REALTORS[®] & Smart Growth

on common ground

The Evolving Form of Housing

DENSITY'S BENEFITS

A NEW LIFE FOR PARKING STRUCTURES

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LIVING IN SMALLER SPACES



Housing Challenges and Solutions

The nation's economic recovery appears to be firing on all cylinders, except one: housing. Housing supply and affordability have not kept up with demand, falling victim to labor shortages, regulations and materials cost and supply. Solving this puzzle will take ingenuity and time. But the good news is that there are many people working on policies and testing methods that, taken together, may start to raise supply.

In this edition of *On Common Ground*, we report on the imbalance of the nation's housing supply, explore its causes and possible solutions along with several emerging types of housing that show promise of delivering much needed affordable housing.

Local officials, industry trade groups and housing advocates are working hard to spur creation of housing through innovative products and policies. It appears that affordable housing is coming but in a variety of new forms. From accessory dwelling units, to micro-apartments, cohousing and container homes, the common element is smaller living space where the community is the amenity.

All of these new forms of housing will produce greater density. A lot of good things come with density: walking, cycling and transit become viable as forms of transportation. Retail operations become more viable as more people live in close proximity to desirable destinations.

Aside from the size of the unit, another way to drive down development costs is to reduce or eliminate parking



requirements. The nation's transportation systems are changing and as we look to the not-too-distant future, those changes will have an impact on land use. We may not need as many parking garages as we now have and efforts are underway to design new parking decks so that they can be retrofitted into habitable space at a future date.

The Richmond Association of REALTORS[®],Va., has undertaken a multipronged approach to fulfilling housing needs for a wide strata of residents, some of which will produce housing in the near-term, while other elements of their strategy will take longer to play out.

The causes of our housing supply shortage and lack of affordability are many; so too must the solutions be varied.

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Hugh Morris Smart Growth Program Manager hmorris@realtors.org On Common Ground is published twice a year by the Advocacy Group of the NATIONAL ASSOCIATION OF REALTORS® (NAR), and is distributed free of charge. The publication presents a wide range of views on smart growth issues, with the goal of encouraging a dialogue among REALTORS®, elected officials and other interested citizens. The opinions expressed in On Common Ground are those of the authors and do not necessarily reflect the opinions or policy of the NATIONAL ASSOCIATION OF REALTORS®, its members or affiliate organizations.

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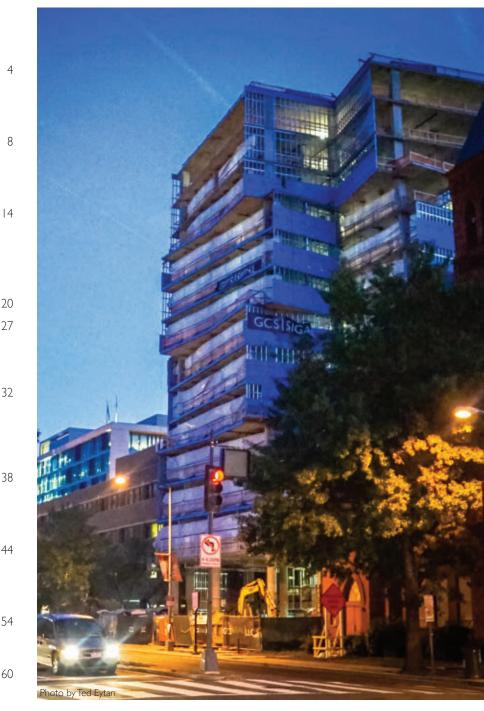
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REALTORS® Take Action

Making smart growth happen

On Common Ground



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THE STATE OF HOUSING SUPPLY & DEMAND

By Brad Broberg

hat a difference a decade makes. After being awash in housing amid the Great Recession, the country is struggling through a dry spell. At the low point of the housing bust in July 2010, there was an 11.9month supply of homes (including town homes and condominiums) for sale, according to the NATIONAL ASSOCIATION OF REALTORS[®] (NAR).

Then inventory began to fall ... and fall ... and fall. A sixmonth supply of housing is considered a balanced market, but inventory didn't stop skidding until it hit a low of 3.2 months in December 2017.

Rental housing followed a similar — if less steep — decline in supply. Vacancy rates fell from a high of 11.1 percent in the third quarter of 2009 to a low of 6.7 percent in the second quarter of 2016, according to the U.S. Census Bureau. Now it appears the pendulum is finally swinging the other way. Since hitting their post-bust bottoms, the supply of homes for sale and the vacancy rates for rental housing have stabilized and are inching up again. The inventory of homes for sale stood at 4.3 months as of August 2018 and the rental vacancy rate was 6.8 percent as of the second quarter of this year. Lawrence Yun, NAR chief economist, says "With inventory stabilizing, buyers appear ready to step back into the market. But higher interest rates will cut into affordability, so the supply of moderately-priced homes will become more important in satisfying demand."

The supply of homes for sale and the vacancy rates for rental housing have stabilized and are inching up again. Underpinning the growth in supply is a rebound in housing production. Before the housing crash, housing starts and completions consistently exceeded one million units per year for four decades, but during the crash they plunged well below one million units and stayed there for several years.

After starts hit a low of 554,000 units in 2009 and completions bottomed out at 584,900 units in 2011, starts are now on track to reach 1.3 million units in 2018 while completions are on track to reach 1.2 million units, according to the U.S. Census Bureau.

Encouraging? Yes, but a slew of data suggests there's still plenty of ground to make up before housing supply and demand are in sync. "While inventory continues to show modest gains, it is still far from a healthy level and new home construction is not keeping up with demand," said Yun. "Homes are selling rapidly, often within a month, indicating that more inventory — especially moderately priced, entry-level homes — would propel sales."

"This is a unique period in housing today," said Jessica Lautz, director of demographics and behavioral insights research at NAR. "The demand for housing is outpacing the current supply — especially at entry-level points in the market. For first-time homebuyers, for millennials, for (baby boomers) who may want to downsize, that housing inventory has become incredibly restricted."

While a projected 1.3 million new housing units single-family and multifamily — will hit the market in 2018, there is demand for 1.5 million units, according to a 2018 Housing Market and Mortgage Market Review from Arch MI, a mortgage insurance company based in Greensboro, N.C.

The report compares new supply (measured by the annual rate of housing starts) to new demand (measured by the annual rate of new household formation plus the number of new units needed to replace obsolete housing). By that yardstick, new supply has lagged new demand by an aggregate 1.5 million units since 2009.



The imbalance between supply and demand is squeezing entry-level housing the hardest.

The roots of underproduction may stretch even farther back. Research by a coalition of housing developers, Up for Growth, calculated that from 2000 to 2015 the nation constructed 7.3 million fewer units of housing than it should have based on a matrix of historic demand indicators such as home prices, population and income.

A total of 23 states — primarily in the west and northeast — whiffed on meeting housing demand during that time period, according to Up for Growth's calculations. California was by far the biggest underachiever with a shortfall of 3.4 million units followed by Arizona (505,000 units), Massachusetts (329,000 units) and New Jersey (320,000 units).

Up for Growth also analyzed the relationship between housing starts and new household formation going back more than 50 years. On average, the nation added 11 units of housing (allowing for units lost to obsolescence) for every 10 new households between 1960 and 2016. However, the nation added just seven units of housing for every 10 new households during the 2010 to 2016 timeframe.

That ratio didn't budge in 2017. Although the nation gained a net 802,000 units of housing last year (1.24 million new units minus 422,000 units lost to obsolescence), the net gain fell 348,000 units short of matching demand from the 1.15 million new households formed, according to U.S. Census Bureau data and estimates from the Urban Institute (UI), an economic and social policy think tank in Washington, D.C.

The deficit is magnified at the low end of the housing market — especially for single-family homes. "Homebuilders are not seeing great value in constructing homes at low price points," Lautz said. With housing production tilted toward the high end of the market, the imbalance between supply and demand is squeezing entry-level housing the hardest. "That supply is not ready and available," she said.

Although beginning to pick up, entry-level housing (under 1,800 square feet) accounted for just 22 percent of single-family home construction in 2017 versus an average of 33 percent between 1999 and 2007, according to the 2018 State of the Nation's Housing report produced by the Joint Center for Housing Studies (JCHS) at Harvard University.

The report, which crunches U.S. Census Bureau data and other government and industry statistics, cites a number

of housing headwinds that have nudged builders to construct more expensive homes — as well as apartments — to offset rising costs.

The cost of construction material, for example, rose 4 percent between 2016 and 2017, led by the rising cost of lumber after recent tariffs. Labor shortages have inflated wages while land continues to grow scarce and more expensive amid restrictive land-use regulations — including lids on density.

"It basically makes it very difficult to build anything affordable, anything lower end," said Laurie Goodman, vice president at the UI. "That's why most of the new homes are higher end."

The imbalance between housing supply and demand may get worse before it gets better. The NAHB forecasts only a slight uptick in housing starts to 1.31 million units in 2019 and 1.34 million in 2020. Meanwhile, another 1.4 to 1.5 million households are projected to form each year, based on U.S. Census Bureau data mined by the Federal Reserve Bank of San Francisco for a 2016 Housing Formation Among Young Adults report.

"Inventory is still going to be a problem," said Dan McCue, senior research associate with the JCHS. "It's a ship that's hard to turn around quickly."

The wild card in any housing forecast is the millennial generation, which has been slower to form new households than in the past and could unleash a wave of pent-up demand for housing when more millennials finally do leave the nest.

While the total number of young adults ages 25-34 rose to 20 million in 2016 from 18.6 million in 2000, the share that headed households decreased by 3.6 percent from 49.2 percent in 2000 to 45.6 percent in 2016, according to U. S. Census Bureau data crunched by the Federal

Home Loan Mortgage Corp. (Freddie Mac) for its 2018 Young Adults and Household Formation Report.

If young adults were moving out and forming households at the same rate of young adults in 2000, the United States would have had 1.6 million additional households in 2016, according to the report.

Instead, an all-time high 26 percent of young adults ages 25-34 were still living with their parents or another relative in 2017. In addition, an all-time high nine percent were doubled up with nonfamily members, according to the JCHS report.

Like household formation rates, millennial homeownership rates also signal pent-up demand. The 2018 Millennial Homeownership report by the UI found that the homeownership rate of millennials between the ages of 25-34 was 37 percent in 2015. That's approximately 8 percent lower than the rate of Gen Xers and baby boomers at the same age.

One big reason why is that millennials are waiting longer to tie the knot. The likelihood of owning a home increases by 18 percentage points among young adults if they are married, but the marriage rate for young adults fell to 39 percent in 2015 from 52 percent in 1990, according to the UI report, which relied on U. S. Census Bureau data. If the 2015 rate had been the same as 1990, the millennial homeownership rate would be about 5 percent higher.

Another noose around the millennial homeownership rate is affordability. Thanks to tight supply and rising interest rates, home prices in third quarter 2018 were at the least

Rising construction costs make it very difficult to build anything affordable or lower end.





affordable level since third quarter 2008, according to a quarterly Home Affordability report from ATTOM Data Solutions, an Irvine, Calif., market research company.

The report calculates an affordability index based on share of income needed to buy a median-priced home relative to historic averages. An index above 100 means homes are more affordable than historic averages and an index below 100 means they are less affordable.

This year's third quarter index dipped to 92 as 344 of the 440 U.S. counties analyzed in the report posted an affordability index below 100 — driven at least in part by a mounting disparity between home prices and wage growth.

According to the same report, the median home price of \$250,000 in third quarter 2018 was up six percent from a year ago — double the-year-over-year growth in average wages. U.S. median home prices have increased 76 percent since the first quarter of 2012. Meanwhile, average weekly wages have risen just 17 percent.

As a result, 23 percent of homeowners were considered cost-burdened in 2016, meaning they paid more than 30 percent of their income for housing, according to the JCHS report. Nearly half — 47 percent — of renters were considered cost burdened. "Cost burdens are their highest in some high-cost areas like Miami and LA, but they're everywhere," McCue said. There are very few places with low cost burdens."

Adding to that burden is the heavy load of student debt, which weighs on both household formation and homeownership rates. About 45 million people owe more than \$1.5 trillion in student loans and the average debt per borrower among the class of 2016 was \$37,172 — up \$10,000 from 2011, according to the Federal Reserve and the website Student Debt Relief.



"The share of young adult households with more than \$25,000 in student debt went from ... three percent to 28 percent," McCue said.

In terms of what type of homes are in demand, Lautz pointed to several generation-based shifts. Instead of downsizing, more and more older boomers are looking for similar size but more affordable homes in the suburbs farther from the city center but still close to friends and family.

Meanwhile, younger boomers and Generation Xers are increasingly seeking larger homes with room for their aging parents and/or children over the age of 18.

Millennials are more likely to purchase in suburban areas and small towns than they have been historically because of affordability but also because of better schools and a desire to maintain personal ties.

"Millennials are as likely to want to buy a home close to friends and family as they are to want a short commute," Lautz said. "That really speaks to a different family dynamic and a different way generations are organizing where we live and what our priorities are."

Brad Broberg is a Seattle-based freelance writer specializing in business and development issues. His work appears regularly in the Puget Sound Business Journal and the Seattle Daily Journal of Commerce.

BEING DONE BEING DONE TOEASE TIGHT HOUSING INVENTORY?





INVENTORY IS TOO LOW -That's a fact.

IT'S ALSO A FACT THAT INDUSTRY GROUPS AREN'T SITTING IDLY BY.

HERE'S THEIR STRATEGY.

By G.M. Filisko

he most persistent problem for the housing industry since the Great Recession of 2008 is that, put simply, there aren't enough homes on the market for the buyers who are interested in purchasing.

Consider this fact: For every four jobs created, only one housing permit is issued, according to the NATIONAL ASSOCIATION OF REALTORS[®]. There was also 4.3 months of inventory on the market in August 2018, when six months is considered a balanced market.

"Everything about housing markets is local," explains Lisa Sturtevant, a senior visiting fellow at the Urban Land Institute (ULI) in Washington, D.C. "But nationally, if you added it up, there's indeed a housing shortfall broadly. Looking at trends in household growth and household production, we're not producing enough housing."

NAR and other stakeholders are actively working to fix this persistent problem by pursuing strategies that they expect to unclog the pipeline of available homes. Those changes may take some time, but the groundwork is solid, and progress is being made.

Spreading the word

It's nearly impossible to solve a problem if few people understand that there is one. That's why NAR is tackling that first step by working to raise awareness of housing underproduction, reports Nadia Evangelou, an NAR research economist in Washington, D.C.

"We receive lots of questions about what could be done by local stakeholders to overcome the housing shortage," she explains. "We came up with the idea of highlighting research about what could increase housing supply."

NAR Research now publishes a housing shortage tracker that compares how many permits are issued relative to the number of new jobs. In addition, it issues the REAL-TORS[®] Affordability Distribution Curve & Score, which compares housing affordability in various metro areas to the statewide figures. It has also created a tool that permits REALTORS[®] to check single-family construction in 175 metro areas against the 20-year construction level and the employment growth. You can find all those data sources at https://realtorparty.realtor/supply.

"We need to start the conversation, and through the data, everybody can see if an area seems to have a housing shortage or not," says Evangelou."

"REALTORS® are taking the lead to address the housing affordability and inventory issues in their communities," said Susie Helm, NAR Vice President, State & Local Services and Advocacy Operations. "The NATIONAL ASSOCIATION OF REALTORS® has developed resources for REALTOR® Associations to engage with others in the community: developers, planners, builders, public officials, and other stakeholders, to assess their unique housing issues; and then, to develop short- and long-term solutions that work. There are grants, expertise and services available from NAR to bring solutions to every community. Two of the grants available through state and local REALTOR® Associations are Smart Growth (SGA) grants and Housing Opportunity (HO) grants."

The SGA grant program offers state and local REALTOR[®] associations a way to connect with government officials, partners, and the public in planning and designing a community's future using 10 smart-growth principles, such as mixing land uses, creating walkable neighborhoods, and preserving open space and critical environmental areas. The HO grant program positions REALTORS[®] as leaders



in improving their communities by creating affordable housing opportunities.

"In Scottsdale, REALTORS" established an annual smartgrowth workshop for civic and business leaders in the city," reports Hugh Morris, NAR Smart Growth Program Manager. "The sessions were led by a smart-growth expert."

Morris notes that inventory and smart-growth development are long-term concepts, so it can take several years for these grants to produce concrete outcomes. "One immediate concrete outcome is starting the discussion and creating those relationships with partner organizations, state and local governments, or like-minded associations," he says.

"These grants have been used often for the last couple of years," adds Morris. "A lot of people see what we call community advocacy grants as a first step to advocacy, and they establish REALTORS" as experts and partners in the betterment of the community. Between the research and advocacy groups, NAR staff and the REALTOR" Party are really here to support the advocacy and outreach efforts of our local associations."

The constraints on construction

Also engaging in discussions is the National Association of Home Builders (NAHB). It's advocating policies that would reset the conditions constraining the construction of homes, particularly single-family homes, in the country.

"I'd categorize it as the five Ls," states Robert Dietz, NAHB's Washington, D.C.,-based senior vice president and chief economist. "Lumber, labor, land and lots, lending to builders and land developers, and laws — with the primary two being lumber and labor.

"In total, what they represent are supply-side headwinds or blocks that have prevented the single-family construction sector from expanding its production faster," adds Dietz. "This year, I expect around 900,000 units to be built, and I think the market could absorb between 1.1 and 1.2 million units."

Residential construction consumes about one-third of the softwood lumber used in the United States, and about one-third of that lumber comes from Canada, reports Dietz. That country, however, has seen a rail car shortage, wildfires, infestation issues, and starting in 2017, a U.S. government-imposed tariff.

"In the last year and a half, there's been a lot of price volatility," says Dietz, who notes that at one point, there was a 63 percent increase in cost, though prices in September were down to 19 percent higher than in 2017. "That's a significant increase, but it's not 63 percent. The volatility continues, and the increase in cost has added thousands of dollars to the typical newly built home. That limits production. And if you think of the homes that are most affected, it's going to be the homes we need the most the smaller, entry-level homes — because those buyers have the hardest time absorbing those cost increases."

Among other priorities, NAHB has been advocating that the federal government rescind the lumber tariffs and negotiate a settlement.

The second major factor holding back single-family construction is the lack of workers in the homebuilding sector. The percentage of open jobs in the industry has been for the past two years higher than at the peak of the building boom before the Great Recession, reports Dietz.

"The construction industry, residential and nonresidential, such as highway and commercial builders, has 273,000 open, unfilled construction jobs," he says. "That's at a post-recession high, and that's been rising for the last four years."

The National Association of Home Builders is advocating policies that would reset the conditions constraining the construction of homes.





Local governments should rethink land use and zoning to allow more density.

Many of the workers formerly in the industry shifted to other sectors — think transportation and energy during the fracking boom — during the Great Recession, and Dietz predicts they're not coming back. "Also, young people are more attracted to office jobs and don't want to work outside, particularly with more of them having four-year degrees," he adds. "It's also because of the macro environment, meaning the current 3.7 percent unemployment rate."

Dietz says the homebuilding industry needs to recruit new workers, including more women. "Currently, only 9 percent of the construction industry is women," he says, "and many are concentrated in office jobs, such as sales, rather than swinging a hammer."

Sturtevant agrees. "One thing I'm struck by is the decline in the construction workforce," she laments. "People aren't becoming construction workers, and that's slowed down the pace of building. My son started high school this year, and the first thing he was handed was a brochure on how to get into a four-year college. What if we also handed out something about trade schools and vocational education? We don't value that as much today as we once did."

It's about local policies, too

While some groups are focusing on federal policies, ULI's focus is more on local issues. "We spend a lot of time thinking about this, and we believe the policies that matter most don't come from the federal government," says Sturtevant. "Yes, the extent to which tax policy changes the ability of the low-income housing tax credit program to provide funding to housing, that's of course important."

However, the solution will come in changes to local landuse policy and local regulations, Sturtevant notes, stating a conclusion she and others expressed in a 2017 ULI report, Yes in My Backyard [https://americas.uli.org/wp-content/ uploads/sites/125/ULI-Documents/State-Housing-Policy-Report-2017.pdf].

The report stresses that local governments should rethink land use and zoning to allow more density — but not











just for density's sake. "It's about how increased density can be brought to bear where there's access to transit or jobs," says Sturtevant. "But not every place should look like Manhattan."

The challenge on that front, however, doesn't typically come from local government, says Sturtevant. "The folks who tend to gum up the works on changing zoning to allow for more housing are typically not the bureaucracy but the residents," she says. "Even if the local elected body or staff thought it was good idea to increase density, the loudest voices tend to be those who don't want change in their neighborhood. That's really hard for elected people to deal with."

Another local factor is various zoning regulations that may be outdated given today's trend toward walkable communities and other demographic shifts that show signs of changing how Americans view and use cars. "Parking minimums have been brought up as a possible way to ease development costs if they are lowered," says Sturtevant. "Those requirements were often written in the 1960s and 1970s, and it's about taking a look at the kinds of requirements in a zoning code that may have been put in place then when different things were an issue."

Local impact fees are another issue on which many organizations, including NAR and the NAHB, are pressing for change. "Research has shown that they create additional hurdles to homebuilders," says Evangelou. "Some areas, like Sunnyvale, Calif., and Denver have reduced impact fees, and that's worked for those areas." All of these local limitations often come together to add delays to new development. "From the early 2000s to today, we've seen the time it takes to build any sort of housing in high-growth markets significantly increase," says Mike Kingsella, executive director of Up for Growth, a new nonpartisan, nonprofit coalition of housing stakeholders, including developers, employers, chambers of commerce, trade organizations, environmental groups, and constituents affected by the lack of available and affordable housing.

"In California, a project that then might have taken, say, five years from beginning to opening the doors for occupancy can take north of 10 years today," he notes.

Despite these headwinds, Evangelou stresses that what works in one area may not work in another, and NAR Research's aim is to provide hyper-local insights. "Our goal is to go to every area and have recommendations for each of the areas," she says. "We also want to get feedback on what local stakeholders think would work best for their area, and from their feedback we can customize our information for the top 100 metro areas."

NAR wants to get feedback on what local stakeholders think would work best for their area.

Will prefab ease the squeeze?

The future also will see more homebuilding in factories, Dietz predicts, as a workaround to the industry labor shortage. "Only 2 percent of homes are currently built in factories," he says. "I also predict we'll see brick-laying robots, auto-drywalling machines, and other machines taking tasks currently done by hand. I've seen some mockups that are currently more in the idea stage. But in the next 10 years, we'll see more of that."

Dietz isn't the only one predicting that factory-built homes will make a mark in the future. Gay D. Cororaton, CBE, an NAR research economist in Washington, D.C., also sees signs they'll expand and improve housing affordability, in part because of what seems to be a growth in the number of companies focusing on increasing the production of manufactured homes.

In June 2017, a San Francisco Bay area developer opened Factory OS in an old shipyard in Vallejo to manufacture homes. Months later, in September, Amazon announced funding for Plant Prefab, a company that builds prefab custom single- and multifamily homes. "Manufactured homes are a more affordable, safe, and decent housing option for aspiring homeowners," says Cororaton.

Manufactured housing and mobile homes were terms that used to mean much the same thing, explains Cororaton. However, after 1976, when the U.S. Department of Housing and Urban Development implemented tougher standards for things like construction and safety, only homes that meet those standards can be called manufactured housing.

Cororaton says increased production of manufactured housing would ease the housing shortage by moving the affordability needle toward those who can't afford

Increased production of manufactured housing would ease the housing shortage.

site-built homes. Manufactured homes cost about \$50 per square foot, or half the cost of a newly site-built home, excluding the cost of land. "But it's facing the same issue as other types of traditional types of homebuilding including a labor shortage, a land shortage, and zoning challenges," she says. "I was told by one major manufacturer that it has a six-month lag, meaning that a consumer puts in an order for a home, and there's a six-month wait."

This type of housing is also getting attention from the Federal Housing Finance Agency, which is required to implement regulations to implement the so-called duty to serve of Fannie Mae and Freddie Mac; they're required to facilitate a secondary market for mortgages for very low-, low-, and moderate-income families in underserved markets, including that for manufactured housing.

Cororaton says the issue of how manufactured housing can affect inventory and affordability needs more research, a mission she's personally pursuing.

While there are still gains to be made, Evangelou says housing strategies are working. "Construction is improving," she says. "It's up in general, but not enough to replenish what wasn't constructed during the down period. It's not a recovery yet, but we're seeing improvement."

G.M. Filisko is an attorney and freelance writer who writes frequently on real estate, business and legal issues. Ms. Filisko served as an editor at NAR's REAL-TOR[®] Magazine for 10 years.





MAKING SPACE: The Case for Adaptive Spaces

Demographics are changing. Is housing adapting? New trends and regulatory changes are reshaping the way we think about housing.

By Tracey C. Velt

hen you think of single-family housing, you think nuclear family — as in a married couple with 2.5 kids and a dog, don't you? However, demographics are changing. Today, nuclear families make up

only 20 percent of America's households. In 1950, these families represented 43 percent of our households; in 1970, it was 40 percent. Since then, unprecedented shifts in demographics and lifestyle have redefined who we are — and how we want to live.

And, these changing demographics are causing housing specialists and developers to rethink the housing stock they are offering so that it meets the needs of the rising households of single parents, singles with roommates, multi-generational families and more. But, that innovation is happening at a snail's pace due to outdated zoning regulations. Enter the Citizens Housing Planning Council (CHPC), which has an ongoing research program called *Making Room* that led to two museum exhibits — the first at the Museum of the City of New York (January to September 2013) and the second, a national exhibition, at the National Building Museum, open through January 6, 2019, in Washington, D.C.

Today, nuclear families make up only 20 percent of America's households.

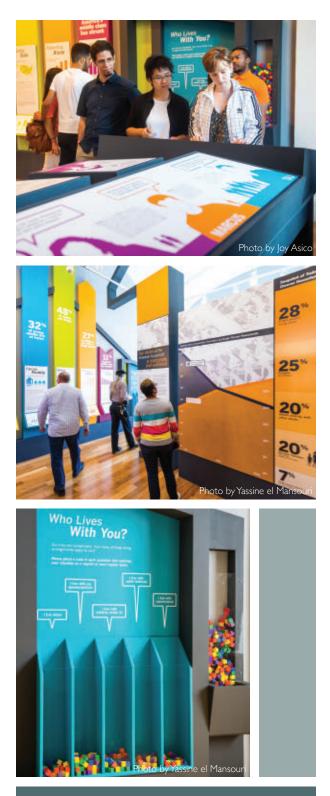
Many people will opt to give up space and supplement with the amenities located around them.

Focus on New York City Housing

"We first focused on the New York housing stock," says Sarah Watson, Deputy Director of the Citizens Housing Planning Council in New York, N.Y. "To understand housing, you have to understand how households are configured. The Census puts them in categories of families vs. non-families, so we created our own housing categories, so we could drill down. What we discovered is that two types of households dominated New York housing — single people living alone, whether young or older, and those sharing a space, such as roommates and extended, multigenerational families." The problem? Most apartments, condos and homes in New York City didn't reflect this non-traditional household. "For us, it became an education project around zoning and regulatory reform in New York, so we could build alternative housing," she says.

In New York, there are three eras of zoning regulations — the 1920s, the 1950s and the 1980s. Those regulations set out to improve housing stock but didn't keep up with reality, according to Watson. "We've been building bigger apartments for nuclear families but not paying attention to the cultural and demographic shifts. Also, housing is expensive, and many people will opt to give up space and supplement with the amenities located around them," she says.

Jacqueline Schmidt, director of design for Ollie (www. ollie.co), an all-inclusive co-living platform providing fully-furnished, shared micro-studios and shared suites with hotel-style services, amenities and community agrees. "Cities are becoming very expensive, and it's hard for residents to claim a space and an area in a desirable neighborhood. Many people are willing to forgo space in exchange for having the environment in their area of choice, conveniences and a community. They can spend more time doing the things they like rather than isolate themselves outside of the area they want to live in." The New York exhibit featured a fully furnished 350-squarefoot apartment with transformable tables, bed systems and seating allowing the compact space to be reshaped into five different configurations.



The pictures above are the Making Room museum exhibit, which showcases new ways to rethink housing design.

Taking It National

Through the New York City exhibit, visited by over 160,000 visitors from all over the country, the researchers realized that this issue was not unique to New York. "We were floored that this was a universal issue in small towns, cities and all over the United States," says Watson. That's when the idea to crunch the numbers on a national level came about, according to Chrysanthe Broikos, curator of the National Building Museum and the *Making Room: Hous-ing for a Changing America* exhibit in Washington, D.C.

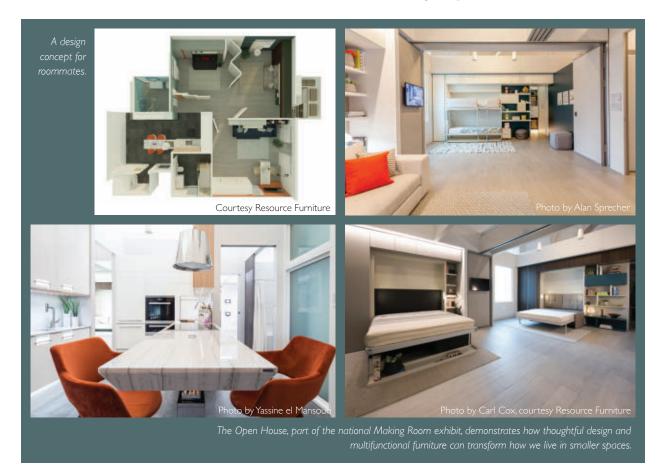
Conceived as a rallying cry for a wider menu of housing options, *Making Room* showcases how architects, policymakers, developers, planners, and the general public can use design as an integral tool to meet today's housing needs. According to Broikos, "There is no better way for the public to understand the power of design than seeing and experiencing it firsthand."

"We worked with the CHPC to take Census Bureau raw data, added proprietary number crunching and uncovered nationwide demographic trends," says Broikos. They discovered that the No. 1 household category nationwide is single people living alone. The second is couples with no children. "That means that 50 percent of our households are one- or two-person households. There's a fundamental mismatch between who we are today and what our housing stock looks like," she says.

The Open House

As part of the national exhibit, The Open House was created. "The Open House is the perfect vehicle for demonstrating how thoughtful design, and smart and flexible products, can transform how we live. Visitors are truly amazed by the multi-functionality of the furniture and you can sense, almost immediately, how their world of possibilities has just been expanded," says Broikos.

"We wanted to wake people to what may be possible in housing," says Lisa Blecker, project manager for the exhibit and director of marketing for Resource Furniture, a sponsor of both exhibitions. "The takeaway is that people don't understand what a space can really feel like. A small, well-designed space with multi-functional furniture



7 CREATIVE PROJECTS

Nationwide, developers are leading the way with creative projects to house people in this time of changing demographics. Here are a few examples.

feels a lot bigger than people expect." She notes that the exhibit got some negative press before it opened, with coverage that said the space was the size of two parking spaces or a shoebox. "But, when people walked into The Open House, their faces would change. They couldn't believe such a small space could look so big."

The Open House was designed by Italian architect Pierluigi Colombo/Clei to showcase how flexible space can seamlessly adapt to accommodate three entirely different living arrangements. And, everything in it is available to buy now, not prototypes. Initially set up to house four roommates (two singles and a couple), the space was transformed to house a multigenerational family and again reconfigured to house a retired couple with a caretaker (it included a rental apartment).

"We all know that households are not static — they grow and shrink regularly as people age, have children, move out, and move back in." says Ron Barth, co-founder of Resource Furniture. "But most homes are not designed to anticipate these inevitable shifts. This was the challenge we faced in planning and furnishing the 1,000-squarefoot Open House. The home was expressly designed to accommodate morphing households without altering the structure or the layout. The hyper-efficient layout, acoustically sound moving walls, hidden storage, and multifunctional furniture, such as the wall beds with sofas, all contribute to the home's ability to function like one twice the size, while easily meeting the needs of the people living there — whoever they may be."

Resource Furniture is involved in 16 different areas from Nashville, Tenn., to Park City, Utah, helping developers understand that the market is changing, and that people are willing to trade square footage for amenities and location.

A small, well-designed space with multi-functional furniture feels a lot bigger than people expect.



Courtesy Urban Ventures, LLC. Aria Cohousing, located in a former Denver convent, represents a new twist on the cohousing concept: one where a developer jump starts the community-formation process. The Sisters of St. Francis sold their former home and 17.5 of the 20 acres surrounding it, to Urban Ventures, a local developer. Today, the four-story building is home to 28 one- to threebedroom residences.



The Choy House in Queens is a solution for housing an extended, multigenerational family. Three independent but interconnected spaces coexist under one roof. The house includes two sets of internal staircases, one for each of the brothers' homes. The lower-level — which is where the grandmother lives — joins the two other sections of the house to each other and opens onto the terraced garden enjoyed by the whole family.





Regulatory and Zoning Changes

In fact, there are projects all over the country capitalizing on these demographic trends and regulatory and zoning changes that allow them to build. In New York city, a zoning requirement that stated a minimum size for apartments was removed. And, density controls that limited the number of studio apartments in one building have been tweaked in high-density districts, according to Watson.

Boston designated innovation zones where minimum size is waived. "Atlanta is doing some interesting things with alternatives such as accessory dwelling units and basement units, which were previously not allowed because of zoning regulations," says Watson. "We're advocating and showcasing what certain jurisdictions are doing — new ways of approaching things," says Broikos. "Policymakers have come through the exhibit. In Washington, D.C., there have been a bunch of changes to zoning in November 2016, allowing accessory dwellings as long as they were approved by zoning first," she adds. "They eliminated one of the hoops required and made it easier." Most of the changes have been to local laws, not statewide change. Although both California and Virginia have made changes concerning accessory dwellings.



Community First! Village outside of Austin, Texas, is a tiny home and RV neighborhood which provides sustainable, affordable housing and supportive services for the chronically disabled and homeless.



Opened in 2016, the John and Jill Ker Conway Residence is a stunningly modern, all studio apartment building for low-income residents — including formerly homeless veterans — that includes onsite support services. The project was spearheaded by Community Solutions, a nonprofit focused on solving problems connected to homelessness.



Photo by Sam Gelfand; courtesy The Alley Flat Initiative

The Lydia — one of the pre-designed accessory units featured in the Alley Flat Initiative Design Catalog — is a one-bedroom, one-bath, 584-squarefoot flat. One of two ADA-accessible models, the Lydia also features a metal roof and covered, front porch. The Initiative is a unique partnership between three nonprofits and the City of Austin that helps property owners build affordable and sustainable accessory dwellings.

And, one large builder, Lennar Homes, is innovating with a model called the Next Gen. It's a home within a home that allows for innovative floorplans to accommodate your family without sacrificing comfort. Says Broikos, "It's not marketed as an accessory unit and it doesn't trigger zoning code issues because of the lack of a second full kitchen, but it does have a range and a cooktop."

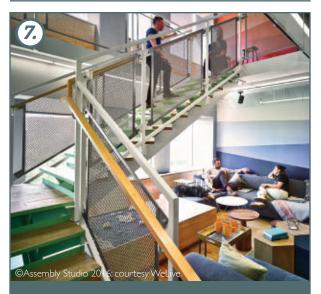
For Watson, who has been studying the topic of changing demographics for 10 years, "now is the time for these alternative spaces to be embraced. Digital technology and social media have lessened our need for things such as books, CDs and more. Our culture has changed. You can live your life adequately with a laptop and that's a revolution as far as space is concerned." She also notes that younger generations are much more open to shared spaces, such as kitchens and recreational rooms, than older generations. "Even 10 years ago, these concepts would have been thought of as bad things, but with innovation, they are accepted and desired. Now is the time for housing changes that meet the needs of the changing demographic."

Tracey C. Velt is an Orlando-based freelance writer who specializes in business and real estate.



hoto by Ben Jacobsen; courtesy Northeast Collaborative Architects

Developer Evan Granoff saw an opportunity to reinvent downtown Providence's historic marketplace. Built in 1828 and recognized as the nation's first enclosed shopping mall, the Arcade's two upper stories now house 48 micro lofts ranging from 225 to 300 square feet. What the studios lack in space is more than made up for with convenient access to lower-level retail shops and neighborhood cultural amenities.



WeLive in Crystal City, Va., offers micro apartments with unique amenities: each 3-story neighborhood revolves around a communal kitchen, as well as a dining and media lounge area, easily accessible from other floors via an open staircase.

PARKING REQUIREMENTS

FALLING BY THE WAYSIDE IN MANY CITIES

By Brian E. Clark

illiam Fulton, director of the Kinder Institute of Urban Research at Rice University, lives in Midtown Houston. He doesn't own a car and gets around the city by foot, bus, lightrail, Zipcars and Uber.

Thanks, in part, to car-less residents like Fulton, he said his neighborhood just south of downtown is about to loosen its parking requirements. In essence, the city has decided to let the market figure out how many spaces are needed per condominium, store, office or restaurant, the former mayor of Ventura, Calif., Fulton explained.

It's a trend that's gaining steam around the country, as driving and car-ownership habits change and cities modify regulations that he said are the "bane of almost every urban district, often resulting in a blanket of too many parking spaces." These minimum parking rules have driven up costs and made it more difficult to build affordable housing, experts say.

Fulton, who was once planning director for the city of San Diego, said he's modified his transportation habits in recent months, using car-share services like Uber and Lyft more and Zipcars less because while Zipcars let him use a vehicle for a short time, he still has to park it.

"Car-sharing services are shaking things up a lot," he said. "You certainly see it in my neighborhood. My apartment building is now one of the most-frequently visited by Uber locations in Houston."

The city has decided to let the market figure out how many spaces are needed.

Builders can assess how much parking they will need more accurately than city government can.

In fact, he said, developers who build parking garages are already thinking about how to design them so they can be converted into other uses in the future when fewer and fewer cars need to be parked. (See companion piece on the future of parking garages.)

"There's no question that the demand for parking spaces will go down, at least in cities and older, close-in suburbs," he said. "In suburbs that are further out, it all depends on the model of car ownership in the future.

"But the model that has been the same for a century is now starting to break down due to companies like Uber. We're beginning to change our views so that we don't think of a car as a product we purchase and is parked most of the time, but as a part of a transportation service that we buy on a per-ride basis. As our society becomes more efficient, the expense and inefficiency of owning cars for many people becomes more obvious. With technology, we've got alternatives."

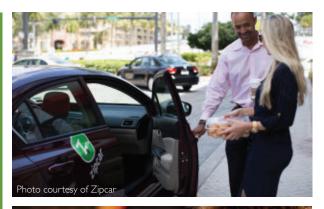
In Fayetteville, Ark., a city of 85,000 in a metropolitan area of nearly 500,000, planning director Garner Stoll said downtown parking requirements have been eliminated, though they are still in place for residential areas. Commercial areas continue to have maximums, however, which means developers can't go more than 15 percent above what used to be the minimum unless they get a variance.

"If you are building a single-family home, you still have to provide two spaces and then we require one per bedroom for multi-family housing. We are a community with 27,000 students, so parking for them is a big issue for our neighborhoods adjacent to downtown and the university.

"As for the downtown dropping the requirements, I think it's been just fine and no one has missed those regulations. The concept is that the builders and the people who are financing development can assess how much parking they will need more accurately than city government can. It's no longer the heavy hand of government putting the squash on projects."









Uber and Lyft have had an impact on parking demands.

Stoll said he believes determining parking requirements "has always been a stretch. Planning professionals have developed standards that aren't really based on any kind of researched assessments. Typical requirements certainly produce more parking than most uses need. It's such a quantum leap to figure how much to require."

He said the change has benefited the city by allowing existing buildings to be retrofitted with new uses.

"If you think about adding small start-up in a historic, downtown building, you'd probably have limited ability to add parking," he said. "But if you can figure out where you can tell your customers to park or provide some sort of leased parking for your restaurant through employees parking the cars or something like that, for example, you can open businesses in existing buildings. I think that's the biggest advantage here."

Stoll said Uber and Lyft have had an impact on parking demands, especially on weekends when people are flooding the downtown to take advantage of entertainment options.

"We have nearly 30,000 students attending the University of Arkansas and 50 percent of them are commuters, so that's a lot of cars. But the university runs a free transit system, which helps. And students take advantage of that because parking is expensive."

Stoll said he'd like to see Fayetteville use market-based pricing for its downtown parking meters, using higher prices during higher demand times with the goal of always keeping one or two spaces free per block. While it's been studied in his city, he said the political will to enact that change is lacking.

Fort Collins, Colo., dropped its commercial parking regulations in residential areas, but then reinstated some rules after homeowners complained about students from Colorado State University — which has an enrollment of around 33,000 — filling the streets with their cars.

"When we were planning our MAX bus rapid transit line several years ago, we created a transit-oriented-development (TOD) overlay zone and took away the minimum parking requirements for that zone, which was a 'very bold move,'" said Seth Lorson, a transit planner in Fort Collins. He said the five-mile long TOD had a large bulge in the middle so that it resembles a "snake that had eaten an antelope."

But he said the city parking ordinance had to be tweaked because developers weren't providing enough parking (for multi-family student housing projects) and it was spilling over into neighborhoods.

"That was an unforeseen consequence of our policy change, and it became a community livability issue," he explained. "But we continue to believe in the idea that people who want to can share or live without cars in high-frequency transit areas.

"So we created a suite of demand mitigation strategies, which says that you can reduce your parking requirements if you have a proximity to a MAX station (MAX buses run at 10-minute intervals and carry more than 4,400 passengers a day), provide Zipcars or car-share onsite, have access to offsite parking or options like that."

Karen Parolek, a principal with the Opticos Design company in Berkeley, Calif., credits Donald Shoup, a



UCLA urban planning professor, and his 2005 book "The High Cost of Free Parking" for sparking the drive to do away with parking requirements.

"It was a call to arms for those of us who are focused on making places more walkable and promoting other modes of transportation," said Parolek, whose family of four lives in north Berkeley near a Bay Area Rapid Transit (BART) and gets by with one car. Her firm of planners and architects focuses primarily on denser areas of cities and older suburbs where it helps rewrite zoning codes and create new, walkable developments.

"If you want to preserve open space and build more compactly, you have to question what you're using your space for. And the reality is that if you are using it for parked cars, you aren't using it for housing or open space.

For a place to be truly walkable, you have to have amenities within a reasonable distance. "When you look at neighborhoods, it's a big puzzle. For a place to be truly walkable, you have to have amenities within a reasonable distance. You have to be able to walk to the grocery store, kids' schools and retail shops. That map only works if they have enough customers within walking distance to be viable."

Parolek agreed that car-sharing services will have a huge impact on the demand for parking.

"Studies show that most cars sit vacant at least 75 percent of the time. With autonomous (driverless) fleets coming and vehicles in service 24/7, the number of cars on the road and in parking spaces could be reduced by a third to half."

She said this change in driving should help achieve her firm's goal of reviving the use of "missing middle housing," which she defines as duplexes, four- and even eight-plexes that look much like regular, single-family houses.

"If it's built as a truly single-family home, it might require two parking spots. But as a duplex, four is probably required and for an eight-plex, 16 spots if you are requiring two spots per unit," she said.







"But there is no way all of those pieces of property would have enough room for all those cars with each space requiring 10-feet by 20-feet of land. That makes most duplexes and fourplexes or even bungalow courts nonviable without any other requirements."

She said the many communities that are facing an affordable housing crisis need to rethink their parking regulations.

"We ask 'would you rather have a duplex and provide a second dwelling for another family?,' because you probably can't do it if you require four parking spaces."

Parolek said not every city is ready to jump on board, in part because conditions vary. "It's a journey and communities have to take one step at a time," she mused. "Eliminating parking requirements is one of the first steps they can take if they feel they don't need it. But if cities want affordable housing, parking requirements are another barrier that makes everything more expensive."

Michael Lander, a principal with Minneapolis-based Lander Group, said he's noticed a strong generational shift when it comes to viewing the need for cars and parking spaces.

"There is a dramatic gap based on age," said Lander, whose firm deals mostly with pedestrian-based projects.

"Millennials approach things quite differently than boomers. They aren't as focused on owning a car, but one of the first questions from a boomer is 'where do I park?' So you have to address the parking needs, which can have a major impact on costs, before doing any project."

In an urban infill setting that requires a parking structure, a space can cost \$20,000 to \$30,000 or more depending on the location and the complexity of the design, added Lander, a member of LOCUS, a national coalition of real estate developers and investors who advocate for sustainable, equitable, walkable development in America's metropolitan areas.

In a 100-unit rental project in Minneapolis that is near transit options and is in a somewhat walkable neighborhood, the market might require half a space per apartment.

Many communities that are facing an affordable housing crisis need to rethink their parking regulations. That means 50 spaces, which adds \$1.25 million to the cost if the spaces average \$25,000 each, he said.

"And if we are not near transit options, we are probably going to have to have 1.5 parking spaces per apartment, depending on the size of the unit and assuming a twoperson household in Minneapolis," he said.

But Lander said parking demand can vary widely around the country. He now lives in San Francisco, where people who want to own a car are willing to pay \$500 a month for a parking space.

"So cars are moving out of the system and becoming detached from the cost of housing, much more here than in the Midwest," he said. "Cities on the coasts tend to be more dense and walkable. In Washington, D.C., for example, they built on 80 former surface parking lots.

"I'm working on two mixed-use projects like that now in Minneapolis where we are adding some fairly dense uses. We are replacing the parking that was there and looking into future needs.

"When parking demands are changing and dropping, you need to dial down on that because every parking space that isn't used is at least \$25,000 you didn't need to spend. And you also have unpurposeful space that is hard to adapt. On the other side, if you have too few spaces, you can't lease or sell your building and you could fail financially."

Lander said putting buildings on what were formerly parking lots adds new residents, offices, jobs, restaurants, retail, an increased tax base and more people to make transit work.

"Figuring out the parking means coordinating something like a dance because restaurants are only open certain hours, while offices are used during the day. The goal is to get each space filled as much as possible each 24-hour period.

"I see counts going down and more parking going from being a private, dedicated arrangement to being part of a pool where you still always have space. Part of it is because of Uber and car sharing. We're moving down that multi-modal road and every city is headed there. In the best urban districts, all of the parking is or will be part of a public reservoir."

He said the same thing should apply to residential streets, where boomers tend to see the spaces in front of their Cars are moving out of the system and becoming detached from the cost of housing.









MORE ON PARKING

Putting buildings on what were formerly parking lots adds new residents, offices, jobs, restaurants, retail, and an increased tax base.

houses as their property, while others — particularly students — see them as free parking spots.

"It creates conflict," he said. "We are in transition and transitions are often rough with growing pains. This is a cultural change between boomers and millennials. That's a significant part of the underlying issue.

Shoup, the UCLA parking guru, drove a 1966 Ford Mustang for two decades. He said he is not opposed to owning an automobile. He just doesn't believe that parking spaces for any kind of vehicle should be for free.

"Free parking is a classic tragedy of the common problem where drivers compete over scarce public parking spaces and consume time and resources searching for them," said the 80-year-old Shoup, who railed against arbitrary standards and the "pseudoscience" methods used to determine them in his book.

"Everyone wants to park for free, including me," argued Shoup, who has been at UCLA since 1968 and where he said Uber and Lyft pick up and drop off 68,000 passengers a week. "But a city where everyone happily pays for each other's free parking is a fool's paradise. The hidden costs are everywhere and they're linked to many of the issues people are interested in, including economic development, urban design, affordable housing, public transit and clean air."

If Shoup had his way, he'd not only remove off-street parking requirements and use market-rate pricing for on-street spaces, but he'd use the parking revenue to improve public services on metered streets. And then use that money to improve services on those same thoroughfares.

"If people see their meter money at work, those new public services can make demand-based prices for on-street parking politically popular," he said. "And it should be something you can take a photograph of, like power washing the sidewalks on a regular basis, removing graffiti, repairing cracked pavement, more police patrols or putting ugly overhead wires underground. Now that would get people on board."







ADAPTING PARKING GARAGES

WILL WE LIVE IN A PARKING GARAGE IN THE FUTURE?

BIG CHANGES ARE COMING.



stimates for the number of parking spaces in the United States range wildly, from a low of 105 million all the way up to 2 billion, though experts say 500 million is a good guess.

And many of those spots — which cover roughly 25,000 square miles of land and often

go unused most of the day — are in the tens of thousands of parking garages that dot our cities. No one knows the exact number for these often unattractive structures, either.

But what most urban designers do tend to agree on is that even as developers build new parking garages, they know that many of them could become all but obsolete in coming decades, due to ride sharing services like Uber and Lyft, as well as the advent of robotic, autonomous cars that will take up much less space when docked.

Parking in urban areas eventually will change from parking lots and garages to much smaller areas set up for pick-up and drop-off of ride sharing vehicles and selfdrive cars, they predict. The former lots, often in prime real estate areas, will sprout green spaces or buildings.

And the existing garages will be converted or demolished — structures with sloped floors are especially problematic — while new ones will be designed so that they can be turned into apartments, offices and retail.

"It's already happening," said Los Angeles-based Andy Cohen, co-CEO of Gensler, an architecture firm with more than 3,500 clients around the globe. He's been speaking all over North America, telling developers, planners and others that they need to get ready for a future in which the driverless car is dominant.

His forecast is that car ownership will peak in the next few years and then begin to drop. By 2025, rather than owning their own vehicles, more Americans will use some kind of ride-sharing service.

All that space now used by the country's 260 million cars, buses, trucks and motorcycles for parking could be taken back for amenities like parks or "people places, and that's something that gets architects and designers excited," he said.

Parking in urban areas eventually will change from parking lots and garages to much smaller areas.





bove images courtesy of Gensle

Rendering of a hypothetical Los Angeles cultural center that highlights how garages can be repurposed, called the "Mod"



"Government officials are waking up, too. I've seen a change in the last six months, with them realizing they shouldn't force developers to provide all this parking that won't be used."

Still, he said his company is designing projects with parking that will take five to 10 years to get built and then be used in a world with autonomous cars that won't need all the spaces that now exist. One is called the "Mod," for a hypothetical Los Angeles cultural center that highlights how garages can be repurposed. Even difficult-to-convert underground parking garages can be adapted for data centers, storage or gyms.

To make new garages like the one that is part of the Mod adaptable, he said they will need flat parking plates, more space between floors — 12 or 13 feet versus the current 10 feet for the future installation of lighting, heating, ventilation and air conditioning systems — more attractive facades and exterior ramps on the outsides that can be removed without disturbing the rest of the structure. They also might have knockout panels and modular sections that can be removed to bring in sunlight and air circulation.

Newer versions of parking garages that can be repurposed might cost 10 to 15 percent more than the older models, he said. But if the alternative is tearing them down if they can't be adapted, it's a wise investment.

Cohen said he'd like to see cities convert unneeded parking garages by installing "pods" that can be used as either low-income or homeless housing — both of which are sorely lacking.

"That's a cool part of this story," he mused. "All that unused space could help solve some of our urban social problems."

In San Francisco, the San Francisco Giants baseball team is thinking about a future that relies far less on private cars. The club is working with Perkins + Will, an interdisciplinary, research-based architecture and design firm to design Mission Rock, a 27-acre project south of AT&T Park.

The development — on what is now a parking lot — will have streets and buildings that can adapt to increased demand for pickups and drop-offs and include 850,000

Unused parking space could help solve some of our urban social problems.

Parking has been decoupled from the housing costs and it's now two separate markets.

square feet of structured parking, said Kristen Hall, a senior urban designer with the company. It will also have 1.5 million square feet of residential and another 200,000 square feet of retail space.

"But it isn't just Mission Rock where we are applying this thinking," she said. "It's an important part of all the projects we're working on because of the falling decline in parking demand that we are seeing.

"It used be that parking was something we thought we had to have, sort of like a kitchen in a residence. You wouldn't buy a place without one. But in San Francisco for example, parking has been decoupled from the housing costs and it's now two separate markets."

She said developers in the high-priced Bay Area might pay as much as \$60,000 per space for an above-grade parking structure and \$100,000 for a similar, underground spot. Developers are taking note, because parking garages are not cheap.

"That's a lot of money to put into an asset that may not be desirable or needed in the future. So the big question is how much do I want to invest in building this asset if the return is just going to diminish?"

She said developers don't want to overbuild. And the buildings they do put up that include parking need to be adaptable with level grades and more space between floors.

She said Mission Rock, which will break ground next year and should be finished between 2025 and 2030, will include a 10-story parking structure with 2,100 spaces that will be designed for conversion into offices, stores and residences. Ramps in the center could be removed to create an atrium and courtyard.

Because no one knows what the future holds, she said designers and architects need to come up with a "menu of strategies" for bigger, master-planned projects.

"We're seeing different approaches," she said. "At this point, it's tricky."

In St. Louis, Megan Ridgeway, a principal with Arcturis, said her architectural firm is looking at a future in which









Above renderings courtesy of Mission Rock

Mission Rock, a 27-acre project south of AT&T Park, in San Francisco.The development will transform a surface parking lot into residential, retail and open space plus structured parking.



Rendering of a planned redevelopment project on the nine-acre site of a former National Guard Armory that is several miles west of the Gateway Arch in St. Louis. The development will include green space and a parking garage that can be repurposed.



Courtesy of Arcturis

Parking structures will need to be designed so they can be converted into housing, offices and stores.

parking garages are "fairly irrelevant" and autonomous cars and ride-sharing is the norm.

A cultural shift away from private vehicles is in the works, resulting in a paradigm shift in urban planning, she said. That means parking structures will need to be designed so they can be converted into housing, offices and stores.

"But when that obsolescence will occur is anyone's guess," she said. "It will take a number of years, so it's not a flick of the switch thing. But in places with foresight, people are already making design decisions that don't preclude second or even tertiary uses."

In addition to providing more space between floors, she said that means rethinking the shape of parking garages, which can be 200 feet wide. By contrast, an office building is often just 120 feet wide.

"Parking structures may have to become more rectangular, so light can get to the interior," she said. "Another option would be to take out some of the interior for an atrium or elevators."

She said her company has worked with St. Louis-based Monsanto to convert an underused underground parking floor into a fitness center.

"That was a great reuse of the space," she said. "And it certainly wasn't as complex as repurposing a standalone garage."

In addition, she said Arcturis is planning a \$180-million redevelopment project on the nine-acre site of a former National Guard Armory that is several miles west of the Gateway Arch in St. Louis.

"It will include a new parking garage, as well as green space," she said. "The developer, Green Street, is progressive and wants the garage design to be something that can be repurposed. That means flat floors and ramps outside that can be removed, a rectangular shape and space between floors of 12 feet."

Todd Heiser, who runs the Gensler office in Chicago, said his company built an 11,000-square-foot interdisciplinary innovation center into an existing parking structure that had unused space at Northwestern University, which is located north of the Windy City in Evanston. Fortunately, the floors in the garage were flat.





The Garage is an 11,000-square-foot interdisciplinary innovation center at Northwestern University in Evanston, III., built into an existing parking structure that had unused space. The space is flexible and has room for classes, workshops, meetings, prototyping, mentoring, 3D-printing, events and hanging out.

Courtesy of The Garage

There will come a time when it won't be very wise to build giant parking decks.

Billed as a co-working hub for ideas and programming, it was built on the second floor of a building completed in 2015. It is called, appropriately, the "Garage." Designers spiffed up, but left the concrete floors uncovered and used plywood for some of its walls to keep a garage-like look. The space is flexible and has room for classes, workshops, meetings, prototyping, mentoring, 3D-printing, events and hanging out.

Another Gensler project, this one in downtown Cincinnati, was designed from the get-go to have its parking floors adaptable in coming years. The nine-story, 280,000-squarefoot building is home to the consumer analytics company 84.51° — named for the longitude on which it rests.

"In the process of designing this building, we realized that the core of the company's talent had other transportation options than private cars, which is true for businesses in other cities, too," he said. "These workers are coming from adjacent or nearby buildings. As cities are being revitalized, people are moving back in. "Our thinking is that if you create a building where a city now mandates three or four floors of parking, you should be able to come up with a strategy to be able to re-appropriate that parking in the future to create usable space."

As the building was being planned, the company wanted another 120,000 square feet, he said.

"So instead of looking at another floor or going outside the building, we decided to go inside the structure," he said. "And it isn't that hard to do, but you definitely need a team that understands what they are doing because you need more space than traditional parking garages have with 10-foot-high ceilings.

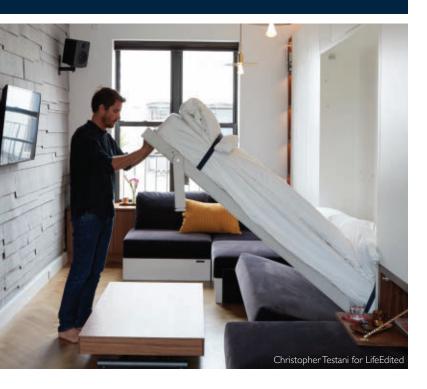
"I think there will come a time not too far down the road when it won't be very wise to build giant parking decks at all," he said. "In the meantime, though, we need to build them so they can be repurposed as easily as possible for a variety of uses."

Brian E. Clark is a Wisconsin-based journalist and a former staff writer on the business desk of The San Diego Union-Tribune. He is a contributor to the Los Angeles Times, Chicago Sun-Times, Milwaukee Journal Sentinel, Dallas Morning News and other publications.



MICRO-APARTMENTS

People are willing to give up living space for community amenities



By Joan Mooney

lenn Greenberg and Will Herbig were living in a 650-square-foot condominium in Dupont Circle, a hip neighborhood in Washington, D.C., when water damage forced them to leave. They moved into a micro-apartment in a new building a few blocks away, The Drake, and loved it. Even when their condo was

habitable again, they decided to sell it and stay in their 450-square-foot studio. "To us, it was more than the studio space," said C roop.

"To us, it was more than the studio space," said Greenwood. "It was the public space in the building as well."

That's part of the appeal of micro-apartments. To the residents, it feels like a worthwhile tradeoff, with a smaller private space but large shared amenities. The Drake has a spacious roof deck with expansive city views, a shared work space for residents who work from home, and a communal kitchen and dining room for those who want to host a dinner party. The management puts on community events for the residents. For a certain type of tenant, it's an ideal situation.

"The small unit forces you to get out," said Greenberg. "In the lobby, they had coffee and tea every day. You're there and you meet people as well."

What exactly is a micro-apartment? A 2014 Urban Land Institute report, "The Macro View on Micro Units," noted that a micro-unit has no standard definition but offered this working definition: "a small studio apartment, typically less than 350 square feet, with a fully functioning and accessibility-compliant kitchen and bathroom."

They moved into a micro-apartment and loved it.

Micro-apartments feel like a worthwhile tradeoff, with a smaller private space but large shared amenities.

Greenberg and Herbig's apartment would be too big to fit that definition. Wynwood 25, a micro-apartment building planned in Miami to open next summer, will have studios as big as 500 square feet. The standard size for a conventional studio is 750 square feet, said Jon Paul Perez, vice president of the Related Group, who is developing Wynwood 25 to add to his portfolio of conventional apartments.

What makes a unit micro depends on the market, said Rohit Anand, principal at KTGY Architecture + Planning, Tysons Corner, Va.

"In Dallas, 500 square feet might be a micro-unit," Anand said. "In coast cities, it could be 350 square feet."

Why build micros?

Developers describe micro-apartments as a response to the high cost of housing in coastal cities such as Washington, New York, San Francisco, Seattle and Philadelphia. And it's not just on the coast. There's a mixed-use development, The Exchange, planned to open in Salt Lake City in 2020, that will include micro-units. The Salt Lake City Council last year declared an affordable housing crisis for the city, with downtown studio apartments renting for \$1,100 a month. Those in the Exchange will be close to half of that.

In Washington, Keener-Squire Properties, a large area developer, started planning The Drake in 2010.

"We had a lot of older buildings that had smaller apartments," said Michael Korns, partner at Keener-Squire. The rents were more reasonable, allowing young residents to rent a place in desirable, but otherwise prohibitively expensive, urban locations. "We realized if we had the opportunity to build the building we wanted to, we could build the units with the floorplan we wanted."

In 2014, Keener-Squire opened The Drake and The Harper, on 14th Street NW, a recently revitalized neighborhood that attracts young professionals. The Drake has a mixture of micros and regular sized apartments, and The Harper is all micros.





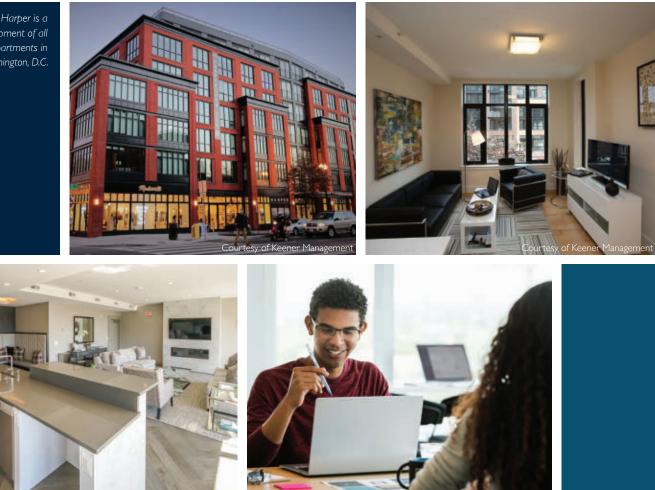




The Drake apartment building in Washington, D.C.

Photos courtesy of Keener Management

The Harper is a development of all micro-apartments in Washington, D.C.



Korns doesn't like the term micro-apartment.

"It makes it sound like not a real apartment," he said. "These are nicely appointed and finished, and they're more affordable than other alternatives in that area." A studio in either The Harper or The Drake rents for \$1,950 a month for 320 square feet. More expensive units are \$2,450 for 430 square feet.

Another difference from conventional apartment buildings is related to density and the local market. The Drake and The Harper have only 56 parking spaces for 218 units

Micro-units will rent for less than larger new apartments in the city.

and 36 parking spaces for 144 units, respectively, and even those spaces are not all used by residents. Retailers and employees rent some of the spaces. In Washington, many young people who live downtown don't have cars. That would not work in every city.

Miami builds its first micro-apartments

In Miami, "everyone has a car," said Perez. Still, city regulations require micro-apartments to have one parking space each versus 1.5 spaces per regular sized apartment.

Like Korns, Perez sees his two micro-developments scheduled to open later this year, Wynwood 25 and The Bradley, as a way to bring down rental costs. They will be the city's first micro-developments, with The Bradley all micro-units and Wynwood 25 having a higher than usual percentage of studios and one bedrooms.

Residents are not spending as much time within their dwelling unit. The neighborhood is the amenity.

"Miami is one of the more expensive cities for housing costs as a percent of income," Perez said. His micro-units will rent in the range of \$3.00-plus per square foot, comparable to or less than larger new apartments in the city. But the rent per unit will be lower. A 600-square-foot unit in The Bradley will rent for \$1,800.

The Wynwood neighborhood, where both developments are located, is a cutting edge, artsy part of town. For the type of residents who gravitate to micro-apartments, young professionals just starting their career, Wynwood is "where they spend their time outside of work," said Perez, "the bars, restaurants and art galleries."

Said Anand, who has designed many micro-developments, residents "are not spending as much time within their dwelling unit. The neighborhood is the amenity."

But developers like Korns and Perez who offer luxury micro-units say relying on the attractions of the neighborhood is not enough.

"You also want to make sure you provide amenities at the building," Perez said. "They're going to be used a lot more than if you have a 2,000- or 3,000-square-foot apartment to hang out in.

"People are going to need a place for work stations, a place to watch football games, big grilling areas where they can invite friends over, have big dinner parties, extra lounge chairs by the pool," he said.

Higher cost to build, but helpful in competitive market

What are the pros and cons of micro-units for developers?

"They're somewhat more expensive to build and operate because they have more kitchens and bathrooms," said Korns. "You're leasing more apartments in the same number of square feet, so you have to staff it accordingly."

Micro-apartments are nicely appointed and they're more affordable.





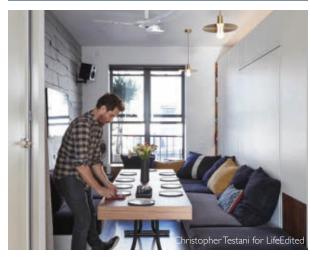


Wynwood 25, a micro-apartment building planned in Miami.





A rendering of The Bradley, a planned micro-apartment building in Miami.





You can appeal to more people because of the more affordable price.

On the upside, "hopefully you can appeal to more people because of the more affordable price."

Although the cost to build is a bit higher, "the financial benefit is about the same as a regular size apartment," said Perez. "It allows you to make sense of the deals in a highly competitive rental market."

Perez is also planning Miami's first micro-condos, in a building to be called Wynwood 29. He is still analyzing the market, but he sees it as "another way to tackle the affordability issue."

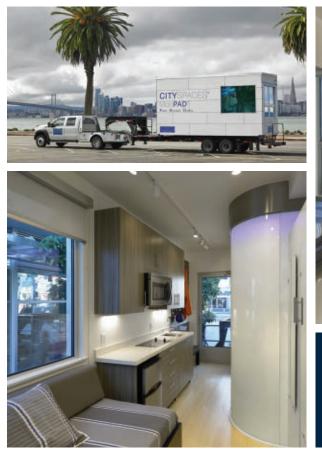
"A younger person a couple of years out of college can't afford a \$200,000 to \$300,000 apartment," Perez said. "In Miami, we now require a 50-percent down payment" since the end of the recession when building started again in 2010. A first-time buyer generally does not have a \$100,000 down payment.

Inside the unit

Designing a micro-apartment is a particular challenge for the architect. Different developers have different ideas of what they want. Some may want the type of ingenious design seen on TV design shows, with a loft bed stored out of sight above a couch.

For The Drake, Keener Squire asked architect Steve Dickens to figure out "how small in square footage a unit could be and still be fully functional," said Dickens. He is senior associate at Eric Colbert and Associates in Washington, D.C. Working with Keener Squire's construction division, for example, Dickens determined through trial and error that the optimal minimal size for a bed niche was the size of a queen size bed plus 20 inches on either side.

One of the hardest parts was designing each unit to comply with the Americans with Disabilities Act and Fair Housing standards, Dickens said. Because of the accessibility requirements, "the bathrooms seemed somewhere between normal and even gracious." But those requirements also meant "you didn't even have half an inch before something could be off," he said.





CitySpaces[®] MicroPADs[®] (pre-fab affordable dwelling) in San Francisco, Calif.

Photos courtesy of Panoramic Interests

Because units are closer together than in a regular apartment building, soundproofing in the floors, walls and ceilings is crucial, Dickens said. In a micro-unit, "if you hear your neighbor's TV you can't escape it" by going to another room.

Solution to affordable housing

Not all micro-units are luxury apartments. Some are built as affordable housing. In San Francisco, Patrick Kennedy's Panoramic Interests has designed CitySpaces[®] Micro-PADs[®] (pre-fab affordable dwelling) — a steel modular home specifically designed to meet the needs of homeless people. Each 160-square-foot unit has a bath and kitchenette and meets Americans with Disabilities Act and Fair Housing Code requirements. Using city money, the MicroPADs are erected inexpensively and quickly.

"There's no definition of micro-unit, legal or industry," said Dickens. "It's an open question; is there a difference between a very small apartment and a micro-unit? The

When you live small, it forces you to edit everything in your life.

difference to me is that a micro-unit implies a lot of forethought, programming and design as well a construction character and quality that optimizes a very small apartment. That's the distinction, where there's a real concerted effort to optimize the space."

Greenberg and Herbig had a similar experience when they were tenants.

"When you live small, it forces you to edit everything in your life," said Greenberg. "It's a freeing feeling to be disciplined." ●

Joan Mooney is a freelance writer in Washington, D.C., who wrote the NATIONAL ASSOCIA-TION OF REALTORS® Water Infrastructure Toolkit.

accessory dwelling units



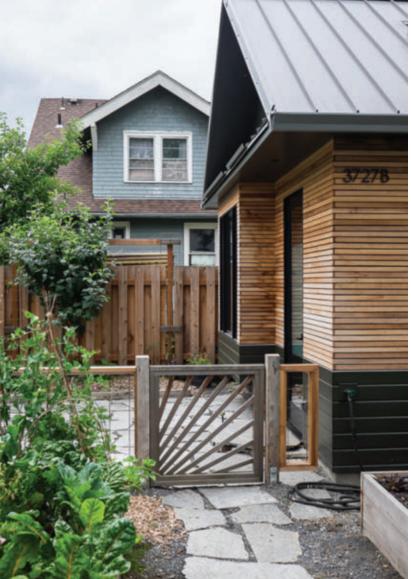


Photo courtesy Asmund Tweto

IS THERE SUPPORT FOR BUILDING SMALLER HOMES IN BACKYARDS ACROSS THE NATION?

By John Van Gieson

aren Chapple, a professor of city and regional planning at the University of California, Berkeley, is an affordable housing expert who wanted to test her ideas by building a small home in the yard behind her house.

Known as accessory dwelling units, or ADUs, small backyard homes are growing in popularity across the country, especially in Western cities. Advocates tout ADUs as an excellent way to provide affordable housing in increasingly unaffordable urban neighborhoods. Skeptics say the trend is encouraging, but the number of ADUs being built is pitifully short of what is needed to make a dent in the affordable housing crisis. Fearing the impact

Some cities have made substantial progress in facilitating ADU development.

Portland has the most ADUs of any jurisdiction in the country.

on their neighborhoods, opponents have imposed restrictions and outright bans on ADUs in a number of cities.

Several years ago Chapple was approached by a group of civil engineering students seeking her advice on building an energy efficiency class project. "Why don't you use my yard for your project to build an energy efficient tiny home?" she asked the students. They agreed.

The students designed Chapple's ADU, pulled the permits and built a model 400-square-foot tiny home in her Berkeley Flats yard.

Kol Peterson, a Portland, Ore., ADU consultant (www. buildinganadu.com), has become a guru to the ADU movement, writing a how-to book called "Backyard Revolution: The Definitive Guide to ADU Development." He said some cities have made substantial progress in facilitating ADU development but too many others have made it impossible to build ADUs in their cities.

"In some jurisdictions this is a new housing phenomenon so they're scared of it because they perceive it's going to alter the fabric of their neighborhoods," Peterson said. "They worry about parking, and they worry about their single-family neighborhood becoming a slum."

"In Portland, they have the most ADUs of any jurisdiction in the country, but it's only one percent of the housing supply," he said. "It's better than anyplace else, but it's still got a lot of room for improvement."

"There's not a single city east of Austin, Texas, that has decent ADU regulations; not even close to decent," Peterson said. "The current regulations are bad on the entire East Coast."

Chapple said ADUs increase the supply of affordable housing. A seemingly contradictory divide has grown up, however, between ADU proponents and affordable housing advocates.

"Affordable housing advocates are angry about ADUs because they think they're getting some sort of free ride, and they're not providing affordable housing," Chapple said. "It's affordable housing for your own family."

Affordable housing is a major justification for ADUs, but there are other good reasons to take up residence in

















a tiny house in somebody's backyard. ADUs are the latest twist on separate facilities such as "carriage houses" and "granny flats," where homeowners provided housing for family, servants or renters.

ADUs make great places for students, including family members, who are attending college. Many provide housing for elderly parents who need to cut their housing costs and maintain their independence while living close to adult children in times of need.

Urban planners like ADUs because they contribute to the goal of increasing density in single-family residential neighborhoods and promote infill development.

There is a strong NIMBY (Not in My Backyard) element to neighborhood opposition to ADUs. Opponents object to denser neighborhoods, small houses on the edge of their property and the possibility of tax increases to pay for services to new residents. There is a perception, incorrect according to Chapple, that new ADU residents create neighborhood parking problems.

She said her studies have shown no net loss of parking space in Portland and Seattle neighborhoods that have a lot of ADUs. "Wait a minute," Chapple tells opponents

Young couples and families use ADU income to reduce their housing costs.



who raise parking issues, "people have fewer cars. There also are households with six cars. It's just that they're not living in tiny homes."

Among cities where anti-ADU arguments have delayed action on ordinances easing ADU restrictions is Boulder, Colo. Ken Hotard, vice president of the Boulder Area Association of REALTORS[®], said the city has an acute shortage of affordable housing units.

Hotard said city planners have come up with a package of reasonable regulations, but progress has been thwarted by the protests of angry residents and the fears of cautious politicians who put off a decision until after the 2018 election. Boulder has held six public hearings, including one that lasted six hours and attracted 60 speakers, many of whom opposed the new regulations.

The issue of renting ADUs has drawn a mixed response, even from cities that are encouraging development of the small houses. Some opponents don't want strangers moving into rental units in their established neighborhoods, but advocates say lower-cost rentals increase affordable housing options and help young couples and families use ADU income to reduce their housing costs.

Asmund Tweto, a Portland architect (www.asmundtwetoarchitect.com), said a number of Portland ADU owners use the buildings for different purposes at different stages of their lives. "Lots of young people who have a big house have built an ADU," he said. "They live in the ADU and rent the big house. When they have kids they switch and they rent out the ADU and live in the big house. As they get old, they can switch again when they no longer need to live in the big house."

Tweto built a 340-square-foot ADU in his backyard in 2017. He has been renting it, mostly through Airbnb.

"I'm using ours as a short-term rental, and we've had hundreds of people stay there," Tweto said. "It's 70 to 80 percent booked most of the time."

Cities promoting ADU development offer a number of incentives such as waiving development fees, easing parking requirements and reducing bureaucratic rules. Peterson said it's been a pleasure dealing with Portland's ADU bureaucrats because the fee waivers can save ADU owners about \$20,000.

Calling ADUs small or tiny houses can be misleading. They are real houses, built to the same standards as singlefamily houses in the community — only smaller. Both ADUs and main houses are required to have living space, at least one bedroom, and kitchens and bathrooms with standard cooking and plumbing facilities. Each type of house must be connected individually to electric, gas, water and sewer lines.

Cities promoting ADU development offer a number of incentives such as waiving development fees.



ADU affordable-housing solutions are getting more creative.

Size restrictions are common in cities that encourage ADU development. Tweto said Portland limits ADUs to 800 square feet or 75 percent of the area of the main house.

There are two types of ADUs, internal and external. External refers to stand alone units that are not connected to the main house. Internal refers to basement and garage ADUs that are part of the main house.

Converting internal space into an ADU is generally cheaper, but may be more complicated than building a new unit and can be subject to stricter regulations. Building codes usually require separate entrances for internal ADUs.

Calling the main houses, which share a lot with ADUs, "big houses" is also a misnomer. Main houses in Portland and other cities tend to be smaller two- or three-bedroom houses built as far back as the 1920s to house working class residents — not McMansions housing the rich. These older neighborhoods tend to be gentrifying, affecting both affordability and availability.

ADU affordable-housing solutions are getting more creative. In an attempt to develop more affordable housing in high cost San Francisco, Chapple said, local officials have allowed the conversion of apartment parking garages into ADUs.

The cost of building an ADU varies widely depending on local conditions and political priorities. Chapple said costs run about \$350,000 to \$390,000 in the San Francisco Bay area with reports of ADUs that cost \$800,000 to build.

"I've been sort of shocked by how expensive these are turning out to be," she said. "\$350,000 is not quite an affordable unit."

U-Cal is developing an ADU report card to measure how well California cities are doing to encourage development of ADUs.

Portland REALTOR[®] Matt Guy said he could build an "entry-level" ADU there for about \$150,000.

In a 2017 survey, Chapple's U-Cal research team concluded that it cost an average of \$156,000 to build an ADU in three progressive Northwestern cities — Portland, Seattle and Vancouver, B.C.

Chapple said her team at U-Cal is developing an ADU report card to measure how well California cities are doing to encourage development of ADUs as an affordable housing solution.

"The median grade right now is somewhere around a B or B minus," she said. "There are a few who have used this as an opportunity to make it harder to build ADUs." Chapple said. Some suburban officials are resisting ADUs, she said, but there is surprisingly strong support in some rural areas.

John Rosshirt, a REALTOR[®] who lives in a rural area outside Austin, is converting his garage into an ADU to house his wife's aging parents.

AARP is making support for ADUs a pillar of its plan to dramatically increase the supply of affordable housing for seniors. AARP and the American Planning Association are joining forces to update an ADU report they first released in 2000.

"By 2035, we're going to have more people over the age of 65 than under the age of 18," said Rodney Harrell, AARP's director of livability though leadership.

"The trend more and more is for cities to open up to ADUs," he said. "They're starting to understand that many cities are having affordability crises. There are people living there who want to stay there, and they're having a hard time."

John Van Gieson is a freelance writer based in Tallahassee, Fla. He owns and runs Van Gieson Media Relations, Inc.



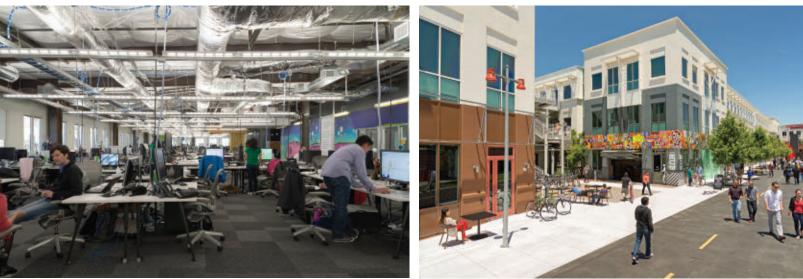








EMPLOYERS' GROWING NEED TO PROVIDE WORKFORCE ACCOMMODATIONS



Photos courtesy of Facebook

here was a time in our country's growth when certain industries, particularly labor-intensive industries, would have to provide housing for the workforce in order to meet the demand of their business development. They were known as "company towns" because the housing as well as all the businesses in "town" — were owned by the company. It was an idea that sometimes started with good intentions, but didn't always work out so well. That was back when there were fewer options for people entering the workforce, and the land was not connected as it is today.

Today, employers are facing the same dilemma in industries that require significant worker populations in areas that lack affordable housing but require skilled labor. Particularly in the high-tech industry; and nowhere more so than Silicon Valley, but also with university and medical facility faculties and staff across the country. Companies are finding it difficult to recruit and retain a competitive workforce because of a lack of affordable housing options within the area. Extended commutes from neighboring communities contribute to traffic congestion and gridlock, and for the worker, it means extra time added to the workday, more cost in transit, and a very strong possibility that your day might start out tinged with a little road stress.

"Tech giants are the drivers of Silicon Valley's robust economy. To continue being successful, these companies need to attract and retain the best employees," says Paul Cardus, executive director for the Silicon Valley Association of REALTORS[®]. "Their employees need a place to go home to, so it's in their best interest to provide housing assistance to their employees. Facebook and Google have started, and are planning for the long term, but more needs to be done. Cities and counties need to actively create housing opportunities at all income levels. Too often, office development far outpaces housing construction, leading to increased traffic congestion and declining affordability." Companies are finding it difficult to recruit and retain a competitive workforce because of a lack of affordable housing options.



Photos courtesy of Facebook







Tech Firms Enter Housing

Numerous studies indicate that workers are more productive and have less absenteeism if they can walk, bike or take public transit to work as opposed to commuting by car. Millennials have embraced ride-sharing options such as Uber and Lyft for getting around. If you don't need a vehicle to commute to work, you might not need a vehicle at all. No car payments, mechanical problems or parking hassles.

But is there land available for all this housing and the necessary development to make it desirable to a high-tech workforce? Not always. In fact, not usually. The original company towns were often in the resource extraction industries: metal and coal mining, lumber camps, and oil fields. Some followed the industry if it was in motion, such as the railroad camps and later with the itinerant fruit pickers and vegetable harvesters.

None of these industries were sited in municipalities, unless consigned to industrial or agricultural areas not fit for housing.

Today's situation is quite different. While the original company towns offered employment, they often kept workers on the edge of poverty by controlling everything else: rent, groceries, even the currency, called scrip. You could easily "owe your soul to the company store," as a popular song of the time expressed. That was supply-side economics. The more workers you had, the more minerals were mined, more trees cut, more rail laid, more wells drilled and more bountiful harvests were the results.

Skilled workers in today's digital age have much greater choices of where they can work. Literally, anywhere in the world. Companies with campus-style headquarters in the United States are finding it difficult to recruit and retain a competitive workforce. It has become demandside economics with today's skilled workers looking for a sweeter wine than served in "The Grapes of Wrath", John Steinbeck's account of the Oakies going to California during the Dust Bowl and Depression, looking for work in the orchards.

Workers are more productive and have less absenteeism if they can walk, bike or take public transit. The new California migration is not to the fertile fields of the Central Valley, but to the Bay Area, where Silicon Valley is home to the tech giants, such as Google, Apple, Facebook and LinkedIn. They all face the difficulty of attracting and keeping the brightest minds of their industry because the availability and cost of housing is one of the tightest and most expensive in the country. These companies are under increasing pressure by employees and officials alike to construct housing to offset their rapid hiring. From 2010 to 2015, the region added 367,064 jobs but only 57,094 housing units, according to a 2017 report by the Silicon Valley Leadership Group and the Silicon Valley Community Foundation.

"Tech firms are feeling the housing squeeze and are having challenges attracting talent from outside the region. When talent turns down once-in-a-lifetime career opportunities because they don't think they can afford a home here, you can't turn your back on that. So more than ever tech firms are asking: how can we help?" said Kevin Zwick, CEO of Housing Trust Silicon Valley (HTSV).

The nonprofit organization is helping workers who qualify as first-time homebuyers through their Homebuyer Empowerment Loan Program (HELP), TECH Fund, and other programs which leverage private funds with public loan programs for deferred or forgivable loans, as well as assistance with down payments, closing costs and procedures.

"TECH Fund is solving both problems it was created to address," says Zwick. "It not only gives Bay Area firms a proven impact-investing vehicle to create affordable homes, but it also gives developers the ability to compete in this hyper-competitive market and secure housing sites quickly."

Tech firms are feeling the housing squeeze and are having challenges attracting talent.

The Ly family spent over two decades renting in Silicon Valley, with dreams of finally owning a home. Thanks to a \$45,000 loan from HTSV that dream is coming true. "We moved a total of seven times; not because we wanted to, but because we had to," Ken Ly explains. "From apartment to apartment, from house to house, we've been renting for 23 years. Finally, we are moving because we want to, and to a place we can call our home."

Yet it remains a problem of supply and demand with available housing stock.

Apple is feeling the pinch at its campus in Cupertino, where local government and local folk are leery of densification and the inherent social issues of too many people and not enough room.

According to appleinsider.com: "Cupertino's government is frowning, however, at building any new housing (during a severe shortage of places to live in the region) because it gets more tax revenue from office space. Apple's local taxes alone fund around 30 percent of the town's budget. At the currently insane housing prices of Silicon Valley, a couple of Apple employees trying to buy a house in Cupertino would face a mortgage of around \$10,000 per month. And there are only a couple dozen available houses for Apple's thousands of employees to even attempt to buy anywhere near the company's offices."



Rendering of the proposed Vallco Town Center in Cupertino, Calif., a mixed-use development with 2,402 units of housing. Fifty percent of the housing units are proposed to be affordable.



Other tech-giants are having better luck. In 2017, Facebook revealed that it will build a village across from its campus in Menlo Park that will include 1,500 residences, a walkable retail district, a grocery store, and a hotel for its employees. LinkedIn has contributed \$10 million to HTSV's TECH fund to aid with housing for its employees in Sunnyvale.

Google is going big with its plans for employer-assisted housing (EAH) at many of its facilities throughout North America, because of lessons learned in Silicon Valley at Mountain View, where its 750,000-square-foot headquarters employs about 20,000 people, but fewer than 5,000 housing units were built between 2003 and 2014.

Google recently won city approval to construct a campus with nearly 10,000 housing units, offices, shops, businesses, and a public park in the North Bayshore area of Mountain View. Approximately 20 percent of the housing will be priced at below-market rate because of Google's significant investment in Low-Income Housing Tax Credits (LIHTCs), a federal loan program established in 1986 which has helped finance over 2.4 million affordable housing units across the United States.

"I think that a lot of people enjoyed the suburban lifestyle that many of our communities have and they wanted to preserve that," Pat Showalter, Mountain View's mayor at the time told the San Francisco Chronicle. "They were fearful that densifying and providing more dense housing would really create problems for their communities. What's important is that those communities are designed properly and we have the infrastructure that supports that dense design."

"Company towns" of the 21st Century will have to be a much different animal than those of past times, driven by different needs. "The fact that companies that design software and build algorithms for a living are having to build housing is really an indicator of the failure of our traditional housing supply model," Matt Regan, senior vice president of government relations for the Bay Area Council, told the San Francisco Chronicle. How the building industry responds, and what financial support it can hope for, will have a dramatic effect on EAH programs in industries requiring a skilled labor force that can be satisfied and feel invested in the community where they live and work.

Skilled Employee Housing

But while Silicon Valley might be one of the neediest areas for employee housing, it certainly isn't the only one. Cities across the country are struggling to house skilled employees for other industries, such as university and medical facility faculty and staff.

The University Circle neighborhood of Cleveland is the cultural hub of the city, known as "Ohio's most spectacular square mile." It's home to museums, restaurants, parks and other urban amenities. It's also home to universities and medical research facilities that require skilled faculty and staff, such as Case Western Reserve University, the Cleveland Clinic Main Campus, a VA hospital and University Hospitals.

What the area lacks, however, is sufficient affordable housing for the faculty and staff. Fortunately, there is

Cleveland's University Circle neighborhood lacks affordable housing for faculty and staff.

Companies can benefit by developing a real estate portfolio to supplement their corporate assets.

Greater Circle Living, which is a program that works with local businesses and qualified employees to provide up to \$30,000 in forgivable loans and other assistance. It's a public-private (P2) partnership whose motto is "An incentive to live near work."

"It's wonderful to live close to where you work. And it's a self-supporting thing. The more people who live in an area, the more businesses that follow, and it becomes a thriving center," explained Andrew, an employee from Case Western Reserve University.

Others have given similar testimonials. "I live 2.9 miles from work. I like to say I roll out of bed and into work. I've ridden my bike to work and I could walk to work. It's convenient and it saves on gas, too." said an employee from Cleveland Clinic.

With some professions, it's not just a matter of convenience. Dr. Karthick has this perspective, "I love the proximity to work. I'm three minutes from Cleveland Clinic. I'm on call a lot so I need to be at work quickly. I didn't want a long drive."

Getting direct financial support from businesses that require a skilled labor force is not necessarily corporate philanthropy, it's investing in their future. Using those funds to leverage available public funding and services is a multiplier that can have significant results.

The P2 model for EAH programs in cities experiencing difficulty recruiting and retaining a competitive workforce is showing results. Available land will always be an issue in a world that gets smaller every day, but the obvious benefits to businesses and neighborhoods of having workers who are invested in their community through having an affordable place to live can be part of the solution to that issue.

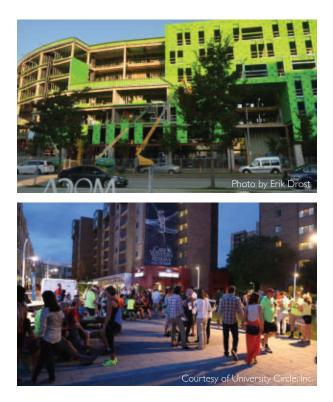
The Company Benefits

Aside from recruiting and retaining a more loyal and productive workforce, companies can benefit by developing a real estate portfolio to supplement their corporate assets. Plus replacing employees can cost 150 percent of the worker's annual salary and impede team-building efforts. Attracting and maintaining the best and brightest of today's skilled labor force gives a company not only a competitive advantage but builds brand recognition. Consumers will be more inclined to patronize companies that treat their workers well, and with the transparency of the Digital Age there is nowhere to hide bad business practices.

EAH programs are also a part of smart growth for revitalizing old neighborhoods and developing new ones with designing for density in mind. Having organizations that can combine public programs and services with private funding, and having supportive zoning and planning departments from local government are essential to developing the model for the future of housing's evolving form.

Jackie, from the Cleveland Museum of Art, puts it plainly. "If you're working in the area, why wouldn't you want to live in the area?"

Kurt Buss is a freelance writer who lives in Loveland, Colorado, with over 25 years of experience managing recycling programs along Colorado's Front Range. He writes about resource conservation, being a Baby Boomer, and enjoying the Rocky Mountains. You can visit his website at www.kurtbusscoloradofreelancewriter.com



the CONTAINER HOUSING MOVEMENT

Seaworthy and Homeworthy



n Common Ground reported on "upcycling" cargo containers for affordable housing in the Summer 2107 issue. We looked at the basic cost, design, permitting and construction issues, as well as some of

the environmental concerns regarding what to do with all these cargo containers in our coastal port cities. We talked to companies and organizations, who were building with containers, and found their experiences to be overwhelmingly positive. For the most part.

Since then, the price of the containers has gone down a bit because steel prices have dropped. You can find singleuse, 40' containers for a few thousand dollars and have them trucked to your location.

Cutting the metal skin for door and window penetrations can be done with hand-tools, and fitting the inside with utilities, insulation and finishes is no different than wood-frame construction. The primary benefits of building with steel containers is that they can be pre-fabricated in a warehouse while the building site is being prepped, and placed on four concrete pilings and welded into place within a fraction of the time it would take to build a stick-frame house.

These units were built to haul cargo across oceans and can withstand a beating from Mother Nature without maintenance concerns. From a design standpoint, the modular nature of these Lego block structures allows for great vertical integration as well as various options for cantilevering, joining and creating unique interior spaces for mezzanines and shared areas in larger complexes.

The only apparent drawback to building with sea containers may occur with the permitting process. Planning and zoning departments don't have much precedent on how to classify sea container structures, yet. Some jurisdictions consider them mobile homes and others lump them into the Tiny House movement. There has been concern from neighbors that they would affect property values.

In Miami, there are plenty of available sea containers, and not enough affordable housing units, explains Danielle Blake, Senior Vice President of Housing & Government Affairs for the MIAMI Association of REALTORS[®].

When we originally reported on container homes for affordable housing, she was working with partner organizations for building and financing, and Miami-Dade County for the land. Florida has a law requiring all counties to "prepare an inventory list of all real property within its jurisdiction, to which the county holds fee simple title, that is appropriate for use as affordable housing." This list was used to select a site that would be aesthetically appropriate for a container home. They found a corner lot in South Miami next to a modular home under construction.

"It's been a struggle at times getting the project through the city and county planning and zoning departments, but the project is finally coming to fruition," Blake indicated. "I was extremely optimistic that this was going to be a quick project, but I have come to learn that government is not so quick. We're dealing with two different bureaucracies.

"Everything takes a long time. There was a lot of hesitation, and it really depends on the audience that you're talking to. The planning and zoning committee at the city is called the Environmental Review and Preservation Board. What does that tell you? There was a lot of landscaping that was required, because the city didn't want it to look like a trailer."

There were similar issues with Miami-Dade County. "This is a different approach than what most people would do," Blake said. "Because it's an affordable housing model and we partnered with the county — and they're dealing with gentrification issues — we made a commitment to help out the community and keep the residents there. We needed to find out what the residents can afford; and can we build it for less than that; and can that model be duplicated?"

It appears they're about to find out. In a letter to the County Commissioners, MIAMI Association of REALTORS[®] pointed out three facts affecting their desire to pursue the project: an abundance of excess shipping containers at the Port of Miami; the growing popularity of container homes and tiny houses across the country; and a lack of affordable housing to meet the growing population.







Travis Price's design concepts for sea container home developments.

Photos courtesy of Travis Price Architects



Photos courtesy of Travis Price Architects

Their stated goal is to build "a container home prototype to demonstrate to the community that containers are readily available; can be repurposed into housing; elevated for flooding; and financed for ownership." They indicated that they had received a grant from NAR and partnered with the Little River Box Company (container home design and fabrication) and Cobo Construction (on site builders).

A final study is being submitted as we go to publication, but it appears as though the difficult work is behind them. "The study is going to talk about all the hurdles that we heard in the process," Blake says. "That's the whole reason why we're doing it."

Perhaps the most compelling application for container housing is in providing quick, secure shelter for victims of hurricanes, tornados and other severe weather events — and then rebuilding the community with them.

After Hurricane Katrina, a Wisconsin homebuilder named Doug Larson was helping with the rebuilding effort and saw the need for fast, safe, temporary structures. When he returned, he formed a new company called MODS[®] International (for Modular On Demand Structures) and has been growing ever since.

On their website they claim, "We are the leading innovator in designing and building modular structures using shipping containers." Other companies might make a similar claim, but their success is hard to deny, and so is their good will. After tornadoes recently ravaged a community in Oklahoma, MODS donated a house to a displaced family. Larson stated on his company's blog, "We're excited to be a part of the humanitarian relief effort in Oklahoma. This is one of the many uses I envisioned when I created MODS."

Another innovator in the container housing field is Travis Price, principal and founder of Travis Price Architects in Washington, D.C. He coined the phrase "passive solar" while writing his Master of Architecture thesis at the University of New Mexico in the early 1970s. He's been learning and teaching ever since, and serves as an adjunct professor, a lecturer at the Smithsonian Institution and National Geographic Society, a published author, and has acquired myriad awards for his work all over the world.



Container housing is just one facet of his work, but he sees it as something much more than a fad.

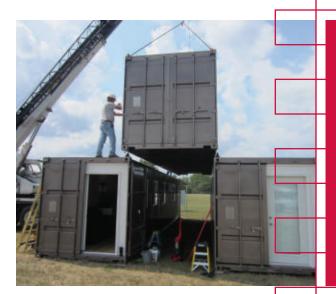
He spoke with us from a jobsite recently, and his enthusiasm was immediately evident. We asked him his thoughts on the evolution of the container housing industry and he recalled that when he was in grad school he envisioned using sea containers as "plug and play" housing that could be taken with you if you moved. "So here it is, all these years later, and we're building them, and it's really increasing. I'm really kind of shocked. I'm seeing them all over the country and people are calling us for advice — builders, architects, people doing them finally. I'm seeing more and more single-family housing than I ever thought I would."

He mentions three projects currently under contract: 55 units in Costa Rica, a 6-8 story tower in D.C., and a village of floating sea container boathouses at The Warf, a brandnew, multi-billion dollar development on the Potomac.

"To me, these projects are market indicators that the modularity is really starting to take a grip. I think there's a hunger for this look, and it's not just the millennials, it's coming from every age group. There's a new change that's not about the technology or so forth, it's really about the culture of modernism. New modernism is here. It's here to stay. The most glorious thing about this new shift to containers is that they are actually giving us a more affordable, faster, IKEA version of a new landscape of architecture.

He's also cognizant of the need for housing structures that can stand up to the catastrophic weather events that seem to be increasing in numbers and ferocity. "I think the future will be to go up eight feet, park under it and put a sea container house up. You're going to have permanent resilience. It'll withstand 200-mile-an-hour winds. It's just made for it. If you use concrete piles and steel welds it's not going anywhere."

"But, the biggest factors for building with sea containers is that it's cool, fast and cheap. The cool factor is the strongest one. People get a lot of emotional benefits from the recycling aspect of building with sea containers. It's part of what I call 'Green Bling'." But he knows it's not a passing trend. "Whether it's one container or thousands of containers, it's the great new building block of the 21st Century." ●







Photos courtesy of MODS International

Photos courtesy of Valverde Commons



COHOUSING OPTIONS GROWING AROUND THE COUNTRY

By Brian E. Clark

t was back in the late 1970s when Jim Ludden and his wife visited the Twin Oaks cohousing "intentional community" in Virginia. The eco-village struck an emotional chord with them and for the next few decades, they searched, off and on, for a similar place to live.

We liked the way of life," said Ludden, a retired 79-year-old software engineer of the eco-village. "We were cruising up and down the Rockies about half-adozen years ago when we found the Valverde Commons just outside Taos, N.M."

In 2013, Ludden and his wife bought a lot in Valverde, which was started in 2006 and designed for seniors ages 55 and older. Individual homes (now totaling 21) circle a common, grassy area with paths providing access and opportunity for socialization. Activities, potlucks and meetings take place in the 2,200-square-foot Common House. A barn contains shared landscaping tools, a complete woodworking shop and space for individual projects. The community has monthly meetings and decisions are made by a majority rule vote.

Sadly, Ludden's spouse died in 2014, but he pushed on and moved into the 1,200-square-foot home he helped design and build six months later.

Individual homes circle a common, grassy area with paths providing access and opportunity for socialization.

Cohousing cultivates a culture of sharing, in which neighbors commit to being part of a community for everyone's benefit.

"I'm a little on the shy side, so it's been a good fit for me," he mused. "To be comfortable here, you need to give up some individuality and be willing to compromise, but you gain community. And that's made it very worthwhile for me. I plan to stay here as long as I can.

"In fact if I have my way, they're going to have to carry me out feet first," he added with a chuckle.

Ludden is part of the still small, but rapidly growing cohousing movement, which was started by Danish architect Jan Gudmand-Hoyer, who died in 2017 at age 81. His goal, which he first outlined in the 1960s, was to create neighborhoods where residents would want to work and live together, rather than be isolated and disconnected.

In a nutshell, cohousing cultivates a culture of sharing, in which neighbors commit to being part of a community for everyone's benefit. Neighborhoods typically comprise 20 to 40 privately owned homes, though some urban projects are set up similar to condominium projects and others mix the two.

By 2018, there were more than 166 cohousing communities in the United States, with 17 under construction and another 144 currently in the planning stage, said Alice Alexander, who served as executive director of the nonprofit organization Coho/US from 2014 to 2017.

Newer ones are popping up in downtowns, while others are rural or are in what might be considered suburban areas of cities. But they all generally share landscaping, gardening and other duties that are not contracted out. They also have frequent potluck meals and form committees that decide everything from maintenance tasks to holiday celebrations. Some include affordable housing options.

And while Valverde is only for residents who are 55 and older, many are multi-generational with members who range in age from newborns to great grandparents in their 80s. They all offer a strong sense of community, aging-inplace opportunities and generally denser housing stock with open space for gardens or orchards held in common.







Valverde Commons, a cohousing development, outside of Taos, N.M., includes community paths, a shared barn and woodworking shop, and a large common house.

Photos courtesy of Valverde Commons







Photos courtesy of Valverde Commons

Cohousing communities include affordable housing options.

Alexander, who helped create the Central Park Cohousing Community in Durham, N.C., said she was inundated in her last year as head of Coho/US with people interested in the intentional community, cohousing concept.

"If the 144 communities that are forming are eventually built, that would nearly double the number we have now," she said. "Primarily the interest in the new project is coming from baby boomers who have the resources, the time and the inclination — because setting one of these up can be a somewhat complicated process."

Alexander, who is 60, said boomers are the main movers, in large part, "because we've seen how difficult it can be with our own aging parents.

"And we are not going to go gently into the good night," she added, slightly paraphrasing Welsh poet Dylan Thomas.

And rather than "rage, rage against the dying of the light," as Thomas put it, she said boomers are demanding a better way to live. "We want community and not suburban anonymity. It's a better alignment."

"A lot of us have the smarts and the resources to do this. And most of us want the communities they're creating to be intergenerational. So a lot of these forming communities are actively attracting families — which can mean a lot of kids."

Alexander said her advice to older folks is not to wait if they are interested in cohousing.

"You only have so many years left, so you should invest in a community where you could be spending the rest of your years. We are social creatures, yet one of our strongest values is privacy. The beauty of cohousing is that you can have both."

Carlos Wysling, a native of Brazil, moved with his wife, Gwenn, into the Higher Ground Cohousing Community in Bend, Ore., 11 years ago after they'd been introduced to the concept in the San Francisco Bay Area.

"Simply put, it seemed like the right way to go for my wife and me," he said. "We looked from Mexico to the Canadian border and this was an amazing find for us. We visited here and had dinner with residents who were



friendly and engaging. There was a house for sale that my wife liked and it clicked."

Higher Ground is a neighborhood of 40 privately owned homes on 7.5 acres in part of what was once the Wells family farm on the east side of Bend about 3.5 miles from downtown. The houses share many common spaces, a large organic garden, an orchard, a community-owned house — which was the original farmhouse — meadows and lava flows. Two rooms in the farmhouse are for rent, as is one of the homes.

There is also a hot tub and sauna that residents share, as well as a wide variety of organized activities such as laughter yoga, dance parties, book study groups, movie and singer/songwriter nights, art projects, lectures, community-building workshops, music and storytelling evenings, cooking and baking.

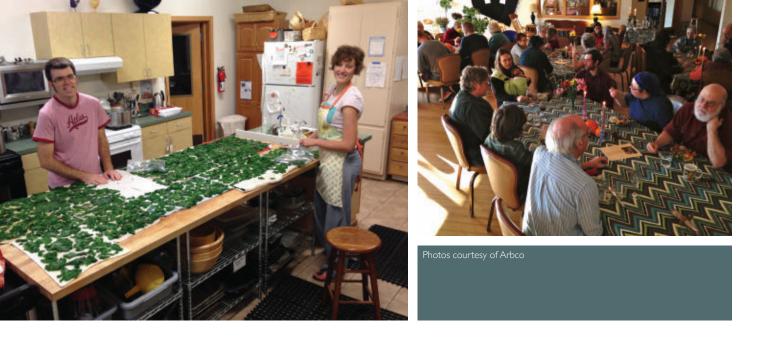
"When we realized a few years back that the original residents' children had grown and moved away, we began

Baby boomers are interested in the intentional community, cohousing concept. to recruit younger people," he said. "We now have eight families with children and another baby due soon. We also have three residents turning 80 and one who is 85."

Wysling said each household pays \$96 a month, much like homeowners' association or condominium dues, to pay for upkeep and community projects. In addition, members are expected to donate four to six hours a month of their labor and serve on committees.

"We have a community meal every Wednesday night that brings people together and some breakfasts, too," he said. "Members look out for one another; watch each other's pets and things like that. We have a board of directors that acts like a homeowners association, but we like to have consensus. And when there are conflicts, we try to resolve them with mediation."

Madison, Wis., is home to three cohousing communities, including one that is now being formed. Brendon Panke is a stay-at-home dad with a 5-year-old son, named Calum, who has lived in the Arboretum Cohousing Sustainable Living Community (Arbco) for nearly seven years. Out of a total population in the 90s, there are more than two dozen other children at Arbco, as residents call it, including several babies.



"My wife and I were in a renting situation that wasn't working well when a friend from grad school told us about Arbco," he said. "We wanted to have our own place, but live in a community where like-minded people were interested in cooperating with each other. We were fortunate to find that here with a lot of nice people. I'm more than happy to volunteer, and I now serve on the board of directors."

There are a lot of helpful baby boomers at Arbco, said Panke, who was baking whole-wheat muffins and making pasta in the communal kitchen when I interviewed him recently.

"So it really is like having a big, extended family around in a lot of ways, with lots of grandparents who have been willing to babysit," said Panke, who is also co-coordinator for the Madison Storytellers group. "I think it's easier being a parent here."

Arbco was started in 2003 by a small group of people affiliated with the Madison Meeting of the Society of Friends (Quakers). They found a site next to St. Mary's Hospital that is less than a mile from the University of Wisconsin campus and downtown Madison.

With help from Madison's flagship cohousing community, Village Cohousing, they broke ground in 2007 and residents moved into the first condominium-like buildings the next year.

You should invest in a community where you could be spending the rest of your years. Arbco currently has six affordable units, made available in part because residents decided to inflate the units' prices in order to make some of the condos less expensive for lower income residents. It's a diverse community, demographically, economically, and racially and includes some members with disabilities.

Four units were sold at discounted prices to buyers whose income was under 70 percent of the area median income. They must be resold as affordable units to new members of Arbco. In addition, two units were constructed by Habitat for Humanity and were sold to buyers with incomes under 60 percent of area median income.

John Merrill, a former UW–Madison Extension housing specialist and one of Arbco's founders, said the community has a total of 40 units, including six free-standing houses, a triplex and a duplex that was built by Habitat. There's also a piano room, play areas for children, a community garden, a chicken coop, a woodworking shop, canoes that can be borrowed for a paddle on nearby Lake Wingra and a tree with a tire swing in the backyard for children and playful adults.

"My wife and I were empty nesters living in a singlefamily home," explained the 76-year-old Merrill, who said cohousing communities are self-selecting and tend to attract moderate to liberal members. "We were in our 60s, wanted to be part of an intentional community and we didn't want to move into traditional senior housing. So an age-integrated cohousing community with kids was just right."

Arbco residents, many of whom dine together on Thursday and Sunday nights, agree when they move in to do at

It's a diverse community, demographically, economically, and racially and includes some members with disabilities.

least four hours of community service a month, though many — such as Panke — tend to do a lot more.

Janet Murphy, a retired nurse who lives at Arbco, said she believes cohousing is growing in popularity in the United States and abroad because the model of living in single homes with big yards where people have little contact with their neighbors is broken.

"It leads to alienation and is not what the human condition needs," she said. "People seek community in a variety of ways and this is one of them."

To govern itself, she said Arbco uses a consensus model to make decisions. "We try not to use words like vote or majority," she explained. "If we want to decide something about the kitchen, for example, we try to exchange enough information while keeping an open mind. We do ultimately have a backup vote, though.

"And while it sounds crazy, we've only had to use it twice," added Murphy, who said she moved into Arbco seeking 'casual social interaction' after she divorced, her kids grew up and she tired of living in a big and lonely old Victorian house.

"The consensus process is slower, but the end result is people are more content with decisions and feel more like they are part of a community."

Janet Kelly, an Arbco resident and a lawyer, said people who want 100 percent control over their property and lives are probably not a good fit for cohousing.

"You need to be relaxed about some things to be part of an intentional community like this," she said. "You have to be able to compromise and work on those skills ... But for most of us who live here now, it's working out quite well."

Brian E. Clark is a Wisconsin-based journalist and a former staff writer on the business desk of The San Diego Union-Tribune. He is a contributor to the Los Angeles Times, Chicago Sun-Times, Milwaukee Journal Sentinel, Dallas Morning News and other publications.







DOES DENSITY MATTER?





By Brad Broberg

f every challenge is an opportunity, then the housing shortage is a chance to reset the conversation about how and where to grow.

Suburban sprawl has dominated development since the end of World War II, putting roofs over the heads of millions and millions of people but burdening communities with the consequences of an auto-dependent lifestyle.

"Your car is your prosthetic (in suburbia). Without it you are disabled," said Ian Lockwood, a sustainable transportation engineer with Toole Design, a transportation design and engineering firm based in Silver Spring, Md.

Given the need to address the housing shortfall and the ills of auto-dependent development, the stars seem aligned for a wave of more compact, efficient and walkable development.

The need for more housing and the demand for walkability brings the D word — density — into play.



Walkable urban places enjoy average rent premiums over drivable sub-urban products.

"I think that is a reasonable assumption, but the other part is that people just plain want it," said Kate Kraft, executive director of America Walks, a coalition of walkability advocates based in Portland, Ore. "The demand is there for walkable neighborhoods."

The need for more housing and the demand for walkability brings the D word — density — into play.

While density is often a lightning rod for debate over the wisdom of adding more people to already populous places, there's more and more reason to think it's a smart thing to do.

"We know from a variety of research ... that you can determine someone's prosperity based on where they live," said Christopher Coes, vice president of land use and development at Smart Growth America, a smart growth advocacy group based in Washington, D.C.

"What we continuously find," Coes said, "is that (places) that bring amenities closer together, that have a mix of housing, have multiple transportation options and have easy access to opportunity — whether it's jobs, education or medical support — generally outperform those that do not."









Photo by Michael Hicks





Developers now are more interested in dense development, but our zoning hasn't caught up.

"Foot Traffic Ahead: 2016," a report published by Smart Growth America and the George Washington University School of Business, quantifies some of the ways density — in the form of walkable urban development — delivers economic benefits.

This analysis of the 30 largest metropolitan areas in the country found that walkable urban locations within each metro have gained market share over sprawling suburban locations in the office, retail and multifamily rental housing sectors.

Walkable urban places aren't just grabbing real estate market share. They enjoy average rent premiums of 90 percent for office, 71 percent for retail and 66 percent for multifamily over drivable sub-urban products, according to "Foot Traffic Ahead." They also correlate to higher GDP per capita and a more highly educated workforce as measured by the number of college graduates 25 and older.

"Foot Traffic Ahead" doesn't address prices of for-sale homes, but a related study, "DC: The WalkUp Wake-Up Call," found that homes in walkable urban neighborhoods in the Washington, D.C., metro sell for 70 percent more per square foot than those in car-dependent areas.

There is a downside to that, though. High prices put housing in walkable urban locations out of reach for many people.

"Part of the reason it's less affordable is that there isn't enough of it," Kraft said. "It's supply and demand. If we can find ways to build more, it will become more affordable."

But that's easier said than done.

"We had an auto-dependent development pattern for decades," Kraft said. "Along with that you had the zoning ordinances that make that kind of development easier to do (and) you had banking and financing that was structured to support it.

"Developers now are more interested in dense development, but our zoning hasn't caught up," she said. "We're seeing improvements, but it took a long time to get where we are and it's going to take a while to get to the point where there's the same set of incentives to build dense development as (sprawl)."

One of the incentives that communities are waking up to is the higher tax revenues and lower infrastructure/ public services costs associated with dense development.

A report by Smart Growth America titled "Building Better Budgets: A National Examination of the Fiscal Benefits of Smart Growth" reviewed data from 17 previously completed studies from around the country. It found that denser development patterns generate an average of 10 times more tax revenue per acre compared to sprawl development.

The report also found that dense development saves municipalities an average of 38 percent on the upfront cost of infrastructure and 10 percent on the annual cost of public services through economies of scale.

Dense development saves municipalities an average of 38 percent on the upfront cost of infrastructure. Urban3, a land-use consulting firm in Asheville, N.C., uses technology to explain and visualize market dynamics created by tax and land-use policies — including creating three-dimensional models that depict a community's tax production per acre as spikes rising out of the ground.

Whenever the model is applied to a city or a region, the tallest spikes always rise from the downtown core and other densely developed sites such as new urbanist neighborhoods.

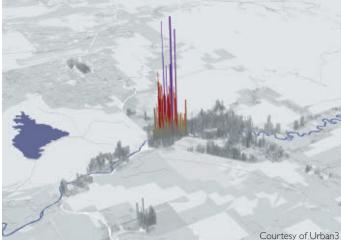
That's why Joe Minicozzi, principal at Urban3, rails at the sight of empty asphalt such as parking lots in otherwise dense areas. "That's a wasted resource," he said.

When cities and regions grow outward instead of inward, said Minicozzi, they dig a fiscal hole by obligating themselves to maintain infrastructure — roads, water, sewer, etc. — that tax revenues from low-density development cannot sustain.

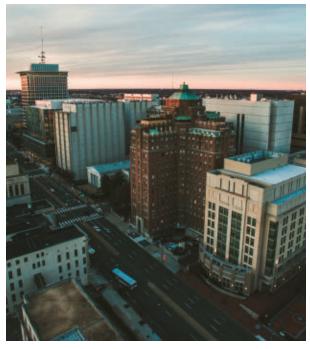
"When a developer builds a road, it's not a gift," Minicozzi said. "It's a liability that the community has to rebuild some 40 years later. You end up with all of this asphalt you have to deal with. It doesn't disappear. You're stuck with it."

Before the advent of sprawl, there was typically a more efficient ratio between the size of the population and the amount of infrastructure needed to serve it.





A three-dimensional model by Urban3 that depicts economic indicators per acre.





During one of his many presentations, Minicozzi cited Lafayette, La., as an example. The city's population has grown by 350 percent since 1950, but the amount of pipes and fire hydrants needed to serve the population has grown by 1,000 percent and 2,000 percent respectively.

The point isn't to scold cities and regions, but to help them make informed decisions about how they use their most valuable asset — land — and determine the relative cost of sprawl versus more dense development.

"Let's just at least account for all of this stuff and figure out whether or not we can afford (sprawl) and identify the subsidy," Minicozzi said. "These are our communities and our neighborhoods and we need to understand what's happening."

Transportation takes a big bite out of both municipal and personal budgets. Density can help reduce costs by making active transportation — walking and biking — feasible alternatives and providing ridership to support transit.

"It turns out you spend a whole lot more money on just getting around if you go with low-density, car-dependent development," Lockwood said.

Reducing reliance on cars and highways — "the most wasteful, resource-hungry method of conveyance ever invented in the history of mankind" — puts more money in municipal coffers to spend on things like parks and schools, Lockwood said. It also puts more money in the

You can plan centers at logical spacings and create transit-ready corridors.





The economic advantages of density will speak for themselves.

pockets of residents to offset the higher cost of housing in walkable neighborhoods.

"I see more cities getting a better understanding of how to retrofit themselves and become more walkable and transit-friendly," he said.

One of the best opportunities can be found along old farm-to-market roads that became the arterial roads that feed the suburbs, Lockwood said.

"There's usually a 300 to 600 foot veneer on each side of the road that is typically covered with surface parking lots and one- or two-story, low-value buildings," he said. "That's where you can put density. You can plan centers at logical spacings and create transit-ready corridors. ... that's what Charlotte, N.C., has done."

Five original farm-to-market roads that radiate out from the city have been designated for transit — either lightrail or bus-rapid transit — with about a dozen stations sprinkled along each and housing concentrated between the stations.

"That kind of strategy allows density to go where it makes sense — along these corridors where people can walk and take transit easily," Lockwood said. "The south line was the first to open and for years now it has been a roaring success. The little station areas are like mini-downtowns and they are just thriving."

In the end, the economic advantages of density will speak for themselves, Lockwood said.

"The cities that embrace the things we're talking about ... density, better mixes of uses, are going to be more competitive," he said. "Their taxes are going to be lower, they're going to have better libraries, better schools."

And the places that don't?

"People are not going to live in those places," Lockwood said. "They're going to dry up." ●

Brad Broberg is a Seattle-based freelance writer specializing in business and development issues. His work appears regularly in the Puget Sound Business Journal and the Seattle Daily Journal of Commerce.



REALTORS® Take Action

Making Smart Growth Happen

Collaboration is growing affordable housing in Richmond, Va.

"The value of living in a 1.3-million-person 'small town' is we know each other and know how to work together. Lots of us have been together for more than 10 years so we have trusting working relationships," says Laura Lafayette, CEO of the Richmond Association of REAL-TORS[®] and executive director of the Partnership for Housing Affordability.

It takes strong relationships to tackle a daunting issue like affordable housing. An April 2018 New York Times article reported the city's eviction rate at one in nine, which is the second highest in the nation. Lafayette calls the eviction rate a symptom of the need for affordable housing and says the members of the Richmond Association of REALTORS[®] are using their longstanding working relationships to help champion programs geared at increasing the city's stock of affordable housing.

"Why sit around and be reactive when you can be proactive and lead?" Lafayette explains.

Jim Napier agrees that collaboration and common goals have helped bring various stakeholders together with impressive results. Napier chairs the Partnership for Housing Affordability and is president of Napier REALTORS[®] ERA.



"It's important that there is a collaborative effort involving government, the public and private sector. The area has lots of nonprofits that were struggling to gain traction — to have a voice, to raise funds. The Partnership for Housing Affordability has become the umbrella organization for all of them," explains Napier. "We were the spark, but not the driving force. The driving force is the housing providers.

Those collaborations helped develop a four-prong approach to affordable housing — infill, a land bank, developer incentives and long-term strategic planning. The initiatives will help renters, first-time home buyers and long-time residents like seniors. The plans are nimble enough to fast-track affordable housing and still allow for future visioning.

REALTORS[®] are helping city leaders craft a local Accessory Dwelling Unit ordinance. Lafayette explains that accessory dwelling units offer a modest smart growth solution that creates housing infill, allows for multigenerational housing and are a viable solution for a graying population. Older residents may choose to build a unit so that they can age in place, earn rental income and avoid social isolation. The units are acceptable to neighbors because owners are required to live on site.

Another solution is the Richmond Land Bank, which is helping turn tax delinquent, abandoned and vacant properties into ongoing affordable housing. It allows for moderate- and low-income homebuyers to purchase homes at below-market rates and helps revitalize neighborhoods. In Richmond, the Maggie Walker Community Land Trust (MWCLT) receives tax delinquent properties from the city of Richmond. MWCLT retains ownership of the land parcel while streamlining the process to turn



the properties over to nonprofit organizations which then transform them into affordable housing. When sold to first-time homebuyers, the cost of the land isn't included in the purchase price, making the home affordable. Years later when the home is sold, the owner keeps half of the equity created by the home's increased market value and the other half is returned to MWCLT. The process repeats for the next owner and again the home is sold at less than market value. That keeps the housing affordable in perpetuity.

Lafayette says the Land Bank is off to an impressive start. Plans are to have 115 homes in the MWCLT by 2024 and, based on national trends, 871 families will be helped by 2039. This model helps create a legacy of homeownership.

"This is a big win because it creates affordable housing in perpetuity," says Napier. "It takes a while for concept strategy to filter down to houses on the street."

Richmond's Land Bank is the direct result of long-standing working relationships. Lafayette explains that the Richmond Association of REALTORS[®] founded the Partnership for Housing Affordability which incubated and helped create the Maggie Walker Community Land Trust which has been designated as Richmond's Land Bank. The Land Bank has expanded to nearby Chesterfield County where, thanks to a block grant, nine homes have been targeted to help turn around a designated neighborhood. "The REALTORS[®] connected all the dots," Lafayette says. "This is an unbelievable example of collaboration."

Richmond REALTORS[®] are also working with city officials on performance agreements, which is where a developer would agree to a building stipulation as part of the permitting process. The plan in Richmond would use real estate tax rebates to incentivize developers and create affordable housing without relying on Low Income Tax Credits. Lafayette says since there is no mandated inclusionary zoning in Virginia, this is another tool that "allows developers to dream their project."

Collaboration and long-standing relationships will continue to direct future affordable housing plans. Richmond REALTORS[®], at the request of multiple local jurisdictions and with the help of NAR and state REALTOR[®] grants, are in the process of helping develop a regional housing plan. Napier explains that because Richmond's REALTORS[®] have gained the respect of regional stakeholders and officials and are seen as a trusted partner and resource, they've been tapped to shepherd this longrange strategic process. He says progress can sometimes seem slow, but the results are worth the effort.

"Sometimes it can feel like pushing a rope uphill," Napier says, "But we care about our community. It's where we make our living and we want to give back to where we live and work and play."



on common ground

