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Executive Summary

The Phoenix Metropolitan Area, or the Valley, is facing a housing affordability and accessibility crisis. Cities across the Valley are experiencing increasing pressure to supply affordable housing for middle-income households—those earning 60 to 120 percent of the area median income (AMI)—that provides access to employment, transit, and parks, among other community benefits. Middle-income housing, or workforce housing, is often difficult to finance, design, and build due to myriad regulatory issues, inaccurate misconceptions, and rising costs of land, labor, and materials.

The Urban Land Institute (ULI) Arizona Task Force for Health, Equity, and Housing Affordability chose to address these barriers to workforce housing development and to identify viable workforce housing solutions with the generous financial and technical support of the Robert Wood Johnson Foundation, the ULI Center for Sustainability and Economic Performance, and Vitalyst Health Foundation.

This white paper identifies six workforce housing development tools, provides general context for each tool, details its benefits and challenges, and outlines implementation actions so local stakeholders can become advocates and actors. The six tools include off-site construction, cohousing, land banks, public-private partnerships (P3s), missing middle housing, and limited equity housing cooperatives (LEHCs) and community land trusts (CLTs). The white paper concludes with a discussion of cross-cutting challenges that hinder the successful implementation of all six tools and identifies local and national examples for how to address these challenges.

This white paper is intended to inspire further conversations, research, and most importantly, action. If ULI Arizona members, local stakeholders, and communities implement these tools and address these challenges, they can create equitable and lasting change in the Valley.

Purpose of the White Paper

The purpose of this white paper is to provide the ULI Arizona Task Force for Health, Equity, and Housing Affordability, ULI members, and regional business, government, and development industry leaders and decision-makers with a set of viable workforce housing tools and strategies for the Phoenix metro area. These tools are a select subset from stakeholder conversations during a Housing Solutions Round Table event that took place in February 2020. This White Paper offers insights from experts and the literature on how six of those tools can be developed in the Valley. These tools are not mutually exclusive. They can, and should, be implemented with other strategies and policies to reduce costs and maximize the health and social equity benefits of expanded workforce housing options.

The six workforce housing development tools include:

1. Off-site construction
2. Cohousing
3. Land banks
4. Public-private partnerships (P3)
5. Missing middle housing
6. Limited equity housing cooperatives and community land trusts

Appendix A defines key terms used repeatedly in this paper. Appendix B provides background information on this project, the Housing Solutions Round Table, and how the research was conducted. Appendix C details the local housing context in the Valley and describes the depth and breadth of the housing crisis. Appendix D includes an outline of the entire summary of ideas, strategies, and solutions discussed during the Round Table. Appendix E includes the full inventory of tools described in stage two of the project approach (Appendix B). These are included as a compendium of additional ideas and strategies that could be considered with the six tools detailed in this white paper.

Workforce Housing Development Tools

The six workforce housing development tools selected by the ULI Arizona Task Force for Health, Equity, and Housing Affordability are presented in the proceeding sections. Notes from the ULI Solutions Round Table, focused research, and expert interviews informed the subsequent sections. The following sub-sections are included for each tool:

- **Background**—Background and contextualizing information so readers broadly understand how the tool is created and implemented, as well as its purpose;
- **Benefits**—Information on the benefits of using the tool so readers understand why and how the tool could be used to achieve maximum benefits for the public, private, and nonprofit sectors and the community;
- **Challenges**—Information on the challenges associated with each tool so readers can address and eliminate barriers head-on or choose to use another tool should the challenges be beyond their scope of influence for change; and
- **Implementation Actions**—A preliminary outline of actions and next steps for Arizona so readers can begin to address the challenges associated with each tool and take the necessary actions to implement the tools in Arizona.

The benefits and challenges associated with each tool are organized in the appropriate sub-sections. Symbols are used to differentiate between general benefits and challenges and health and social equity specific benefits and challenges. The symbols are as follows:

- ↑ General benefits
- ↓ General challenges
- * Health and social equity related benefits and challenges

The benefits and challenges described in the sections on each tool are specific to that tool; however, interviewees, round table attendees, and the literature repeatedly identified four challenges that threaten workforce development regardless of the development tool. Those four challenges include (1) communication across sectors and departments, (2) zoning codes and regulatory requirements, (3) finance, and (4) NIMBYism. This paper concludes with a discussion of these cross-cutting challenges and examples of potential solutions.

Off-Site Construction

The construction industry is facing significant challenges that limit the industry's ability to meet housing construction demands, several of which are beyond the industry's control. First, there are not enough skilled construction workers to meet the mounting demand (MBI, 2019). The shortage of construction labor has reportedly increased project timeframes, forcing bid contracts to be more expensive overall (Abu-Khalaf, 2019; Rosenthal, 2019). Second, the cost of construction products increased by 7.4 percent in 2018, primarily due to dramatic increases in the cost of materials including fuel, steel, aluminum, and asphalt (AGC, 2018). Third, time costs are often added to traditional construction projects due to extreme weather events such as heat waves, heavy rains, and snow storms (Abu-Khalaf, 2019). These costs are likely to increase as extreme weather events become more frequent and destructive due to climate change. Last, the construction industry has been slow to adopt new innovative strategies for housing production and bring them to scale (Galante, Draper-Zivetz, & Stein, 2017).

Hard costs for on-site construction—labor and materials for construction—account for 50 to 70 percent of total project costs. These costs can quickly inflate as a result of project delays (Hoyt, 2020). Based on these percentages, reducing hard costs represents significant savings for developers that can be passed on to consumers (Hoyt, 2020). For this reason, off-site modular construction advocates describe it as the necessary innovation to support industry progress and mitigate rising costs.

What is Off-Site Construction?

Off-site construction offers an alternative to traditional on-site construction where production largely occurs in controlled manufacturing facilities (Galante, Draper-Zivetz, & Stein, 2017). There are two types of off-site construction—modular and prefabricated. Modular construction refers to an entire housing unit or 'module' that is built in a factory. Prefabricated units are comprised of panels that are fabricated in an off-site facility, then assembled piece by piece on site. In both cases, the modules or panels are delivered to the site, assembled or stacked, weatherproofed, and connected to the utilities (Abu-Khalaf, 2019). The materials used to fabricate the modules and panels varies depending on project needs, including concrete, steel, and wood, among others.



Modules being placed for Pod Brooklyn. Source: [New York Post](#)



A prefabricated panel being placed. Source: [UK Construction Online](#)

Benefits

Modular construction and prefabrication benefit design firms, developers, and contractors in a variety of ways including improved productivity, quality, cost predictability, and safety performance. The benefits also include reduced construction waste and increased schedule certainty and client satisfaction (DD&A, 2020). The public sector benefits as well because municipalities can address gaps in housing availability and affordability more rapidly using off-site construction.

Off-Site Construction:

↑ Reduces time costs.

Off-site construction reduces time costs by shifting the traditional construction timeline. Where on-site construction requires a linear construction pathway, off-site construction occurs in two places—the site and the factory. As a result, site work, foundation preparation, and off-site module production can be completed simultaneously, reducing time costs by 20 to 50 percent depending on the project (Galante, Draper-Zivetz, & Stein, 2017; Bertram et al. 2019). These time cost savings translate to savings elsewhere including a lower general contractor fee (Ponsor & Cohen, 2019), quicker returns on investment, and less interest accrued on loans (Galante, Draper-Zivetz, & Stein, 2017).

↑ Reduces labor costs.

The majority of the construction work for off-site construction takes place in a climate-controlled factory. Under this model, the inefficiencies associated with exposure to poor weather conditions are reduced, helping keep projects on schedule and limiting costly delays. The factories are also equipped with automated manufacturing technologies that reduce the number of different trade professionals required for a project (Ponsor & Cohen, 2019). More of the work can be completed using assembly lines combined with automation to maximize efficiency and reduce costs (Galante, Draper-Zivetz, & Stein, 2017). It is important to note that while the number of workers required for a single project is reduced, off-site construction enables more projects to be completed simultaneously over shorter periods of time, which could prevent job loss and rapidly produce much needed housing.

↑ Reduces material waste.

Off-site construction results in greater precision due to limited external impacts and assembly line and automated production (MBI, 2019). With greater precision, comes less waste. In a 2020 survey conducted by Dodge Data & Analytics, over 80 percent of design firms and contractors said they benefited from reduced construction waste generated by modular construction and prefabrication (2020). In addition, limiting the material exposure to the elements and theft on the construction site can reduce material losses (MBI, 2019).

↑ Capitalizes on economies of scale.

Off-site construction projects typically use similar design components and materials across projects, so higher volume orders can be placed more consistently, reducing costs (Galante, Draper-Zivetz, & Stein, 2017). With off-site construction, the manufacturer

directly purchases materials from the supplier, so intermediaries are not required for the purchase, further reducing costs (Bertram et al. 2019).

*** Provides better and safer working conditions.**

The climate-controlled conditions of a factory are safer for workers. Factory workers would not be required to work under harsh weather conditions, and depending on the factory location, their commutes might also be more consistent (Abu-Khalaf, 2019). Employees would no longer be subject to the uncertainties of living on a job-to-job basis. Instead, they would be included on the regular payroll and maintain a more consistent schedule (Galante, Draper-Zivetz, & Stein, 2017).

*** Can create job opportunities.**

Off-site construction requires factories for fabrication to exist within a cost-effective distance of project sites. From a financial perspective, opening local factories can spur job creation (I-1). San Francisco Mayor London Breed partnered with San Francisco Building Trades to develop an off-site construction facility that will create new union jobs (MOHCD, 2018). Valley mayors could come together with the Arizona Building and Construction Trades Council in a similar manner to create a regional hub for modular construction and prefabrication in the Valley. The facility could be tied to a workforce development program where you train new employees on programming, automated production, and assembly line work (I-1). The University of Florida's Rinker School of Construction created a new program to train students in manufactured construction (MBI, 2019). Arizona State University's Del E. Webb School of Construction could be a potential partner for creating a similar program in Arizona, particularly if a large factory exists in the region.

Challenges

↓ The benefits depend on a strict set of assumptions.

Cost savings stemming from expedited construction are the greatest potential benefit to the private sector; however, these savings depend on a set of assumptions (I-1):

1. There are no unforeseen on-site issues or costs. Off-site construction requires high levels of precision and coordination to prevent assembly errors (Abu-Khalaf, 2019). Technical and logistical issues on-site can quickly eliminate cost savings.
2. A factory must be located nearby. With modular units, the entire unit is prefabricated and assembled in the factory, so these units take up more space than prefabricated panels or regular construction materials. Space requirements and fuel costs for transporting modular units can erase off-site construction cost savings—the primary benefit of off-site construction.
3. Local and state governments are supportive of off-site construction. There is no guarantee the locality will be comfortable approving these projects as they are a relatively new tool in their current form. Localities may need to establish safety standards, regulatory requirements, and inspection processes to standardize the process before they are comfortable with off-site construction.

↓ Jurisdictional differences complicate the process.

The codes and regulations for off-site construction vary from state to state and municipality to municipality making it difficult to standardize the process. The approval processes vary between localities and across levels of governance. For the greatest impact, localities could coordinate to create the same approval and inspection processes and requirements (I-1).

↓ **The up-front costs for off-site construction are higher.**

In contrast with the conventional residential construction financing where lenders deliver payments in installments, off-site construction requires approximately 50 percent of the total project costs to be delivered up-front. These funds are required to purchase the materials and pay for project labor as work occurs simultaneously within the factory and at the construction site. Lenders are not accustomed to this financing model so they may choose not to finance the project or require higher interest rates, making the project more expensive (Abu-Khalaf, 2019).

Implementation Actions

What needs to be addressed to implement off-site construction in Arizona:

1. Determine who is already working on bringing off-site construction to scale in the Valley and discuss next steps in the process with local leaders. There are companies working on off-site construction in the Valley, including [Katerra](#), [Offsite Integrated Structures](#), and [Kapture Prefab](#), that should be engaged from the start.
2. Identify lenders willing to take the risk associated with a relatively new model for development requiring a significant up-front investment (I-1).
3. Build partnerships among interested parties and project champions. This work will require developers, construction/contracting teams, architects, local government staff, and other stakeholders to work together.
4. Using established partnerships, identify and address regulatory issues in the Valley related to building permits, building inspections, and zoning codes.
5. Work with local governments to coordinate with the Arizona Department of Housing - Manufacturing Housing Division to resolve jurisdictional issues.
6. Establish a working group or an advisory team, possibly within MAG, to identify where and how off-site construction should be used in the Valley.

Cohousing

The concept of cohousing emerged in Denmark in the early 1970s to support gender equality as women began entering the workforce. Cohousing was thought to be a potential tool for households with two working parents to share in childcare provision and household resources (Ahn, Tusinski, & Treger, 2018). Over the decades, cohousing has evolved and spread across the world, eventually arriving in the United States in the late 1980s (CA, 2020).

Cohousing communities are characterized by shared community spaces surrounded by private homes (CA, 2020). Residents have their own private home and kitchen within the community, but they also have access to common spaces intentionally designed to create a strong sense of community. Architect Laura Fitch describes cohousing communities as “privacy within your home and community at your doorstep” (Segal, 2017). Residents share a large communal kitchen and dining area, a large open space, parking areas, laundry facilities, and often, a garden (CA, 2020).

The community also shares the responsibilities of property management and decision making in a traditional cohousing development model (CA, 2020). By collectively managing the property, residents become practiced in the art of community decision making. The community drives the development process from beginning to end, collectively making choices regarding financing, site selection, materials used, design, community spaces included, and all other components (SOA, 2019). Ideally, all of these decisions are made under the guidance of an experienced consultant or cohousing developer.

The Role of the Private Sector

There are three primary models for developing cohousing or co-living communities. Depending on the model, the developer plays different roles.

- In the first model—a resident-led model—future residents take the lead in every step of the development process, drawing on the knowledge of the consultant during the legal structuring, financing, and designing phases (Williams, 2008).
- The second model—the developer-led model—is a speculative cohousing model where the developer controls all aspects of development, but transitions the development to a resident-led community building and property management model in the final stage (Williams, 2008). This model, also called co-living, is expanding throughout the country, including in Phoenix where [X Social Communities](#) is developing a 253-unit co-living apartment building in downtown. Recently, developers of co-living models have transitioned away from involving residents in the final stage. Instead, they continue to own and manage the property (I-9).
- The third model—the partnership model—is equal parts developer and resident led. Most critically, the developer takes the lead regarding financing, property acquisition, legal structuring, designing, and constructing the community (Williams, 2008).

The Partnership Model

While the resident-led and developer-led models are worthy of further consideration and research, this paper is focused on the partnership model as there is a role for the developer and an emphasis on community engagement and empowerment. In this model, the developer plays the

role of mediator between the community and the other parties required for new housing construction. These parties include:

1. *The Lenders* — Lenders often prefer to communicate through a developer to minimize confusion and avoid negotiating with a large group (I-5). However, the issue extends beyond communication; determining the value of community assets and how to proceed if the asset must be assumed by the lender are challenging tasks (I-9). The developer works with lenders to secure the loan by guaranteeing it and demonstrating a commitment to completing the project. It is very difficult to finance a project without a track record, so a developer with cohousing development experience is essential. The residents must provide purchase equity—approximately 20 percent of future home costs—upfront to secure the loan, as they are still funding the project despite the developer’s role in securing funding (I-5).
2. *The Appraisers* — Appraisers are usually unfamiliar with the cohousing model. They typically price on a cost per square foot basis, but because so much of the building area in a cohousing development is allocated to common use, they struggle to accurately appraise each property. The developer can assist the appraiser in this process (I-5).
3. *The Brokers* — Brokers like decisive buyers. A group of residents forging a new cohousing development likely does not fall into that category. Similar to financing, a developer can leverage their experience and background to encourage brokers to find appropriate properties for cohousing development. Often the residents come to the developer with a piece of land they own or want to buy. In both cases, the developer puts together the transaction documents, ensures the site is suitable in terms of zoning and utility access, and helps the residents through the entitlement process (I-5).
4. *The Architects* — The developer finds an architect for the community as well. Finding the right architect is incredibly important. They must have predictable pricing, experience working with contractors and community members, and be flexible with their designs to meet community needs and desires. The developer serves as the mediator to prevent residents from overwhelming the architect with ideas and suggestions (I-5).

Stone Curves Cohousing Community is an example of the partnership model. It is a multi-generational, urban community consisting of 48 townhomes and condominiums in Tucson. The property is located four miles from downtown Tucson, making grocery stores, jobs, schools, and other necessities easily accessible. The property includes a large, shared common house with a kitchen, laundry room, exercise room, library, office, and guest bedrooms, among other amenities. The community has regular community dinners, events, and activities for the children. Like all cohousing communities, they are self-governed. Sources: [Stone Curves Cohousing Community](#); [Tucson.com](#)



Cohousing in Arizona

Today, there are six cohousing communities spread out across Arizona, although none are located in the Valley. Four of these communities were developed in the early 2000s and two are being developed—one in Flagstaff and one in Bisbee. These existing cohousing communities could offer some insight into what cohousing might look like in the Valley.

Benefits

↑ **Cohousing development gets easier over time.**

Once you have established relationships with lenders, appraisers, architects, brokers, engineers, and other key partners, the development process becomes much more fluid (I-5). The process is no longer significantly different from the traditional market-rate development process.

↑ **Cohousing communities can address NIMBYism head-on.**

The community engagement component of cohousing development extends to the site's surrounding neighbors. Neighbors meet the residents of the cohousing project during the development and site selection stage, offering opportunities to address issues and develop relationships prior to any public hearings or community outreach required by the City (Winter & Durrett, 2013). By working with the surrounding community during the development process, cohousing projects may reduce community pushback.

↑ **Cohousing naturally allows for flexible design.**

Cohousing developments allow for flexibility in the arrangement and types of units, making it a viable alternative for infill development on smaller or oddly shaped lots. The architect designs each unit to the owners specifications rather than standardizing the units, so accommodating a unique lot shape or size is inherently easier (I-5).

- * **Social connectivity is embedded into the design.**
Intergenerational support, reduced social isolation and loneliness, shared outdoor spaces, gardens, and other mental health benefits can arise from having a strong, supportive community. Depending on community preferences, the community support structure may include opportunities for childcare, informal (or formal) education, carpooling, and access to resources that might otherwise be inaccessible (I-5). Communal activities such as cooking, gardening, governing, and maintaining shared spaces provide residents with opportunities to connect and engage with their neighbors.
- * **Cohousing offers environmental benefits.**
Cohousing communities are often developed on infill lots, or in walkable areas with transit access creating an opportunity for car-light living. Cohousing developments are typically environmentally conscious by design. The literature and expert interviews suggest residents intentionally prioritize environmental conservation and sustainability in community design (I-5; Tummers, 2016). Residents use of shared resources and communal spaces can reduce overall energy use and resource consumption (Winter & Durrett, 2013). When cohousing developments remain true to their roots—community, collaboration, and sustainability—health and social equity benefits abound.
- * **Affordability and accessibility concerns are actively being addressed by residents.**
Cohousing developers are increasingly hearing that residents want a spectrum of affordability within their communities. To accommodate a wider range of incomes, residents can set a percentage of the units at a maximum price level and adjust the remainder of the pricing to support the lower cost units. Residents can adjust the maximum income and number of units however they would like because it is their community (I-5). If cohousing is coupled with the other financing tools such as first-time homebuyer assistance, cohousing could be a more accessible and equitable product.
- * **Community involvement is at the core of cohousing.**
Cohousing requires tremendous resident effort and collaboration to create a product that serves their needs. A consultant puts on a series of workshops to guide the community members through the process of selecting materials and amenities and designing shared spaces, among other workshops (I-5)
- * **The benefits are particularly powerful for seniors.**
Social equity considerations for the elderly are particularly important. Cohousing can extend an individual's ability to remain in their homes due to extensive community support, and shared responsibilities. This can save seniors significant amounts of money on expensive retirement homes (Winter & Durrett, 2013). To ensure these benefits to seniors are realized, the communities' bylaws could include language supporting safely aging in place and maintaining diverse age groups and household types (I-9).

Challenges

- ↓ **Cohousing is subject to the typical multi-family development barriers.**

The typical barriers to multi-family housing development include NIMBYism, re-zoning requirements, and parking requirements, among others. The White Paper concludes with a discussion of these and other cross-cutting barriers to development.

↓ **Cohousing is relatively new and therefore risky.**

Most real estate investors and lenders are unaware of how the cohousing model works. From the financial perspective, the lack of knowledge creates a barrier. Cohousing projects are not a standard product lenders are comfortable with. As lenders are often risk averse and the unknown presents a risk, cohousing projects can be difficult to finance, particularly in new markets (I-5). Appraisers have a hard time pricing these homes because it is normally done on a square foot basis, but that doesn't account for common areas which cohousing residents heavily invest in. The homes are usually a bit smaller, but the common areas are large and higher quality than you might see in a typical condo (I-5). These differences between traditional multi-family and cohousing developments could result in inaccurate appraisals.

↓ **The developer does the heavy lifting.**

The developer or consultant must establish the necessary relationships to develop cohousing communities including relationships with lenders, architects, appraisers, city officials and staff, brokers, and engineers. Each of these parties must be secured as with any other development. The developer must leverage their experience and track record to search for and select a site, establish financing, and select an appropriate architect for the project. Selecting the right architect is critically important. The architect must have with experience with direct community engagement and predictable pricing; however, the developer acts as an intermediary for communication.

* **The upfront costs for residents are high.**

Purchase equity of approximately 20-30 percent must be provided upfront by each homeowner to secure the loan. These costs prevent low-to-middle-income households from accessing this housing model (I-5), so cohousing developments often lack racial, socioeconomic, and cultural diversity (I-5). The cost of land, the time and fees involved due to permitting and rezoning (if necessary), NIMBYism, and the cost of new development in general make it difficult to finance a cohousing project that serves the workforce housing income range. This is no different than what is seen with standard, market-rate development projects. These income prohibitive costs are part of what drives inequities in the housing market, regardless of the product.

Implementation Actions

Cohousing affordability can be improved using one of two methods—controlling costs or acquiring subsidies (Morris, 2013). Costs can be controlled in a number of ways including smaller units, greater density, adding rental properties like accessory dwelling units (ADUs), reducing the number of expensive items like bathrooms, standardizing the kitchen appliances and reserving the higher quality kitchen appliances for shared spaces, sharing utility costs, and investing upfront in energy efficiency (Morris, 2013).

Subsidies come in a variety of forms including limited equity cooperatives, community land trusts, public-private partnerships, density bonuses, first-time homebuyer programs, affordable housing developers, and mixing nonprofit owned affordable units with traditional homeownership models (Morris, 2013).

With these two methods for improving affordability in mind, the following implementation actions should be considered:

1. Determine if cohousing is both feasible and appropriate for the Valley and explore other potential cohousing or co-living models (speculative cohousing).
 - a. Explore alternative models of co-living or non-traditional cohousing that retain the community-oriented design, while allowing for rentals, conversion of existing communities, houses, or apartments to cohousing, workforce models, and urban co-living models.

[PadSplit](#) is a co-living model started by Atticus LeBlanc in Atlanta, Georgia. The company converts single-family homes into co-living spaces at prices affordable to individuals earning 80 percent or less of AMI. The homes are largely left the same, but the rooms are converted into a rentable, locked unit with a shared bathroom and kitchen and communal space. They function in a similar manner to [Ollie](#) or [Common](#), but without all the bells and whistles.

Source: Sisson, 2018

- b. Explore the possibility for a developer to partner with a community land trust, or a land bank, to receive the land free of cost and establish affordability in perpetuity (Winter & Durrett, 2013).
 - c. Implement pilot projects in the Valley to determine viability and gauge community interest in the cohousing concept. Outside expertise could be brought in to demonstrate how cohousing models work most effectively.
 - d. Determine if and how the cohousing model could be combined with missing middle housing models. The bungalow courts and courtyard apartment communities are similar to cohousing, but lack the shared communal kitchen.
 - e. Look into models that use public, private, and nonprofit partnerships to create a minimum percentage of workforce units in the communities (Winter & Durrett, 2013).
2. Assess the potential regulatory barriers to determine which barriers must be addressed first and who should be consulted to address them.
3. Consult an experienced cohousing developer to begin building relationships with the required partners and to create long-term goals and strategies for cohousing development in the region.

Land Banks

A land bank is a governmental entity or a special purpose nonprofit established to undertake the responsibility of land banking. Land banking is the process land banks employ to acquire abandoned, vacant, and tax delinquent properties and “convert them to productive use or hold them for long-term strategic public purposes” (Alexander, 2011, p. 22). While the types of properties acquired remain the same, the productive use varies depending on the local housing market.

According to the National Housing Conference’s policy guide on land banks, they serve as a critical tool in both “hot” and “cold” markets (2018). In a “hot” market, the land bank serves as a tool for local governments and nonprofits to make development decisions based on community need without significant land cost concerns. Additionally, the land bank can continue to acquire properties in gentrifying communities to preserve affordability (NHC, 2018). In a “cold” market, the land bank can use its purchasing power to reduce blight by acquiring properties, clearing the titles, and restoring them to productive use (NHC, 2018).

Creating a Land Bank

Traditionally, the state legislature establishes the authority for local governments or nonprofits to create a land bank and imbues land banks with the power to cost effectively acquire and access land through state enabling legislation (I-4). Depending on how the state statute is written, the land bank would be given authority to (1) obtain land at little to no cost through the tax foreclosure process, (2) hold land tax exempt, (3) clear the title and eliminate unpaid taxes, and (4) lease or sell properties based on financial returns and alignment with community needs (CCP, 2018). When a land bank sells a property, it can consider the creation of community benefits—through affordable housing development, improved park access, or another benefit—to be a form of compensation (I-4).

The Arizona State Legislature would be responsible for drafting and approving the state enabling legislation with the help and support of local government and nonprofit partners. Alternatively, the Center for Community Progress (CCP) determined Albuquerque, New Mexico could create a land bank through a City created program or by contracting with a nonprofit entity (Graziani & Toering, 2019). Arizona cities could potentially pursue such an alternative to avoid possible partisan gridlock in the State Legislature.

Acquiring Land

A land bank creates an opportunity for tax delinquent properties to be purchased and revitalized by a non-governmental entity in a way that equitably benefits the public. The geographical scope of the land bank’s purchasing authority depends on the state statute and should be adjusted to meet market needs. The CCP recommends setting broad legal parameters to give the land bank flexibility in property selection (Alexander, 2011). According to Frank Alexander, the co-founder of the Center for Community Progress, there are three other sources for acquiring land that should be allowed. They include:

1. Properties conveyed by the local or state government to the land bank.
2. Voluntary donations or transfers from private owners.
 - Not all properties donated must be accepted. The land bank can produce its own guidelines or strategy to inform the donation and acceptance processes.

3. Acquisition by purchase or lease on the private market if the land bank is imbued with the authority. This could also include the power to exchange properties to assemble land.

Funding the Land Bank

It is critically important to establish funding sources for operations and purchasing properties, otherwise the land bank will be underfunded and unable to serve its purpose (I-5). The land bank will likely need to leverage public funding to get private funding. The funding sources can be layered to meet the land banks operational and purchasing needs (I-5). Donations are also a possible source of land; however, they rarely occur at the scale necessary to fully support the land bank (I-5). Another alternative funding source could be generated by allowing the land bank to recuperate a portion of the tax value from properties it sells. The land bank sells the property to a new owner, the owner pays taxes, and for the first five years, 50 percent of the tax value is returned to the land bank (I-5). There are other alternative funding sources worth exploring, including general revenue funding, tax recapture, borrowing and bond financing, and inventory cross-subsidies (Alexander, 2011).

Benefits

↑ **Development costs are reduced by eliminating land costs.**

Eliminating the cost of purchasing land can save developers money and cover between one-seventh and one-third of the affordability gap for financing workforce and affordable housing units, depending on the site context (Hickey & Sturtevant, 2015). Properties held by the nonprofit land bank are also exempt from property taxes.

↑ **The enabling legislation can be written to enhance social equity.**

Land banks can, and usually do, consider community benefits to be the compensation, where the benefit is attainable and affordable housing for designated low-income and lower-middle-income groups. Land costs often account for 10-20 percent of total project costs, enabling developers to pass project cost savings on to the consumer since they are not paying for the land (Hoyt, 2020).

↑ **Land banking could be a catalyst for inter-jurisdictional collaboration.**

The processes required to develop enabling legislation for counties or municipalities to create land banks could serve as a catalyst for much needed inter-jurisdictional collaboration. Government jurisdictions must work together to determine the methods by which the land bank may acquire property, how to fund the land bank, and how to redevelop or reinvest in the properties equitably.

* **Properties acquired by the land bank are redeveloped to serve community needs.**

Many land banks embed themselves within the existing neighborhood or community leadership structure to coordinate community engagement efforts (Heins & Abdelazim, 2014). For example, in Tempe, a land bank might work with the assigned planner and community leaders for each character area. Regardless of the method, the interviewee emphasized the importance of building community trust and developing a plan for all properties purchased with the community (I-4).

* **Land banks can make the neighborhood revitalization process equitable.**

A land bank should only acquire properties with the input and support of the neighborhood or community to ensure the revitalization process is equitable. A land bank can help prevent speculative purchasing of properties by developers whose sole purpose is generating profit through resale, with or without investing in the property (NHC, 2017). When a land bank purchases the lien, they use the property to benefit the community. Should a speculative buyer purchase the lien, the likelihood of the buyer or developer flipping the property, thereby contributing to gentrification, is higher.

Challenges

- ↓ **Building support for and passing the state enabling legislation.**
Traditionally, land banking requires state enabling legislation which can be difficult to pass due to misunderstandings about the land bank and its purpose and the process of land banking. Constituent groups, such as tax assessors and realtors, that perceive land banks as a threat to the market and their system must be engaged to quell their fears and opposition (Alexander, 2011). Building the necessary support among a myriad of entities and sectors will be an arduous task requiring strong leadership.
- ↓ **Determining the funding source for the land bank.**
Existing land banks across the United States are often woefully underfunded (I-4). Without financial support from the state or local government, any new land bank established in Arizona would suffer from lack of funds as well. The State Legislature and the land bank should be creative when identifying and layering funding sources.
- ↓ **There may be significant issues with the properties acquired.**
It is important to remember that these properties are typically vacant, abandoned, or tax delinquent for a reason. Often, there are significant barriers to restoring the property to productive use. There may be issues with the title, code violations, outstanding liens may add up to more than the property is worth, or the municipality might not have the correct contact information for the owner (Alexander, 2011).
- * **Drafting legislation and implementing the policy without displacing residents.**
As with any purchase of a blighted property, land banking can contribute to gentrification and resident displacement without careful planning and protective legislation. Gentrification may occur if the land bank purchases the property and redevelops in a manner that causes adjacent household's rents to rise or contributes to a cultural shift in the community. Extensive, inclusive, and equitable neighborhood engagement can help prevent gentrification and displacement (I-4).

Implementation Actions

1. Conduct further research to determine the value and feasibility of land banking in Arizona.
 - a. More research is needed from the private and public sectors, as well as other entities that are willing to conduct this research. For example, the results of a Center for Community Progress study on the value and feasibility of land banking in Albuquerque, New Mexico revealed the City's code lien foreclosure process to be the only viable legal system for acquiring properties (Graziani & Toering,

2019). A similar value and feasibility study should be conducted for Maricopa County.

- b. Research how the State of Arizona's Gift Clause might impact or interfere with the land banking process.
2. Engage the local community residents and build community trust in the land bank and the process of land banking (I-4). Ensure inclusive and equitable participation throughout the entire process.
3. Determine the purpose the land bank would serve. There should be a clear problem you are trying to address (I-4).
4. Identify a viable nonprofit or government entity to run the land bank or identify candidates for leadership if a new nonprofit needs to be created. Is there a trusted existing government entity or nonprofit who could absorb the responsibilities and privileges of the land bank?
5. Determine the ideal structure for the policy. Identify policy goals and answer the following critical questions (SGA, 2008):
 - a. What will the geographic scope be?
 - b. How will the land bank be funded?
 - c. How will the land bank be able to acquire property?
 - d. What constitutes a public good?
 - e. What forms of land disposition will be allowed?
6. Engage local leaders, city council members, and state legislators and build support.

Public Private Partnerships (P3/PPP)

The World Bank Group defines a public-private partnership as “a long-term contract between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility and remuneration is linked to performance” (IBRD, 2017, p. 1). The function(s) the P3 serves depend on the type of contract. Typically, those functions include one or more of the following: designing, building or rehabilitating, financing, maintaining, and/or operating the asset (IBRD, 2017).

The purpose of a public-private partnership is to develop a project that serves a public purpose, while benefitting both the public and private partners. The public purpose in this case is attainable workforce housing; however, the project serves a public purpose so long as it contributes to the health, safety, and general welfare of the public (Friedman, 2016). For a P3 to be successful, the top leadership among the public and private sectors must buy-in to the partnership (Riley & Kraft, 2010).

The private sector plays the role of developer, innovator, and partial financier. The private sector partner ensures the success of the P3 during predevelopment and can help draw in other private developers and investors to support and assist with the project (Friedman, 2016). The predevelopment phase also includes community engagement before work begins. The public sector ideally plays the role of “facilitator of economically feasible projects providing public benefits,” rather than a strict regulator (Friedman, 2016, p. 5). The partnership requires flexibility and honesty from both sectors.

The Valley has benefitted greatly from successful public-private partnerships for housing redevelopment. [The River at Eastline Village](#) in Tempe, Arizona is an example of a successful P3 between the Maricopa County Housing Authority and Gorman & Company, an affordable housing developer. The development includes 56-units of affordable housing and provides easy access to the light rail. It also houses the Newtown Community Development Corporation and Community Land Trust on the first floor, providing educational services to residents (Steckner, 2019).

This section is intended to further inform the P3 formation and development processes and to provide insights on the important role P3s play in workforce housing development.

Benefits

The benefits of public private partnerships vary by sector.

↑ **P3s require communication across sectors and groups.**

Increased communication among various groups, departments, and sectors is required for a successful P3, but increased communication will also create myriad cascading benefits and could help improve communication for non-P3 projects as well. Those benefits include reduced redundancies, streamlined operations, and lower costs, among others.

↑ **The private partner assumes the risk.**

The transfer of risks to the private partner means public funds can be used for other purposes, reducing government debt (Friedman, 2016). At the same time, private sector

entities are creating leverage and building a rapport with the public sector by assuming the risk and repaying the equity in a timely manner.

↑ **Both parties address the gaps left by the other.**

The private sector provides a complimentary focus on profit maximization and reduced time costs and market risks (Friedman, 2016). The private sector also brings innovation, budgetary certainty, and an increased tax base from property and sales tax due to job growth to the public sector (Friedman, 2016). The public sector also provides a complimentary focus on benefit maximizing, inclusive community engagement, and knowledge of city requirements and procedures (Friedman, 2016). The public sector can help fill the financing gap in private development projects.

↑ **P3s can extend beyond the public and private sectors.**

Establishing a P5 has even greater potential benefits than a P3. A P5 includes the public sector, the private sector, the philanthropic sector, the nonprofit sector, and the people. The P5 model should be used whenever possible and appropriate to expand community support and ensure the longevity of the project across administrations (Friedman, 2016). The private sectors' participation can be expanded to include nonprofits, the healthcare industry, churches, and other influential groups, but these partnerships are particularly beneficial when the new partners can provide access to land at a reduced cost (I-6). Additionally, there is growing recognition that housing is a form of healthcare, so cities and developers could take advantage of opportunities to partner with the healthcare industry to develop accessible workforce housing (I-6).

↑ **P3s can be used to address wage leakage.**

Wage leakage occurs when employees live outside of the city or region they work in because employees earn and spend their money in different cities. A P3 could be used to develop workforce housing intended to accommodate those workers who otherwise could not afford to live and work in the same city. Neighborhood-specific affordability issues may negatively impact neighboring communities by creating congestion or benefit neighboring communities by contributing to their property taxes (TF, 2016). This is the case in the Valley where employment access is limited in the West Valley and housing affordability and accessibility are limited in the East Valley. A joint regional effort to address the jobs-housing imbalance could address local housing and employment access concerns.

* **The public sector can require robust community engagement and benefits.**

While community engagement is already required for P3 projects, P3s could extend their efforts further by requiring community benefits agreements (CBAs) for P3 developments. CBAs can have a positive impact on both health and social equity depending on the terms of the CBA. CBAs require robust community engagement efforts to establish the vision for the project. The agreement then enumerates the other benefits the developer and the community agreed to such as requirements for job creation, affordable housing creation, improvements to quality of life, and expansion or restoration of government infrastructure (Friedman, 2016).

* **Community services can be incorporated into the new development.**

The public and private partners enlist nonprofits to provide education and information services for future residents and the surrounding community for tax credit projects; however, they could require the incorporation of services for all P3 projects. These services range from financial literacy courses to health services and from homeownership preparedness services to educating the community on the benefits of the project (I-6; I-7). Depending on the type of project, the benefits and services provided vary. For example, senior housing projects may partner with ACCHS or health-related non-profits to provide expanded health services (I-6).

Challenges

↓ **State and local regulations can limit the capabilities of P3s.**

Arizona has unique state regulations that can limit the capabilities of public and private partners. For example, the Arizona State Legislature repealed the statute that expressly allowed municipalities to use tax-increment financing (TIF) to finance development projects (*Apache Junction et al. v. Doolittle*, 2015). TIFs allow for targeted investment in a designated TIF district where the future tax benefits of real estate investments are captured and used to pay for the costs of the project. TIFs are commonly used to finance P3 projects in other states. However, Arizona does have Government Property Lease Excise Taxes (GPLETs) which allow cities to lease parcels of land in the urban core to developer for up to 25 years without paying property taxes. Additionally, municipal zoning and parking requirements add costs to P3 projects, but the public partner can assist in rezonings and permitting processes to minimize the costs.

↓ **Misunderstandings and miscommunication between sectors can derail a project.**

The private sector's ability or willingness to explain project risks and capital financing to public partners is limited. The public sector often lacks an understanding of real estate finance, the limitations of capital sources, and the required returns. At the same time public sector expectations for the project are high and can add significant costs. Beyond the development, the public sector expects the private sector to share in the costs of updating or building new infrastructure and utilities, as well as public amenities such as parks and bikeways (Friedman, 2016). These updates and improvements are often budgeted expenses that fail to be seen in the financial commitments made by partners in any sector (Riley & Kraft, 2010). Additionally, it can be challenging for the public sector to ensure the private partner develops the property in a timely manner, without leaving it to sit empty indefinitely (I-9).

↓ **The properties viable for mixed-income redevelopment are disappearing.**

California developers are buying naturally occurring affordable housing (NOAH) built in Arizona in the 1970s and 1980s. They flip the properties and raise the rents or resell them, often for a significant profit. Flipping properties dramatically reduces the supply of naturally attainable housing and prevents workforce or affordable housing developers from purchasing these properties and working with the city to increase density in an equitable manner (I-6).

↓ **Existing tensions between sectors can prevent partnerships from forming.**

Some tension exists between philanthropic foundation leaders and the public sector. If not tension, the philanthropic sector is often skeptical of these partnerships. Philanthropic organizations do not want to compromise their independence, nor do they always feel their non-financial contributions are respected (Riley & Kraft, 2010).

Implementation Actions

The following actions were identified by interviewees as critical steps for completing a successful P3 development project:

1. Identify a project opportunity.
2. Thoughtfully assemble a team of leaders with P3 experience.
3. Establish common language with your partners, demonstrate that you did your research and understand their goals and terms.
4. Establish responsibilities, strategies for conflict resolution, and success measures in a plan from the start (Riley & Kraft, 2010).
5. Create a shared vision.
 - a. A shared vision and purpose for the project must be established and agreed upon by all the partners. Partners include the public sector entities involved, private developers, the community, business leaders, philanthropic organizations, or any other partners engaged in the process (Friedman, 2016).
6. Create a vision plan.
 - a. Produce a vision plan that establishes broad principles for success rather than descriptions of project details to allow for greater creativity and flexibility (Friedman, 2016).

Missing Middle Housing

The concept of the “missing middle” was developed by Dan Parolek and Opticos Design in 2010 (Figure 1). The phrase encompasses a range of housing types defined as the “middle” in terms of height, density, and affordability. These housing types are missing because they have been illegal in single-family zoned neighborhoods in most American cities for decades (OD, 2020). Missing middle (MM) housing models reflect historic housing development trends that were phased out decades ago, having been largely replaced by detached single-family homes and mid-to-high-rise apartment complexes (MCPD, 2018). However, these MM housing models still exist and offer insight on where and how to develop new units to serve the needs of lower-middle to middle income households.



Figure 1. Missing middle housing depiction by Opticos Design, Inc.

What Does the Missing Middle Model Include?

The phrase “missing middle housing” includes the breadth of housing models that fall between single-family homes and mid-rise apartments. These models are diverse, offering designs with gross densities ranging from 6 to 62 dwelling units per acre (du/acre), including duplexes, triplexes, fourplexes, multiplexes, courtyard and bungalow style apartments, accessory dwelling units, townhomes, and live/work housing models (OD, 2020).



Remodeled duplex in the Coronado Historic District in Phoenix, Arizona.

100 year old remodeled multiplex includes 7 units on Roosevelt Row in Phoenix.



A remodeled fourplex in the Willo Historic District in Phoenix.



Single-family home with detached guest house in the Del Norte Historic District.

The images above illustrate four examples of MM housing in the Phoenix Metropolitan area. All four examples are located in City of Phoenix historic districts. While historic designation status is not a requirement for MM housing, the presence of these models in historic districts is not a coincidence. Kronberg Urbanists + Architects illustrated the impacts of historic planning practices on current housing development trends with their research on MM housing and infill in the City of Atlanta (2019). The most walkable neighborhoods in Atlanta today are clustered around the historic streetcar lines and fall within the historic 1929 City boundary. These neighborhoods were developed before allowable densities changed to restrict ADUs, duplexes, and other higher density housing models (KUA, 2019). Similarly, Phoenix's historic districts were originally developed along the streetcar lines north and east of downtown, and they too represent some of most walkable and diversely developed Phoenix neighborhoods (Anderson, Mahmuljin, & McPherson, 2011).

Figure 2. The 8 Characteristics of Missing Middle Housing

1. Walkable
2. Medium density, but lower perceived density
3. Small footprint, blended densities
4. Smaller, well-designed units
5. Off-street parking does not drive the site plan
6. Simple construction
7. Creating community
8. Marketability

Source: Parolek, 2012

According to Dan Parolek, there are eight characteristics of missing middle housing (2012) (Figure 2). These characteristics also represent historic housing development trends. ULI members and other local stakeholders can use this list of characteristics to identify appropriate areas for MM housing development in the Valley. Historic neighborhoods can be used as starting points, but the search should extend beyond those neighborhoods to identify other areas that reflect the eight characteristics or have the potential to do so.

Neighborhoods capable of filling the MM housing gap are walkable and ideally, they include access to local businesses and jobs (Parolek, 2012). While

densities are often 16 du/acre at a minimum to support transit and businesses, they are perceived as low density, therefore they blend in with the existing neighborhood character, improving resident acceptance (Parolek, 2012). MM housing models are smaller, diverse in size, and well designed to maximize the use of space. They require fewer parking spaces, as they are located near transit and in walkable communities (MCDP, 2018). Simpler construction methods, in

addition to smaller sized units, can help reduce the costs of producing MM housing. The shared community spaces associated with MM housing models, such as courtyards, backyards, and plazas, provide a space for community interaction and create a sense of place (MCDP, 2018). Finally, all seven of the previous characteristics make MM housing models marketable to millennials and baby boomers who want walkable, vibrant communities and value homeownership (Parolek, 2012). However, to serve community needs, MM housing must extend beyond the 3-story luxury townhomes popping up all over cities across the United States. They should and can address a wider range of incomes.

Benefits

↑ MM housing limits a city's service provision area and reduces costs.

Many Valley cities are characterized by an ever growing urban fringe that municipal governments must provide services for. It costs the city more money to provide community assets in less dense neighborhoods as the costs per tax payer are higher, yet these communities often demand higher quality services and assets (PolicyLink, 2001).

↑ MM housing could be marketable in the Phoenix metro area.

According to a study by Commercial Cafe of 25 major metropolitan areas, residents of the Phoenix MSA rated walkability as their top choice for the most beneficial transportation development or improvement (Ginsac, 2018). As missing middle housing models are often developed in walkable infill areas, MM housing further contributes to walkability by adding to the housing supply in walkable areas and providing opportunities for commercial spaces via live/work housing (Parolek, 2012).

↑ MM Housing has environmental benefits.

MM housing development typically prioritizes infill and brownfield development over greenfield development, saving natural spaces and keeping ecosystems intact. It also creates walkable communities that can be less reliant on driving, leading to reduced congestion and pollution (PolicyLink, 2001).

*** MM housing models offer more affordable homeownership opportunities.**

Missing middle housing types are smaller and more simply designed, reducing costs while maintaining quality. These qualities inherently result in more affordable homeownership opportunities, reducing the barriers to entry for homeownership and equity building.

*** Diverse housing types allow households to remain in their community long-term.**

MM housing adds to the diversity of housing types in a community, enabling a single neighborhood to serve a wider demographic range with regard to age, family size, or income. The traditional housing development model forces growing families out to the suburbs and requires people to retire in different areas as they age and downsize (MCPD, 2018). In a neighborhood with diverse housing types, a household can transition through the various stages of life and housing needs without leaving their community.

*** MM housing provides spaces for social interaction.**

MM housing includes models with shared yards, such as ADUs, and shared common spaces, such as courtyard apartments. The shared communal spaces associated with many missing middle designs promote social interaction and community building.

Challenges

↓ **Finding financing for MM housing can be difficult.**

Limited access to capital for “middle” housing projects has also restricted supply. These projects may be less profitable than mid-to-high-rise apartment complexes or single-family homes due to land, material, and labor costs. The standardized designs used for single-family homes and mid-rise apartments simplify the costs, maximize the returns, and improve predictability of the outcomes, making these models more popular among developers and lenders alike, but they are not eligible for government subsidies if produced for market rate workforce households.

↓ **The zoning code and permitting processes add significant costs.**

The zoning code prohibits the development of many missing middle housing types and adds fees disproportionate to the cost of the project. Maricopa County cities need to adjust setbacks, parking requirements, and strict zoning designations, and shorten lengthy permitting processes. The barriers presented by the zoning code and permitting processes are addressed further in a proceeding section as they present a threat to all six workforce housing tools.

↓ **Greenfield development is often more appealing than infill.**

Infill development can be challenging because it uses small, scattered sites. These may have complex title issues and need significant infrastructure investments as they are often located in older neighborhoods. They may also require environmental remediation (PolicyLink, 2001). When the alternative is greenfield development—a clean slate for the developer—it is difficult to entice developers to prioritize infill over greenfield development. Additionally, determining where to incentivize infill can be a challenge; however, the City of Phoenix is already zoned for infill in light rail adjacent areas.

* **There will be community opposition.**

Community opposition presents a threat. This includes NIMBYs, but it also includes very real and justifiable concerns from low-income residents that infill and missing middle development will result in gentrification and displacement. To counter the threat infill development represents to low-income communities, cities can implement several policies to incentivize infill development and preserve affordability. Many cities use mandatory inclusionary zoning requirements to preserve or create affordable housing, but mandatory inclusionary zoning is illegal in Arizona. However, voluntary inclusionary zoning is legal and cities could establish a density bonus with an infill zoning designation. Encouraging infill using missing middle models and preserving affordability while chipping away at NIMBYism will be the work of both the public and private sectors.

Implementation Actions

The following actions should be taken to expand missing middle housing development and improve the outcomes of MM housing projects:

1. Assess the barriers to missing middle housing development and engage the community to identify and implement solutions.
2. Conduct a study to determine which areas are best for increasing density gradually and adding to the missing middle housing supply.
 - a. This study could include a mapping component to illustrate where MM housing exists, where there are opportunities for expansion, and areas where MM housing does not exist, but would fit in. The study could evaluate the potential for integrating ADUs and converting units to duplexes, triplexes, fourplexes, and apartments in walkable areas in Phoenix.
 - b. The redevelopment practices seen in older cities like Atlanta and Houston are not direct corollaries to cities in Maricopa County, but they can serve as examples of how large, often older, homes can be converted into multiple units while maintaining neighborhood character.
3. Modify existing parking minimums to reduce the overall parking requirements and/or allow on-street parking to count toward required parking.
4. Reform lot subdivision standards to allow for ADUs in appropriate areas as determined by city staff using extensive public engagement. Additionally, cities could allow property owners in R-4 and R-5 zoning districts to build both an attached ADU and a detached ADU on one property to maximize density with limited impacts to neighborhood character (KUA, 2019) .
 - a. The city, a nonprofit, or a community group could establish a revolving loan program to fund ADU construction.
5. Further incentivize missing middle development in infill designated zones by updating old infrastructure and adding public amenities (PolicyLink, 2001). The infrastructure investments made by the city reduce costs for developers and the public amenities preserve community spaces as density increases.
6. Fast-track and streamline the permitting process by establishing by-right zoning, expanding mixed-use zoning designations, and/or increasing allowable densities in designated areas (PolicyLink, 2001). Cities should also reduce minimum lot sizes and setbacks, and lower impact fees (PolicyLink, 2001).

Limited Equity Housing Cooperatives and Community Land Trusts

Limited Equity Housing Cooperatives (LEHCs) and Community Land Trusts (CLTs) are both models for shared-equity homeownership in which low-to-middle-income households or individuals are able to purchase homes or condominiums at a lower cost. Lowering the cost of purchasing a home partially reduces the financial barrier to entry for homeownership (Ehlenz & Taylor, 2019). Both models restrict the resale value of homes to preserve affordability while still allowing homeowners to build equity through homeownership.

LEHCs and CLTs are presented together in this paper as complementary models for workforce housing development and expansion of homeownership access; however, LEHCs and CLTs are also highly effective and equitable housing models when implemented independently.

Community Land Trusts

In the CLT model, ownership of the home and the land underneath the home are separated. The CLT owns the land in perpetuity and leases the land to homeowners using a ground lease. Typically, ground leases are set for 99-years and are inheritable and renewable (Palmer, 2019). The lessee purchases the home atop the land and leases the land from the CLT. This reduces the overall cost of the unit. Resale price restrictions are established in the ground lease to maintain affordability and pass savings on to the next homeowner (Green, 2018a). This resale price limitation ensures generational affordability.

Limited Equity Housing Cooperatives

The LEHC model expands the reach of shared-equity homeownership to multi-family residential developments. Under an LEHC model, the “residential development [is] owned and managed by a democratically governed, nonprofit cooperative corporation, such as a tenants’ union”, whose members reside in the development (Green, 2018b, p. 1). The members of the LEHC own the development under a blanket mortgage covering all units, eliminating the need for individual households to qualify for a mortgage. The costs of ownership are spread out across households, enabling those “unbankable” households to purchase a share of the property and build equity (Ehlenz, 2013).

Owning a share of the cooperative entitles a household to a unit. When a household is ready to move, they sell back their share in the LEHC and a new household can purchase that share (Ehlenz, 2014). Prospective owners are required to become members of the organization the blanket mortgage is issued under before a sale takes place. As the name implies, the amount of equity a member can earn when they sell their property and share are limited to maintain long-term affordability for future residents (Green, 2018b).

Combining CLTs and LEHCs

There are two ways an LEHC can be created under a CLT. (1) Converting an existing housing complex to an LEHC. (2) Developing or purchasing a site without tenants and working to build an LEHC from the ground up through education and outreach. In both cases, the CLT acts as a support system for potential residents. In scenario two, construction does not begin until the units are filled and the contracts are signed. The CLT also encourages future tenants to save for the LEHC as they continue to gather enough tenants to fill all of the units (I-8).

Benefits

↑ LEHCs are added to an existing successful housing model.

CLTs are a tried and true model for expanding access to homeownership and wealth building in Arizona. Since 2004, Newtown Community Development Corporation (CDC)—located in Tempe, Arizona—has sold more than 135 homes through their CLT program. As a CDC with deep community roots, Newtown also provides down-payment assistance, financial coaching, homebuyer education, and credit counseling to Valley residents (Newtown, 2019). If the LEHC model is incorporated into an existing CLT, such as Newtown, they can expand their reach and provide homeownership access to households earning 60 percent of AMI and below (I-8).

↑ CLTs are already equipped with the necessary knowledge and skills.

CLTs have the knowledge depth required to create and support a successful LEHC. They are qualified to serve as economic advisors, so they can guide members through the budgeting process to ensure the long-term health of the LEHC. They are experienced in educating individuals on homeownership and financial literacy and have a strong track record in partnership development (I-8). They also provide an institutional memory for the LEHC as residents and members change over time, serving as a reminder of the LEHC's longevity, purpose, and goals (Ehlenz, 2014). Additionally, the CLT plays the role of mediator among members and helps troubleshoot problems as they arise (I-8).

*** Collaborative decision making is embedded in LEHCs.**

LEHCs have a community board that makes decisions in partnership with the CLT board, so residents are directly represented in decision making. The collective decision making process fosters a stronger sense of community and collaboration among residents, as they work together to make decisions for the good of their community.

*** Residents gain ownership over their housing situation.**

For lower-income residents who were former renters, joining an LEHC provides a new opportunity for ownership over their housing situation, literally and figuratively. They are no longer subject to one-sided decisions made by their landlords, instead democratic decisions are made with their co-residents.

*** Homeownership access is expanded.**

LEHCs expand the accessibility of homeownership and equity building to low-income households (below 50% AMI) by using a group mortgage. Homeowners purchase a share in the co-op and pay monthly dues. In essence, they are paying rent, but building equity through shared ownership (I-8). For single-family houses, homeowners are required to obtain individual mortgage financing (Ehlenz, 2013). The “bankability” of an individual household then becomes a barrier to homeownership. A group mortgage eliminates bankability concerns by spreading out the financial burden across multiple households.

*** The efforts to create an LEHC are largely community driven.**

The CLT will not go to a community perceived to be threatened and suggest they use this model. There has to be interest from the community already. The CLT will then build or support the growth of that initial community interest. However, it is primarily the

residents' job to get their community on board with the conversion of rental properties to an LEHC (I-8).

Challenges

↓ Funding is limited for CLTs.

As with all housing developments, but particularly attainable developments, funding is one of the most significant barriers. CLTs are eligible for federal funding through programs such as the HOME Investment Partnership program, but federal funding is limited (Palmer, 2019). Due to limited funds, CLTs often must choose between providing down payment assistance to a single family or purchasing a home that will be permanently affordable to families for wealth building (Palmer, 2019). Newtown CDC is the only CLT serving Maricopa County which has a population of approximately 4.5 million people. Newtown, like all other CLTs, is forced to make these same choices. If LEHC development and management are added to the services CLTs provide, financial resources may be less impactful and staff members may be overloaded.

↓ The CLT does the heavy lifting.

The costs to the CLT vary depending on the capacity and knowledge of current staff members. The CLT would be responsible for education, construction, and financial startup costs, which could be supplemented through partnerships with public or private entities. The CLT determines whether potential tenants are income-qualified, educates them on the LEHC model and requirements, and has tenants sign-on to the cooperative agreement. They also co-manage the LEHC long-term to preserve affordability in perpetuity.

Implementation Actions

There are several actions required to determine how to proceed with LEHCs and CLTs. These actions are intended to guide stakeholders as they contemplate pursuing this solution.

1. Educate local leaders, stakeholders, and community members on the purpose of LEHCs and the potential role the CLT could play in the successful creation of LEHCs.
2. Assess community interest. Without buy-in from community members, it is not recommended to pressure communities into pursuing this option (I-8). However, the CLT or other advocates can continue to educate communities and stakeholders.
 - a. Newtown CDC would also need to determine whether they are interested in developing expertise in LEHCs and serving as a mediator and partner for interested communities.
 - b. Should Newtown not be interested, a new CLT could be created to serve the LEHC market, if that market exists or develops. Such an effort would require significant time and cost investments and experienced and passionate advocates.
3. Consult regional and national experts on CLTs that operate LEHCs, including local expert, ASU faculty member, Dr. Meagan Ehlenz. Experts will be able to address concerns, answer questions, and provide further support to Newtown, or another CLT, should they choose to pursue this option.

Addressing Cross-Cutting Challenges

The research and interview process for this white paper revealed several challenges that prevent or slow the development of all housing types, regardless of the development tool. Four of the most significant cross-cutting challenges identified by stakeholders during the Solutions Round Table event and by expert interviews are described below. In keeping with the goals of the ULI Arizona Task Force, examples of innovative solutions aimed at addressing these challenges are provided to inspire and energize Valley stakeholders.

Communication Across Sectors and Departments

A lack of interdepartmental, interjurisdictional, and inter-sector communication complicates the workforce housing development process. Siloed communication can add costs and slow down the development process. Limited communication may also contribute to lower levels of trust among departments and across sectors which could further limit the formation of collaborative partnerships, particularly public-private partnerships. Without effective communication, critical and often expensive efforts, such as updating local infrastructure, may be unintentionally duplicated and technical knowledge may be lost (RT, 2020). By establishing more, and stronger partnerships, creating opportunities for knowledge sharing, and communicating openly with stakeholders, local governments, nonprofits, the private sector, and the public can build trust amongst one another. This trust and communication can lead to more effective governance and equitable cities.

Innovative solutions to the knowledge gap include:

Distributed Governance as an Alternative Operating System

In 2017, New York University professor Neil Kleiman and former mayor and Harvard professor Stephen Goldsmith proposed a new operating system for local governments that employs technology, big data, and community engagement as tools for improving public services and local governance systems (Goldsmith & Kleiman, 2017). They call the new system distributed governance because it draws on the distributed knowledge of residents, businesses, and organizations to increase government productivity and better address the needs of the community. Data and resident insights are used to establish local policies, strategies, and projects in cost effective and equitable ways. The keys to this system are openness, collaboration, and knowledge sharing (Goldsmith & Kleinman, 2017).

Summer Design School

The United States Office of Personnel Management (OPM) created the Lab at OPM in 2013 “to build human-centered design capacity across the federal government,” or problem solving that prioritizes people’s needs, behaviors, and ways of thinking (OPM, 2020). The Lab launched the Summer Design School in 2017 to create an opportunity for inter-departmental and inter-agency learning and collaboration (OPSI, 2017). Public, private, and nonprofit sector participants build design and collaboration skills and work on addressing complex challenges together during the week-long course. Ideally, participants leave the course with a desire to increase collaboration and knowledge-sharing across sectors and departments outside of the classroom.

Zoning Codes and Regulatory Requirements

The National Multifamily Housing Council (NMHC) and the National Association of Home Builders (NAHB) recently published a study finding that regulations imposed by various levels of government account for 32.1% of total development costs on average and up to 42% of total development costs in some cases (Ponsor & Cohen, 2019). These costs come from strict zoning requirements such set-backs and parking minimums, infrastructure improvement requirements, permitting processes, environmental reviews, and public hearings. While these codes and processes provide necessary checks and balances, there are ways they can be improved and streamlined without compromising public sector goals or the quality or design of the projects they regulate. As the following examples illustrate, many regulatory improvements have co-benefits that allow localities to address multiple barriers at once.

ReinventPHX

In 2012, the City of Phoenix began the arduous process of research and community engagement to create a new vision for communities along the light rail (COP, 2020). The City established six Transit-Oriented Development (TOD) Districts along the light rail and created policy plans and five year action plans for each district. The City of Phoenix conducted extensive community and private sector engagement to create these plans. In addition to adopting the TOD policy plans, the ReinventPHX process also included the adoption of the Walkable Urban Code (WUC). The WUC established reduced parking requirements near light rail stations, reduced building setbacks, expanded opportunities for mixed-use development, and set a minimum requirement of 75 percent shade cover for sidewalks (COP, 2016).

Mesa's Central Main Plan

In 2012, the City of Mesa adopted its Central Main Plan, and with it they adopted a form-based code along Main Street, the urban core of Mesa (COM, 2020). The City contracted with Opticos Design to create a zoning code that encourages infill and redevelopment of existing properties along the then future light rail line. The form-based code establishes reduced parking requirements, proposes missing middle housing typologies that could be integrated into existing single-family neighborhoods, phases density according to the distance from light rail, and allows for increased mixed-use developments (COM, 2020). The elements are designed to create an active streetscape, improve walkability, and enhance access to the light rail and urban core, while diversifying housing options near Main Street.

Financing

Many factors contribute to the limited financial resources available for affordable and workforce housing development. There are strict requirements associated with all federal funds that make it difficult or impossible to finance certain housing projects (RT, 2020). The majority of workforce housing projects do not qualify for government subsidies due to the income range they are intended to serve—typically 80 to 120 percent of area median income. The high costs of materials, construction, and land leave developers with few options for producing workforce housing without government subsidy, while still earning a profit (RT, 2020). Developers need to be innovative when sourcing project funds if they want to fill the workforce housing gap. Arizona needs new funding sources, new partnerships, and reduced costs to make these projects pencil out.

Arizona Housing Fund

Howard Epstein, a National Executive at Bank of America, founded the Arizona Housing Fund (AZHF) in 2019 to create a dedicated and sustainable revenue source for affordable housing development (AZHF, 2019). AZHF's goal is to raise \$100 million over the next 10 years. The Fund establishes a partnership with the nonprofit organization, the Arizona Community Foundation, which manages the funds and fields applications for grant funding from AZHF. The revenue sources for the Fund are entirely dependent on donations from the following sources—direct donations from individuals, groups, and organizations, voluntary business participation in sales transaction-based donations on specified transactions, and escrow donations where buyers and sellers are able to donate during the closing process. The grant funds created by these donations go directly to affordable housing development with supportive services to help lift individuals and families out of poverty (AZHF, 2019).

NIMBYism

Vocal neighbors opposed to density, affordable housing, and other types of development perceived as a threat to property values can derail a project quickly. These NIMBY, or Not-In-My-Back-Yard, voices are the loudest, but often they are also the most extreme and fail to represent the opinions of the entire community. In addition to their presence at meetings, public engagement opportunities, and hearings, NIMBYs have further amplified their voices using social media (Friedman, 2016). While valid, NIMBY opinions do not represent the values and voices of the entire public. Equitable and inclusive engagement, along with education, can help reveal or create a culture of YIMBYism, Yes-In-My-Back-Yard, that allows for thoughtful and progressive development.

California YIMBY

California YIMBY, or Yes In My Back Yard, was founded in an effort to counter the NIMBY voices that so often delay or prevent housing development. California YIMBY is a nonprofit with over 75,000 members and a number of volunteer teams across California. Members and staff engage with elected officials, policy experts, grassroots organizations, and voters to advocate for equitable and inclusive communities and address the housing shortage (CY, 2020). The nonprofit advocates for policy solutions such as AB 725, which requires cities to allow affordable duplexes in their plans. California YIMBY also supports policies like SB 902, which allows for “gentle” density increases by encouraging ADUs and increasing the number of homes allowed on a single property from two to four in appropriate areas (CY, 2020). A similar organization could be created in Arizona to build a culture of YIMBYism and support progressive housing policies.

Conclusions

A number of barriers to workforce housing development exist in the Valley and across the United States. However, these challenges present opportunities for the public, private, and nonprofit sectors to improve the ways in which they regulate, finance, design, construct, develop, and implement workforce housing solutions. Each of the four cross-cutting challenges in the previous section are coupled with existing solutions to illustrate possibilities for change in a system that appears rigid and impenetrable. Yet, these challenges are being addressed in the Valley and across the country.

The six workforce housing development tools described in this white paper can also serve as solutions to these cross-cutting challenges. To implement each tool most effectively, the cross-cutting challenges must be addressed. Developing these six tools and removing the barriers to workforce housing development will require a coordinated, collaborative effort on the part of the public, private, nonprofit, and philanthropic sectors. However, the work should begin with inclusive community engagement to determine which tools are most valuable and which challenges are most pressing for local residents.

The purpose of this white paper is to inform stakeholders on unique and viable workforce housing solutions; to inspire innovative new solutions; to spark conversations; and to embed health and social equity into solutions to the housing affordability crisis in Arizona and the Valley. The next step is for local leaders, stakeholders, and community members to act together to eliminate barriers and implement workforce housing solutions.

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Appendix A — Definitions

The ULI Arizona Task Force for Health, Equity, and Housing Affordability adopted the following definitions for the purposes of this project.

Affordable Housing: The term is widely used to refer to housing that is subsidized or rent regulated and is occupied by a household whose income is less than 80 percent of the area median income (AMI). The term used in this manner can be limiting—growing numbers of households within a higher range of incomes live in unsubsidized or unregulated market-rate housing but have a problem with “housing affordability”.

Area Median Income (AMI): The median household income of each metropolitan statistical area adjusted for family size. HUD publishes AMIs annually. AMI is used to determine the eligibility of applicants for most housing assistance programs.

Displacement: Displacement is a concern and possible outcome of gentrification, but it is “a distinct phenomenon that can occur even in the absence of gentrification” (Zuk et al. 2018, p. 34). Displacement may be forced (informal and formal evictions) or responsive (rent or tax increases) (Zuk et al. 2018).

Fair Market Rent (FMR): FMRs are gross rent estimates. They include the shelter rent plus the cost of all utilities. FMRs are set based on the average rent distribution in a metropolitan statistical area (MSA) and set as the 40th percentile rent in that MSA (HUD).

Gentrification: “Gentrification is a pattern of neighborhood change in which a previously low-income neighborhood experiences reinvestment and revitalization, accompanied by increasing home values and/or rents. Gentrification, while frequently controversial, can be either good or bad for a neighborhood, depending on who benefits from the reinvestment and revitalization” (Pollack et al. 2010, p. 2). This definition removes value judgements and defines gentrification as a concept separate from displacement. However, it is important to note that gentrification, even without displacement, often results in the loss of community identity and culture.

Health: A holistic definition of health that accounts for the social and environmental determinants of health is used for this project. Health refers to a “state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity” (WHO, 2014, p. 1). A “healthy and safe home environment include[s] access to clean air and water; efficient transportation, including safe, walkable neighborhoods; affordable, healthy foods; violence-free places to be physically active; and affordable, secure, quality housing” (LACDPH, 2015, p. 2).

Housing Affordability: Refers to the ability, or the lack thereof, of a household to meet its housing expenses with a reasonable and sustainable share of its income, which is generally defined as spending no more than 30 percent of gross income on housing costs regardless of household income or whether the household lives in subsidized, rent-regulated, or market-rate housing. Recently, the definition for housing affordability has expanded to account for transportation costs as these costs are directly related to housing costs and location. The [Housing + Transportation \(H+T\) Affordability Index](#) created by The Center for Neighborhood Technology includes transportation costs when determining housing affordability to create a more comprehensive understanding of the affordability of a place.

Housing Cost Burdened: Households that spend more than 30 percent of their income on housing (NLIHC, 2019).

Severely Housing Cost Burdened: Households that spend more than 50 percent of their income on housing (NLIHC, 2019).

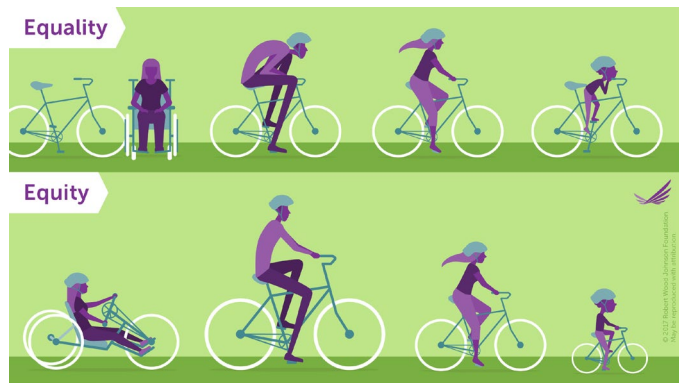
Social Equity: ULI defines social equity as “just and fair inclusion into a society in which all can participate, prosper, and reach their full potential. Unlocking the promise of the nation by unleashing the promise in us all” (PolicyLink, 2015).

- **Social Equity v. Equality:**
Equality is treating everyone the same, whereas equity means you treat people in proportion to their needs.

- **Social Equity v. Real Estate**

Equity: Throughout this paper, social equity is defined according to the definition above. When the term ‘equity’ is used in isolation, it is in reference to equity in real estate. Therefore, “equity is the difference between the market value of your home and the amount you owe the lender who holds the mortgage” or put in different terms, it is “the amount of money you [would] receive after paying off the mortgage if you were to sell the home” (Weintraub, 2020).

Workforce Housing: For the purposes of the Task Force, workforce housing includes households earning between 60 and 120 of AMI. Generally, workforce housing is housing affordable to households earning between 80 and 120 percent of area median income (AMI). In high-cost areas, incomes may be as high as 150 percent of AMI or low-cost areas may be as low as 60 percent of AMI. Some definitions exclude owner-occupied housing.



Infographic depiction of equality versus equity.
Source: [Robert Wood Johnson Foundation, 2017](#).

Appendix B — Project Background

This White Paper supports the Urban Land Institute (ULI) Arizona District Council Housing Affordability Initiative. The Initiative is part of ULI's National District Council (DC) Task Forces for Health and Social Equity program led by the ULI Building Healthy Places (BHP) Initiative with funding support from the Robert Wood Johnson Foundation (RWJF). ULI District Councils in Arizona, Chicago, Sacramento, and Tampa Bay were selected to organize ULI member-led task forces to explore local policy and practice barriers to promote healthier and more equitable communities.

In May of 2019, ULI Arizona applied to the national ULI Task Forces for Health and Social Equity program. The program offers technical assistance and funding to support local efforts addressing regionally specific land use and/or transportation challenges. The ULI Arizona application focused on the growing lack of housing affordability in the Phoenix metropolitan area, with an emphasis on the impacts of investments in urban cores and high capacity transit infrastructure. ULI Arizona was awarded the grant in June 2019.

Vitalyst Health Foundation generously provided a partial match of the ULI/RWJF grant to fund PLAN*et Communities' consulting work for the project. The primary author, Elizabeth Van Horn, is an employee at PLAN*et Communities. Portions of her work were funded by Vitalyst, while others were provided pro bono in partial fulfillment of her Master of Sustainability Solutions (MSUS) at Arizona State University.

The purpose of Task Force is to identify regulatory, financial, and design or development barriers to supplying healthier, equitable, and more affordable housing with the ultimate goal of developing targeted, sustainable solutions. In the latter half of 2019, the Task Force met regularly to discuss housing, health, and equity challenges in the Phoenix region and to learn how various community partners are tackling different aspects of the issues. In November 2019, the Task Force decided to focus on creating innovative solutions and tools for an important market segment where affordability was diminishing quickly—workforce housing in urban cores—because this segment does not yet have a lot of advocate attention or resources available.

Project Approach

The work for this research project was conducted in three stages.

Stage One

In stage one, the Task Force convened local housing experts and business, community, and development industry leaders for a Housing Solutions Round Table event. Stakeholders who are knowledgeable of housing, health, and equity and have experience navigating the myriad challenges and opportunities were invited to participate. On February 5, 2020, over 65 local housing stakeholders participated in the Solutions Round Table event, including Task Force members, Arizona State University (ASU) faculty, affordable and market-rate housing developers, local and state public officials, community health advocates, and housing, transportation and land use experts.

Elizabeth co-developed questions with PLAN*et Communities and the Task Force to guide table discussions on the four key components necessary for creating healthy and equitable housing solutions. These include—1) regulations and planning practices, 2) financing tools and sources

of capital, 3) location and land, and 4) partnerships. Round Table participants joined discussions on two of the four key components by rotating tables. The conversations were documented by ASU student notetakers and the summary notes were consolidated for analysis. Elizabeth conducted a content analysis for each set of notes to identify repeated comments and reoccurring themes. The themes were divided into three categories—general comments, new ideas, and existing solutions.

Stage one also included a non-exhaustive review of national workforce housing types and best practices for their potential as transferable ideas for Arizona. The combination of existing best practices and the new ideas and solutions proposed during the Round Table event were catalogued and developed into a detailed inventory of workforce housing solutions. This was done by creating a list of terms for a key word search and using those results to create a broad inventory of potential policies, tools, and solutions. The Task Force leadership team reviewed the inventory and provided direction on which tools warranted further research. Based on their feedback, six tools and strategies were selected for focused research. They include the following: 1) cohousing, 2) missing middle housing types, 3) combined limited equity housing cooperatives (LEHC) and community land trusts (CLT), 4) public-private partnerships (P3), 5) land banks, and 6) offsite construction.

Stage Two

Stage two consisted of focused research and expert interviews on the six tools selected by the Task Force. A review of academic literature and non-academic sources was conducted to collect background information on each tool, including the status of its application in Arizona. Four lenses were used to sort and document the benefits and challenges of developing, implementing, and operating each tool—private sector, public sector, social equity, and health—and helped to organize the questions in each interview script.

Twelve interviews were conducted with national and local experts, with a minimum of one expert interview per tool. The Task Force members and ULI staff facilitated introductions with appropriate experts. Due to the individualized nature of these interviews, a unique interview script was created for each interviewee. The interviews were recorded and transcribed using a high-quality transcription service. The interviewees provided critical information on the complexities of each tool and best practices for developing and implementing each tool.

Interviewees are cited by using the letter ‘I’ for interviewee and a number between 1 and 12—the number of interviews conducted. Each interviewee was assigned a number at random to serve as a code of reference for readers. To protect the anonymity of the interviewees, names are not listed with the interviewee codes. The acknowledgments section includes a complete list of individuals who helped inform the findings of this study. The interviews and literature review informed the final stage of the project.

Stage Three

The final stage consisted of writing and editing of the White Paper. Two drafts of the final product were delivered to the Task Force and ULI staff for review. Following the review of draft one, Elizabeth consulted the Task Force via a virtual meeting to clarify comments and address

concerns about the paper's content and structure. The feedback provided on each draft was addressed in the final version of the White Paper.

The final White Paper document provides an overview of housing affordability challenges in growing urban areas of the Phoenix region and describes six workforce housing tools that could be implemented or expanded upon to increase a set of sustainable solutions. The following sections are provided for each tool: background information, benefits, challenges, implementation actions, and considerations for health and social equity. The summary conclusion highlights cross-cutting challenges that demonstrate the complexity of issues and offers national best practice examples of how they can be addressed.

Strengths and Limitations

Housing affordability and expanding healthy, equitable workforce housing solutions is an intricate, multifaceted and expansive topic that could be distilled and tackled in a variety of ways. Some tradeoffs were made to keep the project moving forward in a relatively short period of time. The primary strength of the White Paper is rooted in the robust support and input from experts, stakeholders, and ULI Task Force members. Contributions from over 65 local stakeholders informed the foundation of the research and the Task Force and ULI staff provided support, resources, feedback, insights, and connections to experts throughout the process. Peoples' dedication of time and willingness to be interviewed provided valuable insights on potential tools, policies, strategies, and ideas and those benefits cannot be overstated. Additionally, public sentiment and momentum for addressing housing affordability on a broader mainstream scale is mounting in the Phoenix metro region and statewide. The timing of this project and its findings benefited from the increased activity and attention for this important issue.

The approach used to develop this white paper also had several limitations. The most notable is the lack of general community and resident engagement in the process. While diverse business and industry sectors were intentionally engaged in the Solutions Round Table event, other key measures of diversity and inclusion, such as race, ethnicity, gender, sexual orientation, religion, and socio-economic status, were not explicitly addressed. This white paper was researched and written by a single author—a middle-class white woman—and as such, there are limitations to the author's personal experience that may impact the paper, particularly the sections on social equity. The author interviewed three equity advisors to better inform these sections.

The other notable limitation to this project was time. All research, interviews, analysis, and writing were undertaken over the course of five months. Time limitations contributed to another limitation—the number of interviews conducted. Ideally, interviews with two to three experts on each tool would have been conducted. There are numerous opportunities to expand upon this White Paper with additional time, comprehensive research, and diverse engagement. Stakeholders should keep these limitations in mind when consulting this document, either for determining which tools to use or when identifying next steps for increasing the supply of workforce housing.

Appendix C — Local Housing Context

Many areas of Arizona, and Maricopa County in particular, have a growing affordability problem. This new reality stands in stark contrast to Arizona’s reputation ten years ago when people were fleeing expensive rents in coastal cities to come to Arizona. Several factors contributed to this change including underproduction of units, stagnant wages, rising construction and development costs, and instability of key affordable housing funding sources (Kingsella, 2019; NLIHC, 2019a; NLIHC, 2019b).

Underproduction of Units

Statistical evidence illustrates the magnitude of the problem. Between 2000 and 2015, Arizona underproduced the necessary number of homes to meet demand by 505,134 homes (Kingsella, 2019). In Maricopa County, for every 5.5 jobs added between 2010 and 2017, only one housing unit was built (Kingsella, 2019). The number of additional jobs does not directly translate to the number of new units needed. However, Maricopa County still underproduced new homes by a more representative measure of housing need—the number of new households formed. Household formations are new groupings of individuals living together under one roof. These include family and non-family household formations. For each new household formed in Maricopa County from 2000 to 2017, an average of 0.77 housing units were built (Kingsella, 2019). This underproduction of housing led to a shortage in supply and allowed for housing costs to rise quickly.

Stagnant Wages

Incomes in Arizona have not kept pace with rising rents and home prices either. The minimum wage in 2019 was 11 dollars per hour and the fair market rent (FMR) in Arizona for a two-bedroom rental unit, as determined by HUD, is \$1,015 per month. To afford a one-bedroom rental unit at FMR in Arizona, an individual making minimum wage must work 57 hours per week or approximately 1.4 jobs (NLIHC, 2019c). In Maricopa County, the housing wage required to afford a rental unit at FMR when working 40 hours per week, 52 weeks per year, without being housing cost burdened, is \$20.63 per hour, or \$42,910 per year (Figure 1) (NLIHC, 2019c).

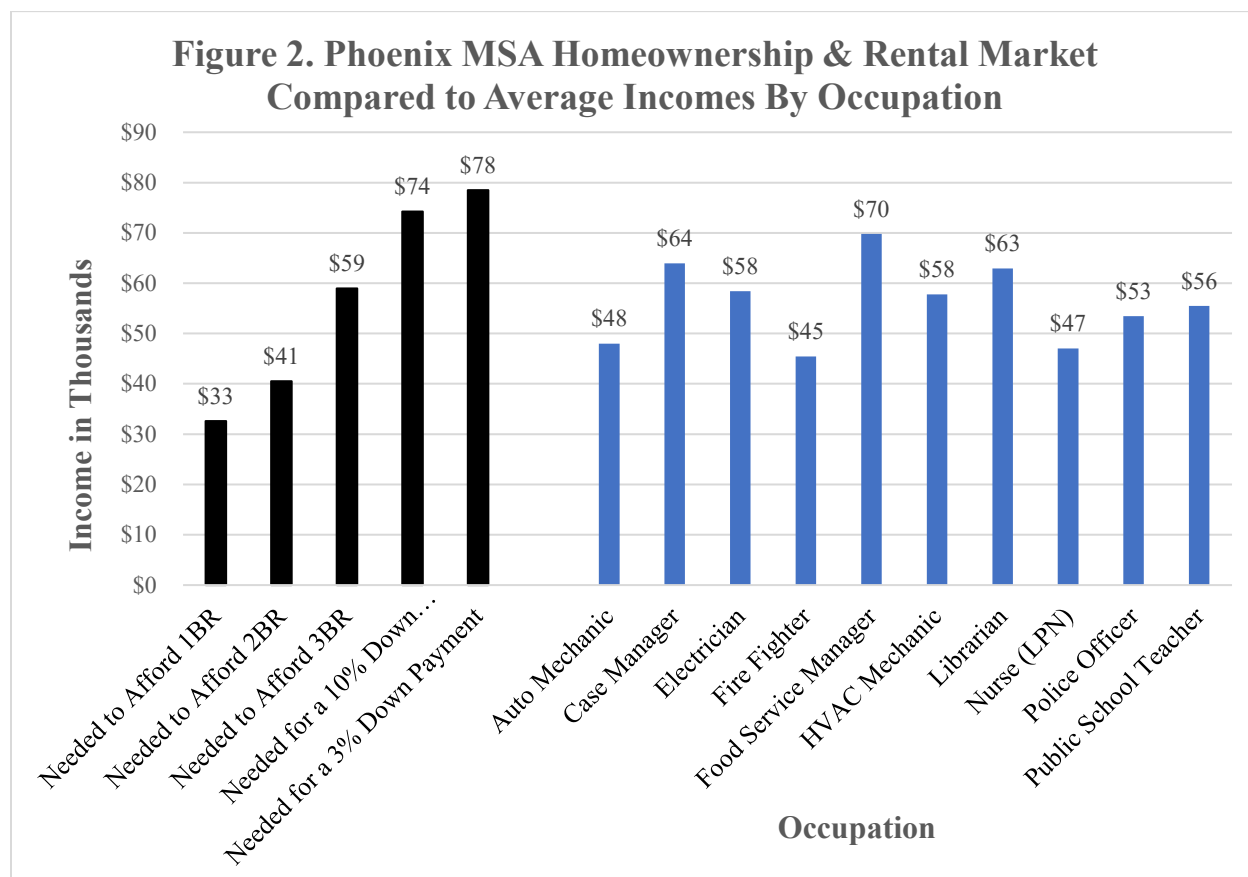
Figure 1. 2019 Phoenix-Mesa-Scottsdale MSA	
Area Median Income (AMI)	\$72,900
Affordable Monthly Rent at AMI	\$1,823
30% of AMI	\$21,870
Affordable Monthly Rent at 30% AMI	\$547
60% of AMI	\$43,740
Affordable Monthly Rent at 60% AMI	\$1,094
120% of AMI	\$87,480
Affordable Monthly Rent at 120% AMI	\$2,187
Two Bedroom (BR) Fair Market Rent (FMR)	\$1,073
Hourly Wage Needed to Afford 2BR at FMR	\$20.63
Annual income needed to afford 2BR at FMR	\$42,920
Full-time jobs at minimum wage to afford 2BR at FMR	1.9

The rental market is more accessible for households in the workforce range—60 to 120 percent AMI—as even households on the lower-income end of the spectrum are able to afford a one bedroom rental unit at FMR (Figure 1). While the incomes and affordable monthly

Source: NLIHC, 2019c

rents listed in Figure 1 generally illustrate what affordability looks like in Arizona, they do not paint a complete picture of housing affordability or attainability. The limited number of available units prevents some households from renting within an affordable price range, resulting in housing cost burdened households (NLIHC, 2019a). The price of renting is also higher near job centers where transit is available and jobs are walkable, such as downtown Phoenix and downtown Tempe. While rents may appear affordable across the Valley, these affordable rental units are often located far away from job centers, so they come with higher transportation costs.

Rental units may be difficult to find within an appropriate price range or a certain proximity to jobs, but homeownership is even less attainable in the Valley. Wages in Arizona are not only stagnant; they are insufficient for accessing homeownership. The National Housing Conference's Paycheck to Paycheck analysis from 2018 (Figure 2) compares the annual incomes of Valley workers that fall within the workforce range to the incomes needed to afford rental units and down payments on a typical Valley home. On their own, the average police officer, school teacher, and electrician, among many others, cannot afford to purchase a home in the Valley (NHC, 2018). As homeownership is one of the primary ways to build equity in the United States, the home prices in the Valley preclude many workers and families from accessing this key tool for wealth building.



Source: NHC, 2018

Rising Costs

In Arizona, and across the country, the rising costs of development can be attributed to numerous issues including the rising costs of construction materials and land, labor shortages, and government imposed financial barriers to development (Ponsor & Cohen, 2019). The overall cost of materials increased by 7.4 percent from 2017 to 2018, while the cost of lumber and plywood increased by 11 percent (ACG, 2018). Land costs have been steadily rising, particularly in urban cores, such as downtown Phoenix, and landlocked cities like Tempe (Hoyt, 2020). The limited supply of skilled labor also contributes to rising development costs by driving up wages and slowing down the construction process (Bertram et al. 2019). Last, time and financial costs associated with acquiring permits and approvals and meeting regulatory requirements are burdensome. While it is important to have regulatory and development standards in place, those standards could be streamlined to improve the development process overall (Ponsor & Cohen, 2019).

Unstable Funding Sources

Cuts to housing funding sources over the past three decades at the state and federal level contributed to the housing deficit in Arizona. In recent years, the Trump Administration repeatedly proposed dramatic funding cuts for the Department of Housing and Urban Development, even calling for the elimination of programs including the Community Development Block Grant program (Arnold, 2020). While these budget cuts were largely rejected by Congress, they still create instability and present a continued threat. In 2019, the Arizona State Legislature appropriated \$15 million to the State Housing Trust Fund for a set of pre-selected projects for the first time in nine years. Prior to this one time funding appropriation, the Housing Trust Fund was capped at \$2.5 million as compared to pre-recession levels in 2008 of approximately \$40 million per year (NLIHC, 2019b). While momentum was growing over the past year to establish a stable revenue stream for the Housing Trust Fund, COVID-19 may slow or stop progress due to the strain on city and state budgets.

Appendix D – Summary of Housing Solutions Round Table Notes

Appendix E – Full Inventory of Workforce Housing Tools and Solutions