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20/20 Vision

Imagining the Apartment of the Future

By Teresa O'Dea Hein, Managing Editor

"The future is already here," points out Daniel Gehman, AIA, LEED AP and principal at TCA (Thomas P. Cox: Architects). With an accelerated pace of innovation evident in the past five to 10 years, industry observers believe that the groundwork is already being set for the apartment of 2020. While anything is possible, those interviewed for this special report agree "the paradigm is shifting to denser spaces that are highly amenitized," as Gehman puts it.

Generation Y preferences are already influencing the multifamily industry—but what advances will be needed to satisfy them and the following Generation Z residents?

First of all, who are these residents? While many possible years are used as the brackets for Generation Y (often called Millennials), members of Generation Y in the U.S. number approximately 76 million if the years 1978–2000 are considered, as is common in market research.

Both Generation Y and aging Baby Boomers share a desire to be more urban and more connected, in a social networking dynamic, observe a number of industry experts. They expect to see a growing emphasis on green strategies impacting everything from energy generation, usage and control to material choices and resource conservation, as well as provisions for parking facilities.

Gen Y is often considered a generation of privilege that's used to organized activities and accustomed to not having to share living spaces. To meet their needs and wants, multifamily communities in 2020 could be influenced by:

- social networking;
- higher density, urban development;
- smaller, more compact units;
- home automation for energy control and security;
- greener materials and processes;
- use of alternative energy sources;
- reduced carbon footprints;
- universal design for aging in place;
- reduced provisions for car parking;
- more mixed-use developments;
- more people working at home;
- seamless union of technology and adaptable spaces;
- inclusion of outdoor green space;
- top-quality workout centers; and
- no more landline phones.

Based on patterns already evident, future multifamily residents will be technologically connected and socially networked, according to Vickie Alani, AIA, associate principal at ADD Inc.

"Generation Y residents are very specific in the way they come together with a certain group of people and want to be with like-minded individuals," explains Steve Basque, IIDA, a principal at ADD Inc. "They like that sense of community and will look for apartment buildings that offer that type of environment. So communities will become very targeted, aimed at a certain demographic."

Compact urban developments

Basque believes residences near universities could appeal to Baby Boomers who'd want to take classes or attend free lectures and concerts. (But older residents would want larger units, he adds, because they have a lifetime of possessions and tend to cook and entertain.)

Transit-oriented development will be a given by 2020, says Basque, because densities in urban locations will have to increase. This ideally would allow nature to stay natural without urban sprawl, he believes. Escalating gas prices will also drive more people into apartments, adds Basque.

"For the first time, there'll be a slowing of the acquisition of cars," predicts Basque. "American culture might not be as car-focused as in the past."

"I don't think younger generations want that quarter-acre lot in the suburbs," agrees Greg White, vice president, development for Equity Residential. "As cities have cleaned up and become safer, people want to be where the action is, with retail, restaurants and other attractions nearby, especially with \$5 gallon gas. The question is, how do we make it affordable, as construction costs will no doubt continue to rise? Plus, residents have grown used to more upgraded finishes, like granite countertops, and I don't think we'll go back [to cheaper materials]."

Observers are expecting a drop-off in demand for parking in future developments, with more emphasis on public transit. Access to car-sharing services like ZipCar, more storage for bicycles and outlets to recharge electric cars are expected to increase. "If buildings start to accommo-

date alternative transportation, people will use them, but it has to be easy," Alani points out.

Garage space could become more like a storage facility, Basque says. And since cars might not be taken out as often, more stacked parking systems could be used, so the garage takes up a smaller footprint. Furthermore, Alani notes zoning may continue to allow fewer cars per unit.

"Advanced building technologies will lead to user-configurable spaces and 'living' structures that will intuitively respond to a resident's environmental needs and moods, with products like LCD wallpapers, adhered by surface tension, that project a variety of murals. This façade reacts to the state of mind of the resident—projecting either joy or solace," says TCA's Gehman. These user-responsive built-ins could even program music, temperature and aromas, Gehman predicts. They could be voice- or thought-activated via an electromagnetic sensor on a radio frequency identity device (RFID).

Plus, the idea of projection TV could take on a whole new dimension in the future as entire walls or even ceilings could be used to display television programs or movies. "It used to be that you always had to have a large wall where a TV could go," Basque recalls.

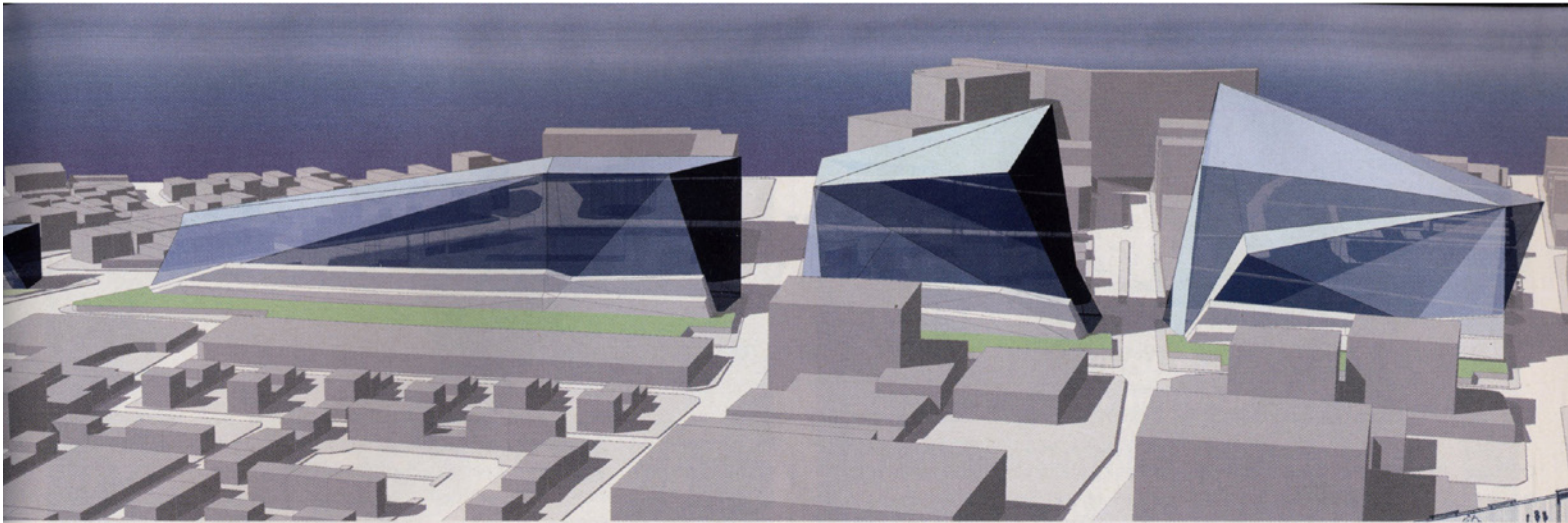
Gisue Hariri, a principal with Hariri & Hariri-Architecture, envisions technology being embedded in the building walls and floors, so that residents watch movies or check e-mails anywhere in the unit.

Square footage will be reduced because developing real estate will become more expensive, points out Basque and others. At the same time, these smaller units will keep rents lower so that residents could choose not to have roommates. Many Gen Y-ers tend to be from smaller, more affluent families, and tend to not be used to sharing, Basque observes.

Already, a British designer has introduced the "iPad," a cost-effective 380-sq.-ft., one-bedroom condominium.

"The same way people look at small cars as saving energy, I can see small units as the remedy from an energy conservation standpoint," notes Phillip Gesue, director, acquisitions and development for Time Equities Inc.

While units will be smaller, Mark Moorhouse, project partner at Dominion, and others expect that at the same



time, they will contain more amenities, like steam showers or whirlpools, as well as conveniences like dog-walking and maid service. Plus, the number of bathrooms might increase, starting with two-bedroom units containing 2 1/2 baths.

On the other hand, Gehman expects that as Latino and Asian families make up a greater percentage of the population, developers might create spaces that can grow and accommodate several generations in a unit.

Reduced Carbon Footprints

"What I would like to see is apartment communities that have no negative impact," says Kevin Ratner, president of Forest City Residential West. "And communities that could even be restorative, such as by generating energy for themselves and even able to give energy back to the grid, as well as by being built out of recycled materials and not creating any waste." Ratner adds, "We'll certainly be seeing buildings use less energy as a number of cities, like Los Angeles, Boston and Chicago, are already demanding."

People will be living closer to their jobs or in a live/work/telecommuting arrangement, according to a number of those interviewed. Telecommuting could even mean the chance to work with several people who also live in the same building and work for the same employer. For instance, taking corporate housing to a new level, Ratner hypothesized that a company might want to rent, say, six apartments and set up a satellite office.

Furthermore, Ratner says, there might be more opportunities for communal living activities, such as a community garden, possibly instead of a pool.

"Every component of a building will have to do more than its obvious use," believes Gehman, with thin-film photovoltaics and wind capturing devices mounted on the building exterior. "More and more projects in 2020 will be off grid," Gehman predicts. "Perhaps management companies will become their own tiny utilities." A more resource-aware analysis of the real cost of a dwelling could even take on a marketing angle.

Time Equities' Gesue expects to see new types of photovoltaic panels that use holograms, rather than flat screens, to catch the sun's rays so they can be mounted in different locations. "I expect the use of photovoltaic and geothermal will be much higher," he reports. "Creating cooling is particularly expensive and geothermal does that without creating a carbon footprint."

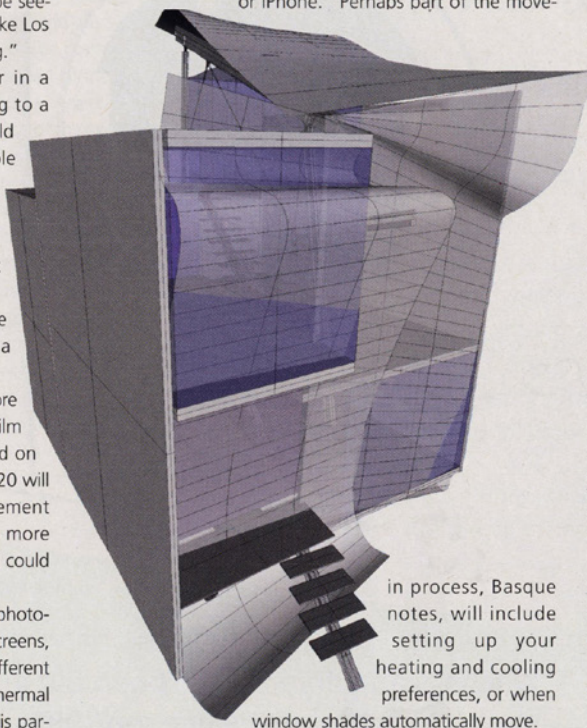
Richard J. Henken, executive vice president of Schochet Associates, predicts, "People will build HVAC systems for maximum compatibility across energy sources, be that natural gas or oil, so you can take advantage of the markets. I wonder if cogeneration will become cost-effective."

There will be different ways to heat and cool projects, such as a heat pump system developed for multifamily communities that works off a computer-controlled mani-

fold (not just one for each unit), says Moorhouse. With rising utility costs, he points out, "What used to be a 15-year payback conceivably could come down to a six- or seven-year payback when calculating a heat pump's cost."

Henken adds, "Smart buildings will be completely wired for everything, with Wi-Fi required. We might want to rethink unit mixes to include more one bedrooms and one bedrooms with dens, since roommates are less likely."

Timothy Crowley, managing director of FLAnk, points out, "The ability to manage one's home life both from inside and outside the home will be a major selling point of for-sale and for-rent housing over the next decade. Advancements in this field are extraordinary. Products allow renters and owners to control lighting, AV, temperature and security from one point of contact, either via touch screens in the home or via an office computer, Blackberry or iPhone." Perhaps part of the move-



in process, Basque notes, will include setting up your heating and cooling preferences, or when window shades automatically move.

"As margins become tighter over time and more scrutiny is leant to sustainability," Crowley continues, "I would imagine we would see more use of products that are both environmentally sensitive and better suited to the long haul, such as paperless gypsum board (for its resistance to mold), bamboo floors (for sustainability), stronger and less dense metal studs (for cost conservation), high-efficiency lighting equipment (for conservation) and non-toxic paints and stains (for air quality)." White expects that recycling will be required in all multifamily communities

Above & below: Sophisticated computer modeling will increasingly allow designers to fine-tune structures so that not only will resident views be maximized, but site-specific climactic conditions can be responded to thoughtfully. "Net-zero" energy use buildings could become the norm by 2020.

All images courtesy of TCA (Thomas P. Cox Architects)

by 2020, as well as more recycling of construction waste.

Gehman expects we'll find ways to cut water usage and reclaim more waste water. Already, one manufacturer of bathroom fixtures offers a combination sink and toilet that uses water from hand-washing for flushing.

"With a greater awareness of the environment's fragility and more consciousness of product odors, people may want greener materials, perhaps opting for wool carpeting instead of nylon," says Basque. "While it is more expensive, the option could be advertised as a green advantage."

Moorhouse and Basque believe that the quality and size of workout facilities will have to improve "because they are really attractive to this renter demographic."

Similarly, Basque thinks there will be a greater connection to outdoor spaces, via areas like a roof deck or garden. A green roof terrace will also help mitigate the urban heat island. "And windows will have to be operable."

The availability of common gathering spaces will be key, too, say Basque and Alani. These could even be in lobbies that are designed to be more functional and encourage people to sit and talk (especially as apartments get smaller).

Hariri wonders, "If people don't cook and eat at home, maybe a kitchenette would be sufficient within an apartment or condominium, with a larger and more luxurious kitchen/dining space being available in a common area." Perhaps on-site cafes could produce organic meals from locally produced ingredients for residents, Gehman adds.

All kitchen faucets in the future may be activated with just a tap on the spout or handle, building on technology recently introduced that makes kitchen tasks easier and more hygienic, as well as handy for aging Boomers.

With more people living alone, security and access control will be even more important. Convenient keyless locks, be they electronic or biometric, could be widely used, based on a chip-based key fob or fingerprint recognition.

Technology will also change the leasing process. "Your thumbprint could be the credit card of the future," predicts Joseph Batdorf, president of J Turner Research. "I believe there will be a time when people will be able to put their thumb down to complete the entire screening process and lease an apartment."

Brock MacLean, vice president, national sales/development at For Rent Media Solutions, concludes, "The changes of the last 10 years have opened my eyes wider to the interactive possibilities for the future. Social media will help create a more enjoyable living experience. And I think there'll come a day when we'll see true 'virtual tours' of communities." **MHN**