, a subject Tanney feels strongly about. "Architecture needs to be site-specific," he says. "You can't just plop down McDonald's everywhere. We're not interested in perpetuating the complacency of American suburbs."

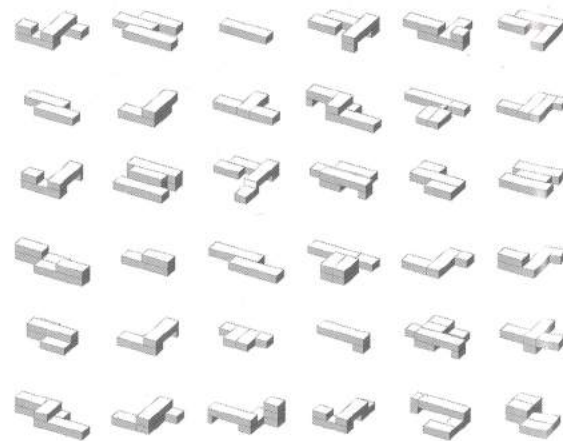
Such mass customization doesn't exactly come cheap, but as a rule it costs significantly less than pure custom, site-built projects, which still account for half the firm's work. As a point of comparison, take two houses it's doing within a few hours of each other in New York state. One, a customized modular residence, costs \$175 to \$200 per square foot. The other, a site-built custom home, tops out at \$300 to \$350 per square foot, nearly twice as much. And the price of Resolution: 4's modular homes could decrease as time goes on. According to Tanney, 60 to 80 percent of each module is built at a factory. The remaining 20 to 40 percent of construction—which can range from finish flooring and tile work to cabinetry and roofing, depending on the client's preferences—happens on site, and this variable drives up the home's overall cost. The more the architects can figure out how to do at the factory, the more affordable the final price tag will be.

Tanney admits his and Luntz's 10-person firm isn't yet making a profit from prefab, though it's getting close. Finding modular housing factories to collaborate with has proved difficult, due to the prevailing industry attitude that Modern houses are ugly and hard to sell. That may be changing, though. "Since all the buzz about prefab started, a number of the manufacturers have done focus groups and come back to us saying yes, there is a market," he says. A couple of panelized housing companies also have approached Resolution: 4 about designing prefab prototypes for possible production down the line. So the firm's future just might include panelized construction, as well as the modular system it's worked so hard to implement.

Its immediate goal, though, is to get the 20-plus modular homes it's working on (including a seven-to-11-unit artists' community) successfully built and occupied. "We're trying to hunker down and build," says Tanney. Has their considerable investment of time, money, and effort in prefab been worth it? "Hell, yeah," he says. "It's exhilarating. We're in this for the long haul."—*m.d.*



Cranes place Resolution: 4's second built modular house, in Annapolis, Md., onto its site (above). The firm's modular typologies (below) offer buyers a wide selection.





The floor plan and window placement at this conventionally constructed house in Kent, N.Y., help bring in lake and forest views.



The Dwell Home, in Pittsboro, N.C., (left and below) garnered a boatload of publicity both for Resolution: 4 and for prefab housing in general.



Photos courtesy Resolution: 4 Architecture

filter into mainstream housing. You can purchase the same automobile model as your neighbor's but get something more customized to your taste. The same level of fit and finish will be required for prefab to be accepted in the marketplace."

Allison Arieff

Editor of *dwell* magazine and author of *Prefab San Francisco*

"There's a much stronger national consciousness of design now, helped along by Ikea and Target; it's no longer an elitist movement. I'm seeing people who are frustrated by the experience of buying a home, and architects who are motivated to make a system that works for those buyers. Houses with enough options for personalization avoid the stigma of being bland. You see this business model in BMW's Mini Cooper, where people are buying into a brand but taking ownership of that brand by being able to make a different kind of roof. I'm also seeing a savvy group of architects who are taking a holistic approach to business, making the connection with financing and developers."

Dan Rockhill

Professor of Architecture

University of Kansas, Lawrence, Kan.

"Yes! I do think it's a way to bring design to the broader public that cannot afford an architect. Increasingly, the entry-level home buyer is hip, went to college, likes the urban life, and has a clear disdain for suburbia. The best analogy to prefab houses is the Mini Cooper—mass produced but with enough options to let the owners feel they have a custom automobile. This will be the appeal of prefab, a little something for everyone at an affordable price."

Witold Rybczynski, Honorary FAIA

Meyerson professor of urbanism

University of Pennsylvania, Philadelphia

"Any prefabricated system that limits the appearance of a house will fail right away. A lot of the architecturally motivated houses are very different looking, and the market for them could fit on the head of a pin. People interested in prefab should look at panelized building technology as it currently exists. Unlike sectional homes, which have to be a box, these prefab walls can take on any shape you want. They're successful precisely because they don't dictate the appearance of the house."

Barry Berkus, AIA

B3 Architects

Santa Barbara, Calif.

"I'm high on the idea. Prefab offers great opportunities, whether it's panels and modular components or entire houses made in a factory, and it's receiving a great deal more design

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