

**“Opportunities to Increase Housing Production and Preservation.” Pam Blumenthal and Regina Gray. Plus “Expanding Housing Choice through Investments in Innovation and Technology” Regina Gray.**

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## **Opportunities to Increase Housing Production and Preservation**

*In this article, Pam Blumenthal and Regina Gray discuss the impact of regulatory barriers on housing affordability.*

The United States needs more housing, and more varied types of housing, to meet households’ needs throughout the country. Some economists estimate that one consequence of the 2008 foreclosure crisis was the slow rebound in home construction while household growth continued, resulting in underproduction of housing by more than [3 million units](#).

Although home production has recently been on the rise, [building permits](#), one indicator of new housing supply, remain below historical averages and far below the level needed to eliminate the deficit in housing.

The consequences of inadequate supply are higher housing costs for both renting and buying a home. [More than 37 million renter and owner households](#) spent more than 30 percent of their income for housing in 2019. In the years prior to the pandemic, low interest rates for mortgage loans and increasing incomes, not lower home values, had reduced owner cost burden. For renters, increasing incomes were matched by rising rents, maintaining cost burdens despite a strong economy.

Without significant new supply, cost burdens are likely to increase as current home prices reach all-time highs, with the median home sales price reaching nearly [\\$375,000](#) by July 2021. These data emphasize the urgency of employing opportunities for increasing the supply of housing and preserving the existing housing portfolio.

The regulatory environment — federal, state, and local — that contributes to the extensive mismatch between supply and need has worsened over time. Federally

sponsored commissions, task forces, and councils under both Democratic and Republican administrations have examined the effects of land use regulations on affordable housing for [more than 50 years](#). Numerous [studies](#) find land use regulations that limit the number of new units that can be built or impose significant costs on development through fees and long approval processes drive up housing costs. [Research](#) indicates higher housing costs also drive up program costs for federal assistance, reducing the funds available to serve additional households.

The need for quality affordable housing does not take the same form in each community; local context matters. Land costs rise when demand is strong and land use regulations limit the number of new units that can be built. Further, imposing significant costs on development through fees and long approval processes also increases housing prices. Many localities contend with both problems. In regions where population growth is slow or supply and demand are more balanced, low incomes and poor housing quality may be greater influences on housing affordability. The federal government continues to explore strategies for strengthening capacity and providing incentives for reform at the state and local levels.

HUD provides formula grants to jurisdictions to support affordable housing production and preservation through community development block grants, the HOME Investment Partnerships program, the Indian Housing Block Grant Program, and other initiatives. Technical assistance helps jurisdictions more effectively use these funds to serve their residents. Low-income housing tax credits are currently the federal government's principal tool for incentivizing and subsidizing the construction and rehabilitation of affordable rental housing. Each year, the tax credit incentive supports the construction or rehabilitation of more than 100,000 affordable housing units annually, and it has supported the development of more than 3 million units since its inception. The federal government also supports the production of multifamily rental housing by insuring multifamily mortgage loans through the Federal Housing Administration and the Rural Housing Service.

HUD has [several tools](#) to assist jurisdictions seeking to increase the supply of housing in their communities affordable to households across income ranges through regulatory reform. One vehicle through which communities may share information and find regulatory reform models is the [Regulatory Barriers Clearinghouse](#). The clearinghouse is a one-stop portal that assembles and disseminates information on state and local regulations and policies affecting the creation and maintenance of affordable housing, offering useful resources to state, local, and tribal policymakers developing strategies for reducing regulatory barriers. HUD has a long history of sponsoring research on

regulatory barriers. Recent research on barriers to offsite (or factory-built) construction quantifies the cost of land use regulations and its impact on consumers to understand the factors that affect where builders decide to site offsite construction projects. [Cityscape](#) recently hosted a symposium on regulatory reform and affordable housing.

[HUD published](#) a report in January 2021 that highlights actions state and local governments are taking to reduce barriers that are limiting housing production and preservation. These activities range from state tax policies and incentives to encourage local action to local zoning changes, process improvements, and community engagement reforms. These efforts are not limited to jurisdictions often in the headlines, such as Minneapolis, Minnesota; Portland, Oregon; and California; they are appearing in communities nationwide.

- [Utah](#) updated its General Plan requirements for counties and municipalities to include a moderate-income housing plan element to meet the needs of people of various income levels living, working, or desiring to live or work in the community. Among other requirements, the updated plan mandates jurisdictions adopt at least 3 of 23 recommended strategies.
- [California](#) and [Washington](#) have preempted local prohibitions on accessory dwelling units. Other jurisdictions are adopting regulations to allow duplexes, triplexes, and quadplexes to be built through by-right zoning.
- [Arkansas](#) prohibits counties from regulating residential building design elements, which include the exterior building color; the type or style of exterior cladding material; the style or materials of roof structures, roof pitches, or porches; the minimum square footage of a structure; and other architectural components.
- [Texas](#) and [North Carolina](#) require local jurisdictions to review permit applications within specified time periods, or “shot clocks,” to reduce the time for development approvals.
- In [Maricopa County](#), Arizona, municipalities formed the Regional Plan Review Group, adopting identical building codes and plan review checklists to simplify development in the region.
- In [Dover](#), New Hampshire, city officials adopted a plan for context sensitive zoning and implemented a streamlined application and review process to reduce procedural delays and complexity.
- [Boulder](#), Colorado, built a more inclusive, transparent, collaborative, and interactive community engagement strategy to develop its next-generation housing strategy, which will define community priorities for the expansion and preservation of diverse affordable housing choices.

- [Buffalo](#), New York, eliminated all parking minimums in its Unified Development Ordinance.

Additional state and local activities to increase housing production are highlighted in a June 2021 [report](#) to Congress.

Many communities want to better serve their residents by providing affordable housing options, but they lack the resources to identify or implement needed regulatory reforms. Although other jurisdictions may provide a plethora of models, determining which of those strategies may be most effective for a specific community can be challenging. It may require conducting a housing needs analysis, creating a housing policy plan, determining which regulations or processes are the chief constraints in the market, and understanding aspects of another jurisdiction's local context to see whether the activity would be effective in the community of focus.

Once potentially effective models are identified, implementing them can be a substantial undertaking: reviewing and revising the master plan that guides development throughout the jurisdiction, zoning ordinances, subdivision ordinances, adequate public facilities ordinances, environmental regulations, and historic preservation rules, as well as coordinating with transportation and other infrastructure planning departments, require significant staff expertise and resources. Fragmentation within local government can inhibit collaboration across the many government agencies that affect housing production. Conducting effective stakeholder engagement, particularly when local stakeholders disagree on how best to proceed, is vital for developing housing policy plans and implementing necessary reforms to effect those plans. Technical assistance could help fill some of this knowledge gap, especially in places with smaller populations (under 50,000) that have limited capacity for planning, including rural counties and tribal communities.

The housing market faces the potential for significant disruption as the measures put into place during the COVID-19 pandemic to protect renters and homeowners begin to expire, making it critical that governments take action to ensure their residents are stably housed. Significant federal resources have been made available to help meet those immediate needs. The pandemic has also thrown into stark relief the need for jurisdictions to implement long-term regulatory reform to create inclusive communities with housing affordable to households with various needs and preferences.

HUD continues to explore ways to support jurisdictions in their efforts to meet the housing needs of their residents. Technical assistance, funded research, and the Regulatory Barriers Clearinghouse remain valuable resources. We anticipate additional

resources will become available with the implementation of the Affirmatively Furthering Fair Housing rule, ongoing research, and funding for capacity building and technical assistance to support local jurisdictions in achieving their housing goals. In addition, a comprehensive zoning reform program, such as the one proposed in the Build Back Better Plan currently before Congress, would enhance HUD's efforts to help communities plan and implement housing policy reforms, study the impact of those reforms, and share the most effective approaches to community engagement and policy actions.

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**[Expanding Housing Choice through Investments in Innovation and Technology](#)**



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As the Office of Policy Development and Research celebrates its 50th anniversary, the time is right to reflect on our progress in promoting investments in technology that can offer Americans more affordable housing options and transform the homebuilding industry. The drive to build housing more quickly, cheaply, and efficiently is a challenge that HUD has grappled with since its inception. Lessons learned from the Operation [Breakthrough](#) demonstration in the late 1960s provide a lens through which we have witnessed considerable progress in industrialized construction. The demonstration was the first attempt to highlight the value of innovation — a new,

creative approach to housing construction and building materials — alongside the incorporation of technologies that improve housing performance.

Despite the demonstration's short-lived success, the program achieved its underlying objective: mass-producing tens of thousands of affordable units. Operation Breakthrough's biggest accomplishment, however, was the adoption of the HUD Code, which introduced the industry and the world to manufactured [housing](#). The Manufactured Home Construction and Safety Standards Program, which governs the HUD Code, established design, performance, and installation standards for manufactured homes built after June 15, 1976 ("Manufactured Home Construction and Safety Standards," [2015](#)). In 1994, updated HUD Code energy standards raised minimum insulation requirements and mandated whole house ventilation systems for manufactured [homes](#). Homes built to these standards enhance quality and safety and improve energy [performance](#).

We believe that manufactured housing, once used interchangeably with the term "mobile homes," is an important segment of the housing stock with the potential to increase the supply of affordable housing for low-income Americans. Since the establishment of the HUD Code, manufactured housing (and offsite construction in general) has undergone many technological, design, and financing changes that have made it indistinguishable in many respects from conventional site-built housing. In fact, in our recent engagements with international delegations, officials have characterized the HUD Code as a precursor to innovation in industrialized construction. Although discussions to modernize the HUD Code are ongoing, nations such as Sweden, the United Kingdom, and Japan look to the code to demonstrate the benefits of industrialized housing construction. As we continue to build our Learning Agenda around innovation and technology, we look to adopt national and international best practices that work.

The Affordable Housing Research and Technology Division (AHRT) provides guidance on technological advancements in housing for HUD through research, data analysis, policy, and demonstrations. Throughout the 1990s and into the new century, AHRT did most of its creative work through the Partnership for Advancing Technology in Housing (PATH). PATH was a public/private initiative that sought to expand the development and use of new technologies to make American homes stronger, safer, and more durable; energy efficient and environmentally friendly; easier to maintain and less costly to operate; and more comfortable places in which to live. PATH linked key agencies in the federal government with leaders from the homebuilding, product manufacturing, insurance, financial, and regulatory communities in a unique partnership focused on technological

innovation in the American housing industry. PATH's mission was to highlight building materials, products, tools and equipment, and systems that are incorporated into housing units and developments to improve performance.

PATH was an ambitious research program that greatly expanded the knowledge base of innovation and technology in housing. Through sponsored research, AHRT researchers learned how building technologies can create a positive impact on housing performance and outcomes. Our research demonstrated that making long-term investments in innovative technologies, such as insulated concrete forms and structural insulated panels, not only improve housing quality but also reduce costs and preserve affordability. AHRT produced more than 100 groundbreaking research products that focused on durable construction materials and installation techniques, improved indoor air quality, investments in technologies that reduce energy consumption in housing, and advancements in offsite construction. Although the PATH program eventually ended, HUD's mission to show how investments in innovative housing technologies produce high-quality housing continued throughout the following decade and to this day.

The fact that we face challenges to industry uptake of innovative technologies is no secret. The housing industry itself is very diffuse, segmented, and risk averse, with few investments in research and development. PD&R has addressed these challenges head on through its commitment to a robust research and development agenda that helps the housing industry understand its role in advancing innovative technologies. AHRT's objective is to reduce industry misconceptions and risk aversion to the adoption of new technologies. In a recent publication focused on reducing barriers to innovation in [housing](#), we learned that in efforts to convince housing industry professionals to consider adopting cutting-edge housing technologies, biases and uncertainties persist. Many in the industry believe that adopting new technologies is risky because doing so may increase the cost of materials and skilled labor and slow the construction timetable. These costs, skeptics assert, ultimately get passed on to the consumer in the form of higher housing prices. Improving education on both the supply and demand side of the housing equation, along with presenting a compelling argument backed by empirical evidence for continued investment in research and development, will go a long way toward overcoming this skepticism. Getting persuasive research into industry hands, however, has been challenging — until recently.

With the launch of the Office of Innovation in 2018, PD&R had a vehicle through which AHRT could effectively articulate ways in which the industry could convert research results and technological innovations into feasible actions. The office assisted AHRT in three important aspects: facilitating discussions with industry representatives about our

research findings and policy recommendations, promoting the development of the ongoing building technology research grant program, and assisting AHRT with the inaugural Innovative Housing Showcase in [2019](#).

Through outreach and engaging industry stakeholders, the research community, sister agencies, and affiliated organizations, including the U.S. Department of Energy, the National Institute of Standards and Technology (NIST), and the National Institute of Building Sciences (NIBS), AHRT partnered with experts to develop a robust building technology agenda and research program that has produced more than two dozen studies, guidebooks and toolkits that strengthen the evidence base on how innovative solutions to housing challenges positively impact the preservation of affordable housing. Topics typically focused on the adoption of housing technologies such as high-performing heating, ventilation, and air conditioning systems that improve comfort and indoor air quality; mass timber in industrialized housing; durable housing construction in Indian Country; disaster-proof resilient materials; strategies for reducing carbon emissions in housing; advancements in mass timber and steel construction; and further explorations in market research of offsite construction.

The most recent building technology research grant [program](#) asks researchers to help PD&R continue to build on the evidence regarding the potential of offsite construction as an affordable housing solution. Researchers are also tasked with identifying strategies adopted by local governments to reduce restrictive land use zoning requirements that often impede housing construction and reduce the housing supply, which typically cause housing prices to rise. The program resulted from engagement with the National Institute of Building Sciences, which helped PD&R facilitate discussions with the research community, along with MOD X, a research-based consulting firm based in the northeast. The team worked with industry experts, including code officials, to host several events exploring recent domestic and international trends in offsite construction. This engagement not only resulted in several agenda-setting accomplishments, including the Offsite Construction learning [agenda](#), but it also gave PD&R the opportunity to work with the National Association of Home Builders (NAHB), the International Code Council, the National Institute of Building Sciences, and MOD X to host followup panel discussions at the National Building Museum. The meetings would complement the third annual Innovative Housing Showcase, which was held earlier this summer.

This year's Innovative Housing Showcase involved a joint effort with NAHB to feature innovative housing technologies and construction on the National Mall in Washington, D.C. HUD invited more than a dozen manufacturers and builders to participate alongside representatives from HUD program offices and other federal agencies. Just in

time for Homeownership Month, the showcase's theme was making the pathway to homeownership easier, particularly for those who often face the greatest barriers. As in previous [exhibitions](#), this year's showcase featured various housing designs and models that employ offsite construction methods, demonstrating many potential housing configurations that consumers can customize according to their needs and preferences. Setting this year's event apart from previous showcases was the addition of an ADU Alley highlighting accessory dwelling units, which proved to be quite popular with the public, along with exhibits showcasing box homes that can be assembled and installed quickly and then broken down and transported where needed — offering potential uses as shelter for people experiencing homelessness, as a homestay, or as housing for an aging parent.

The Showcase culminated with a house party hosted by HUD Secretary Marcia Fudge to raise awareness about the potential for offsite construction as a promising alternative approach to homeownership. This year's Innovative Housing Showcase attracted more visitors to the National Mall than did the previous two events, and we felt that we had accomplished what we set out to do: informing interested consumers and skeptics alike about the potential for innovative housing technologies to advance more affordable housing solutions. In the meantime, we continue to build our research capacity and raise awareness of the importance and benefits of technology adoption in housing construction.

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