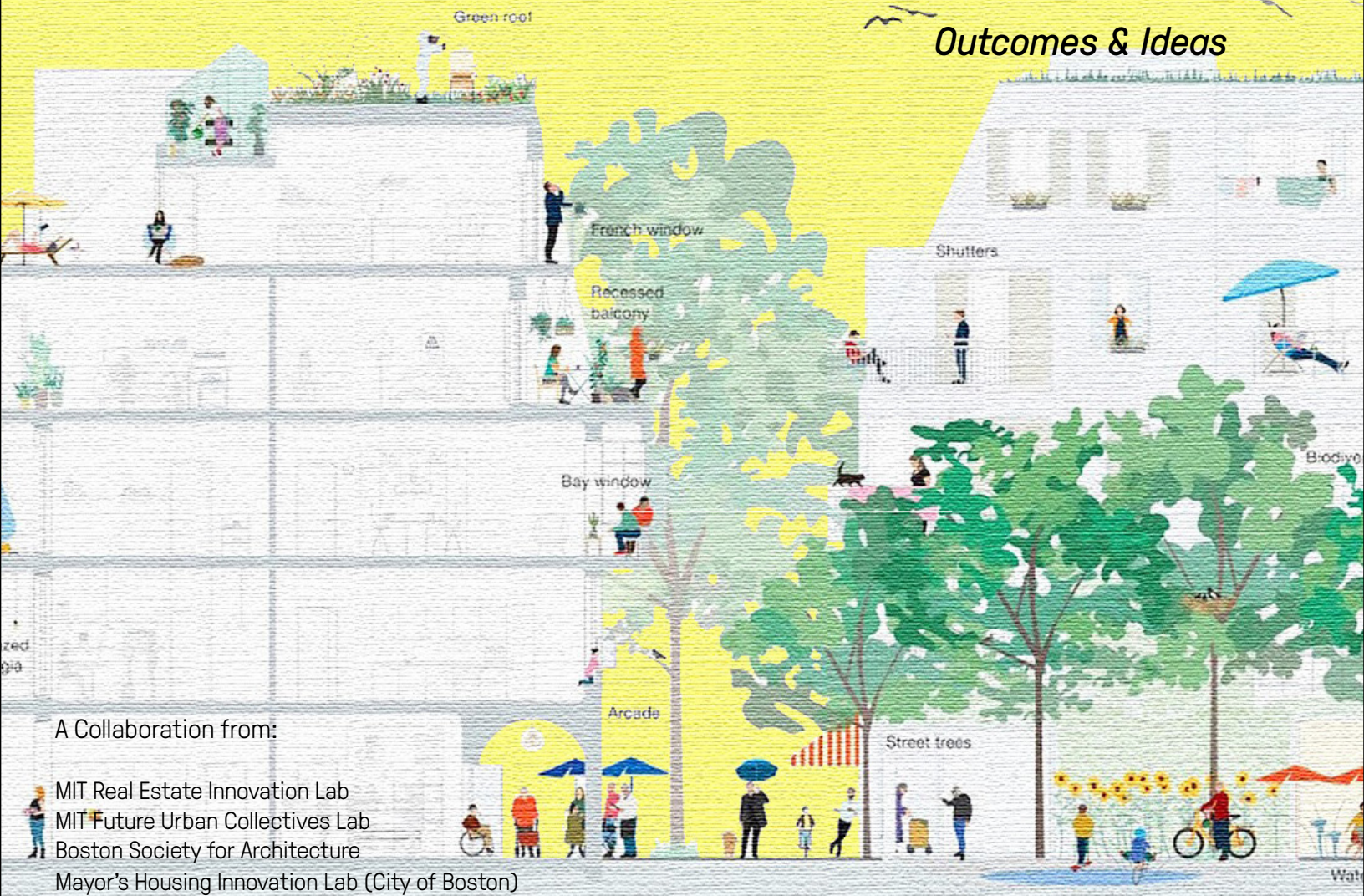


The 3rd Annual
Housing Innovation Workshop

Distributing Density

Middle-Scale Housing for Sustainable Communities

Outcomes & Ideas



A Collaboration from:

- MIT Real Estate Innovation Lab
- MIT Future Urban Collectives Lab
- Boston Society for Architecture
- Mayor's Housing Innovation Lab (City of Boston)



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A Letter from the Organizers

Dear Housing Community!

Over the last three years, a team from the City of Boston Housing Innovation Lab, the Boston Society of Architects, MIT's Future Urban Collectives Lab and MIT's Real Estate Innovation Lab has come together to workshop solutions to a significant problem in our community: housing affordability.

The past two workshops - [Developing Differently](#) and [Innovative Materials and Methods](#) - provided an opportunity for community leaders across a range of fields with interdisciplinary backgrounds to think collectively and design solutions to core issues in the affordable housing supply for our community.

This year, on July 7th and 8th, 2020, we convened over 60 dedicated participants for a two-day, virtual workshop to discuss and identify innovative solutions that can help facilitate the production of equitable, sustainable, middle-scale housing in the city of Boston. We asked the housing community all to help us craft a Request for Ideas (RFI) for our next Housing Innovation Competition, and also to attempt to respond to our central question: Can Middle Scale Housing Be Used as an Anti-Racist Strategy?

At this year's event we witnessed, once again, the importance of inter-professional collaboration that can lead to alternative solutions to the issue at hand. We listened attentively to each of the breakout groups' ideas and proposals highlighting the importance of inclusionary and innovative housing models, the role of housing as a process of community-making, the need for financial and institutional support in the creation of this form of housing, and so much more. Most of all, we appreciated the ways in which many of the participant professionals were able to openly critique and respond to the RFI presented, as well as our overall process and vision for the next Housing Innovation Competition.

Finally, we have created this outcome summary to highlight the ideas that came out of the workshop. This year's virtual adaptation and format was one that challenged us in an unprecedented way, but the results proved invaluable to our efforts.

With Warm Regards,

The Housing Innovation Workshop Organizing Committee

About the workshop:



Location:

Zoom Virtual Meeting Room



Guests:

60+



Organizations Represented:

15+

Participant Expertise:



Land Owners & Managers,

Financiers,

Brokers



Builders & Contractors,

Real Estate Developers



Community Experts,

Lawyers,

Communications & Media



Educators & Researchers,

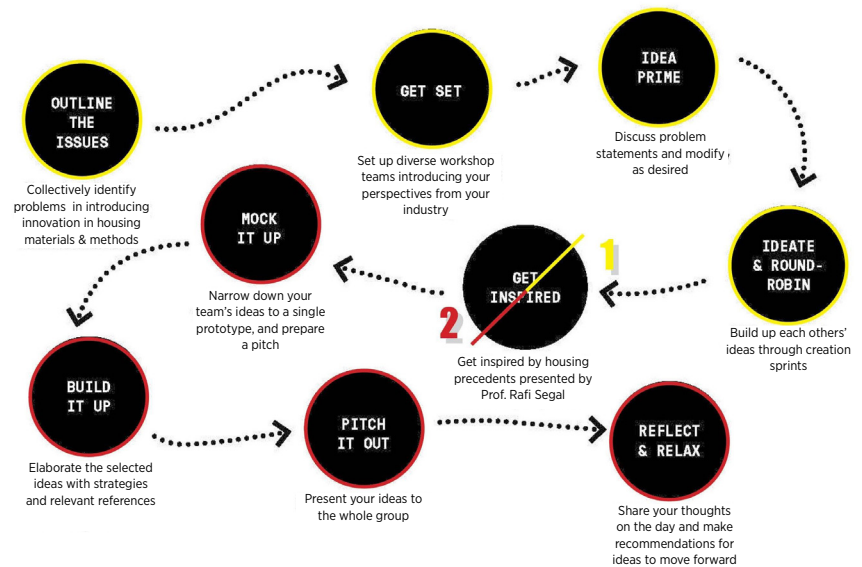
Technology Evangelists



Designers & Architects,

City Planners

Workshop Flow:



The Housing Innovation Workshop

The Housing Innovation Workshop is an annual event that brings together a variety of stakeholders to discuss, ideate, and envision new futures for housing. The goal is to create a community of innovators and practitioners through a dialogue on housing innovation, and broadcast its findings and results to the wider housing and real estate industries.

Each Workshop adheres to a set of principles to encourage inter-disciplinary and inter-organizational collaboration: being open to spontaneous connections; questioning the obvious; listening to others and volunteering your experience; and withholding judgement on new (and old!) ideas. We strive to remain mindful of social equity with respect to innovation adoption by questioning who may be benefitting, how may wealth distribution be impacted, and how jobs and communities are affected when we propose new technologies and processes.

Through an engaging and inspiring method, the workshop enables participants to invent dozens of ideas and then refine them into a handful of built-out mock-ups that are pitched to each other. The workshops create a voice for progress in housing issues, and provide a platform to draw national attention to the conversation.

The Opportunities for Innovation in Housing

Middle-scale housing, otherwise known as the *missing middle*, can be described as a range of multifamily or clustered housing types that exist between single-family detached houses and mid-to-high-rise apartment buildings that make up the fabric of our cities. This type of building stock became illegal to build in the 1940s in many of our urban centers and suburbs through racially codified policies, zoning ordinances, and institutional structures. Nevertheless, this housing stock, which in New England takes on the form of duplexes, triple deckers, townhouses and many more, can no longer be as easily built in many neighborhoods today. And yet, as the city of Boston has grown over the last few decades, so has the demand for more diverse housing options, including middle-scale housing.

For this year's Housing Innovation Workshop, we created a space where participants from relevant industries and fields came together to help highlight the current barriers to building middle-scale housing. Originally scheduled for June 10th and 11th, and postponed in support of and in light of #ShutdownAcademia #ShutdownSTEM and the broader #blacklivesmatter movement, the workshop also served as a reminder to more intentionally evaluate housing policy's role in perpetuating systemic racism and what our collective role is in dismantling this system. This period and this workshop asked us to confront systemic inequities ultimately brought to light by a global pandemic and led us to center our own efforts on what was always the underlying mission: to collectively ideate ways of creating more middle-scale affordable housing and sustainable communities in our city.

Ultimately, we asked participants to help us craft a Request for Ideas (RFI) as the first phase of an upcoming Housing Innovation Competition on how middle-scale housing types can help support the City's goal to increase affordable housing opportunities for Boston residents. The RFI draft presented hypothetical properties that are based on parcels found throughout the City in order to allow for a variety of housing options to emerge from sites that are approximate to typical infill conditions and zoning in the city of Boston. The larger group was split into seven break-out groups, where participants were guided by facilitators to achieve three key goals through an antiracist lens: 1) effectively ideate solutions for the issue at hand, 2) test respond to the RFI, and finally 3) critique and provide feedback for the RFI.

Group 1:

Zoning, Permitting, Entitlements



CHALLENGE STATEMENT:

Current zoning and permitting in Boston limits the allowance for missing middle housing. The existing regulations have not kept up with the changing housing climate and have not accounted for the necessary increase in supply. Additionally, variations from the existing zoning process introduce parochial attitudes and prolonged community processes that make it difficult for updated proposals to move forward and support the missing middle.

PRECEDENTS:



Affordable Housing Zoning

Featured: Affordable Housing Zoning Overlay Prototype, Cambridge, MA, USA



Digital Permitting

Featured: Open Systems Lab, PlanX, digitized permitting guidance and compliance system



Improving Entitlement

Featured: Examining California Land Use Entitlements (Working Review Paper), University of California, Berkeley

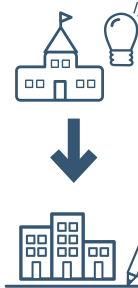
However, several key questions remain, such as:

- What level of affordability is required to qualify for the overlay?
- Deeper affordability vs breadth of affordability?
- What community benefits must be included to qualify?

OPPORTUNITY NEXT STEPS:

Overlay for Affordability:

- Create mixed-income communities through zoning solutions such as Form Based Code, No Zoning Code, Overlay for Affordability, and Increasing Threshold for Article 80.



City-led planning process: Creating Visions, Setting Priorities, and Developing Action Plans.

100%-Affordable Housing Zoning Overlay Proposal: As-of-right Permitting, Changing Density Regulation, Building Conversion to Affordable Housing, etc.

WORKSHOP OUTCOMES:

Overlay for Affordability

In order to reduce current barriers for developers looking to create affordable housing in Boston, we can create mixed-income communities through zoning solutions such as: **Form Based Code, No Zoning Code, Overlay for Affordability, and Increasing Threshold for Article 80.** Specifically, Affordable Housing Zoning Overlay provides incentives for developers to include affordable units in their projects, as well as creating new affordable units more quickly, more cost effectively, and in areas where there are fewer affordable housing options for residents. Some of the incentives include increased density bonus, increased allowable heights, lower parking requirements, streamlined permitting, etc. This approach meets the goals of improving speed of the regulatory processes, removing barriers for affordable development, encouraging/incentivizing creative solutions in the missing middle without encumbrances of zoning, and promoting projects that don't require subsidy. An overlay could maximize community benefits in addition to the creation of affordable housing.



Design + Urban Planning & Transportation

CHALLENGE STATEMENT:

Existing urban planning and design processes provide limited opportunities for public engagement, creating underutilized public spaces with little flexibility in local neighborhoods. Limited flexibility in zoning also hinders innovations in urban design and planning.

PRECEDENTS:



Accessory Dwelling Units

Featured: Elemental S.A., Half-finished Houses



Co-Living

Featured: Nesterly, Platform for intergenerational home-sharing



Co-op Community

Featured: Alpenglow CoHousing, Ridgway, Colorado, United States

WORKSHOP OUTCOMES:

Diverse and Participatory Community-making

We propose to create diverse housing typologies, accommodating multicultural and multi-generational communities and addressing a broad spectrum of needs. Empowering and encouraging residents to make decisions in planning and urban design processes will help raise the awareness of the community's existing conditions and foster interpersonal trust. Also, with improved public engagement, community cooperatives (or other voluntary groups) may take the responsibility of managing public spaces and other shared resources.

However, several key questions remain, such as:

- Is it possible to facilitate the application process for special permission to adjust single family residential housing to increase density?
- How can community cooperatives optimize the allocation of resources and services?
- What are viable innovations on the car ownership and transportation issue (ratio between parking and public space)?

OPPORTUNITY NEXT STEPS:

Diverse and Participatory Community-making:

- Create diverse housing typologies, accommodating multicultural and multi-generational communities and addressing a broad spectrum of needs.

Group 3:



CHALLENGE STATEMENT:

The triple decker used to be a primary method to build financial equity for Boston's workforce. Today, Boston's housing supply does not match resident needs: with an increasingly large student population and young workforce housing, the triple decker housing stock is increasingly occupied by collections of single people rather than families. Development is expensive and inaccessible to the low- to middle- income resident. We need to rethink how design responds to the middle-income resident population and lifestyles: How can low- to mid-scale development pencil out on paper?

WORKSHOP OUTCOMES:

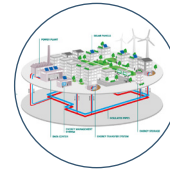
Innovative and standardized new families housing typology

What are the 21st century typologies for the middle-income, working Boston family? We propose to establish and allow a housing typology that accommodates 6-12 dwelling units within predominantly triple decker neighborhoods. It will be a new typology that can potentially double the density when two or more typical parcels are combined while conforming to a 3-story limit. We can also explore private car-share models, reduced parking ratios or "no parking minimums" to accommodate these developments within existing parcels. Inclusionary housing requirements would be incorporated into the new typology. Also, these units should employ standardized approaches to design and program that could serve to reduce cost. Investing in upfront construction technology will allow for future affordable expansion and modification of these units and a required flexible ground floor (program and design) that can be used to generate wealth for residents.

PRECEDENTS:



Triple-Decker Upgrade
Impacts on housing choice, location, and parking



District Energy
Featured: ENGIE, District heating and cooling systems



Robotic Furniture
Featured: Ori, Transformable furniture for high-density urban living

However, several key questions remain, such as:

- How can design be used to facilitate equity building?
- How can the cost of construction be brought down to a minimum through design?
- How can the neighborhood be educated on design so that they can be active participants in the design of this project? Can we utilize AR/VR and other virtual engagement modes to inform and build buy in?

OPPORTUNITY NEXT STEPS:

Innovative and standardized new families housing typology:

- Establish and allow a housing typology that accommodates 6-12 dwelling units within predominantly triple decker neighborhoods.
- Explore private car-share models to reduce parking ratio.
- Implement standardized approaches to design and program to reduce construction cost.

Group 4:



PRECEDENTS:

Regenerative Neighborhood Development

Featured: Sweet Water Foundation, Chicago, IL, USA



Innovative Research on Living Environment

Featured: Blue Zones Life Radius



Health & Climate

CHALLENGE STATEMENT:

Current housing development is structured on product delivery that capitalizes on ROI, rather than providing livable environments for housing. The process has transpired in a deeply racist system and culture, leading to various local practices of exclusion, such as institutional redlining, interpersonal racism, and Not-In-My-Backyard-ism (NIMBY-ism). The current housing standards and typology do not enable organic growth that represents economically and racially diverse communities and their ideas of beauty. Housing and communities are racially inaccessible and unaffordable, which do not welcome diversity of lives or lived experiences.

However, several key questions remain, such as:

- What are the financial values in creating valuable housing that focuses on health and climate from which metrics can be determined?
- How can the design and development process, not just the end product, be shaped by trauma-informed practices and climate forward thinking?
- How can we engage and incorporate existing and future residents into the development process to help these communities not rely on outside groups?

OPPORTUNITY NEXT STEPS:

Encouraging self-sustaining, mutually supportive community:

- Integrate local education and trade skill development.
- Incorporate multiple housing scales to support diverse needs.
- Allow for experimentation in social engagement.
- Enable informality for organic growth of some designated public spaces.

THE OPPORTUNITY:

An Innovation Opportunity Fund

We understand housing as a process of community making. The ultimate goal is to foster sustainable communities - no displacement, economic and cultural growth of the people living there, stable communities that remain for generations, and accommodations for all age groups. To address the current challenges and achieve the visions mentioned above, we see opportunities through several critical strategies: 1) integrating local education and trade skill development, 2) incorporating multiple scales of housing typologies to support diverse needs and foster mutual aids, 3) allowing for experimentation in social engagement, and 4) enabling informality for organic growth of some designated public spaces.

Group 5:

Community engagement + Resiliency



CHALLENGE STATEMENT:

There is currently a lack of representation in the RFI from community organizations and others, and it can be very challenging to actually get the involvement needed to work with the community. Sitelessness and placelessness issues make it impossible for community members to respond directly to the needs and context of specific neighborhoods. Engagement must have a place-based logic. There are also no explicit requirements for partnerships with neighborhoods, which can lead to tokenism and a lack of true inclusivity. Engagement often requires community members and organizations to provide free labor in exchange for ‘a seat at the table.’ The three goals outlined in the RFI are not the same goals defined by the community. There is also a lack of clarity about key words, terms, and definitions, which reduces the ability to hold participants and organizers accountable to certain metrics.

WORKSHOP OUTCOMES:

Identify neighborhoods, Mandate partnerships

Incentivize and compensate community participation via Cooperative Capital. True engagement will require dedicated resources and funding to build local wealth and capacity. The engagement process should build local economies and generate community health. Also, we need to identify specific neighborhoods with their own histories, challenges, and opportunities, and have the RFI solicit perspectives that are unique to each place. We should also mandate partnerships with local residents or community organizations when scoring housing competition entries. Then, we could crowd-source or develop RFI goals through solicitation and partnerships rather than providing them as a given RFI. Additionally, we should build a lexicon of terms that result in a unified understanding of definitions, which could also result in building accountability.

However, several key questions remain, such as:

- How can the RFI process play into existing neighborhood networks and local knowledge, while not burdening organizations with labor?
- How do we craft an RFI process that would embed resiliency through true participatory processes which are built on local knowledge and people-powered decision making? Activating individual and collective agency through participation means power and creates resiliency of the people and networks involved.
- How do we ensure black and minority communities, individuals & households are able to build wealth through community engagement in the development process?

PRECEDENTS:



Community Assistance to Low-income Residents

Featured: Somerville Community Corporation, Somerville, MA, USA



Local Partnership

Featured: Chinese Progressive Association, Boston, MA, USA

OPPORTUNITY NEXT STEPS:

Identify neighborhoods, Mandate partnerships:

- Identify neighborhoods with histories, challenges, and opportunities.
- Mandate partnerships with local residents or community organizations when scoring housing competition entries.
- Crowdsource or develop RFI goals through solicitation and partnerships.



PRECEDENTS:



Cross-Laminated Timber

*Featured: Mithun + Katerra,
CLT Student Housing
Prototype*



Volumetric Modular

*Featured: Kasita,
Stackable modular housing
prototype*

Constructability / Technology, Methods, and Materials

CHALLENGE STATEMENT:

The key challenge lies in lowering the cost of construction and increasing housing production through a cost and performance-based city wide RFP process where zoning relief can be provided at a neighborhood scale. There are a number of drivers of this challenge. First, traditional construction methods that lack scalability and the cost irregularities of material supply make it difficult to increase housing production, especially on small sites; this usually results in a higher soft cost. Second, complex building code, stringent zoning, and the long process of public approval slows down construction. Third, a labor force with high cost but insufficient training exacerbates small or medium-scale housing development. Lastly, site staging on tight urban sites often proves challenging.

WORKSHOP OUTCOMES:

Diverse and Participatory Community-making

We focused on potential strategies to deliver cost-efficient construction methods, such as developing new innovative construction methods and categorizing viable and replicable housing prototype models. However, to ensure successful implementation of these ideas requires more than minor efforts from the private sector. Gaining the involvement of the city is critical. For example, the city could set clear affordability targets and provide a working framework for individual developers on innovative construction processes (such as modular design with prefabricated materials), new materials (such as CLT), and zoning relief. This approach may also encourage companies to establish long-term collaboration with the city. In addition, the city - along with unions - may also coordinate out-sourced training programs for low-skill labors, hence improving the construction efficiency for small- and medium-scale developments.

However, several key questions remain, such as:

- How can we achieve viable private public partnerships that engage non-profit neighborhood groups?
- Can the city provide subsidy to modular or prefabrication companies who are willing to contribute to mid-housing development?
- What are new parking solutions to limited street parking, without compromising project affordability?

OPPORTUNITY NEXT STEPS:

Cost-efficient construction with the involvement of the city:

- Set clear affordability targets and provide a working framework for individual developers on innovative construction processes.
- Encourage long-term collaboration with companies with good credit on innovative, affordable construction.
- Coordinate out-sourced training programs for low-skill labors.

Group 7:



Innovative Financial & Development Model

CHALLENGE STATEMENT:

The team highlighted the inequitable banking system behind traditional real estate financing, which has been widening the financial gap. The team aims to encourage development that builds an alternative model of financing, design, ownership, and management. How can the City dispose of land and lease to people who have not benefited from the traditional system of real estate financing?

However, several key questions remain, such as:

- How do we create a project that is financially feasible (broad range of incomes) and controlled by current residents of the neighborhood?
- How can we engage the city to be willing to support residents - technically and financially - to bid, plan, finance, and manage the new housing?
- How do we balance the competing interests of wealth creation and long-term stability and low cost of housing?

WORKSHOP OUTCOMES:

Alternative financial models with the city's involvement

We proposed to consider alternative models of financing, ownership, and management. The city could explore the impact of different supports such as financial guarantee, tax incentives, and attracting local investment, for middle-scale housing development. Other possibilities include ideas such as crowdsourced investment with public guarantee. Furthermore, it is important to consider viable strategies for tenant empowerment through ownership and incorporate explicit anti-racist lens to the selection criteria when draft a future RFI.

OPPORTUNITY NEXT STEPS:

Alternative financial models with the city's involvement:

- Explore additional supports from the public sector, such as financial guarantee and other tax incentives.
- Explore land leasing for public land and crowdsourced investment with public guarantee.

PRECEDENTS:

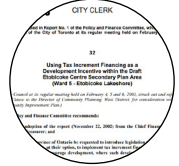
Co-Ownership & Co-Operative Development

Featured: Nightingale Housing 1.0; 20 Apartments in Brunswick, Melbourne



Tax Increment Financing with Public Guarantee

Featured: Tax Increment Financing as a Development Incentive within the Draft Etobicoke Centre Secondary Plan Area



Crowd-Funding

Featured: Fundrise, Online syndicated real estate investment platform.



Anti-racist Housing Strategies

When presented with the question Can middle scale housing be used as an anti-racist strategy?, participants were being asked and challenged to engage in a reflective activity. These conversations can be challenging, but are important to align with the values of the Boston and Cambridge communities. This was done in part to contextualize the conversation to the present moment, but also to contextualize it to the history of middle-scale housing in the city of Boston. This workshop served as an opportunity to more directly engage with the history, state, realities and nature of housing in our community. This conversation and ideas suggested to us that it is indeed possible to generate innovative ideas that attempt to push back on exclusionary policies. Moreover, to articulate practices that have for many years materialized as barriers to the creation of multifamily housing that we need today. The following list illustrates the many strategies that participants proposed at this year's workshop, based on the different group themed conversations:



1. **Diverse Housing Models.** We must promote racially mixed and mixed-income communities by creating diverse housing typologies to accommodate multicultural and multigenerational groups.



2. **Public Engagement.** To further improve public engagement, community cooperatives should be incentivised to take the responsibility of managing public spaces and other shared resources. This could be done with innovative financial and development models, such as land leasing for public land and crowdsourced investment with public guarantee, philanthropic funds, tax incentives, and more.



3. **Antiracist Financing** Policies. Anti-racist housing financing policies need to be explicitly denounced. Whether explicit through legacy red-lining practices or through financial institution modeling bias. People of color systemically face lower access to mortgage capital and higher financing rates. This is often blamed on correlative socio-economic factors or active predatory behavior on behalf of banks to coerce populations into home ownership that is not viable.



4. **Cooperative Models.** Educational programs on cooperative financing models for housing and home ownership structures must be supported and must begin at the community level. This would help to create financing structures and potentially lead to the development of community banking institutions.

Reflections:

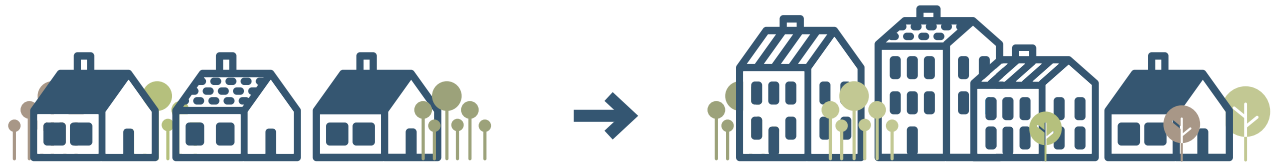
While we could not have foreseen the events that unfolded this year, we recognize that amidst the many challenges, there were also reminders of the need to continue to host the Housing Innovation Workshop. In previous years, we saw the need for a space where individuals could gather and form a housing community centered around innovation, and we knew to continue working towards facilitating such encounters. When it became evident that large gatherings would no longer be a possibility as to prevent the spread of COVID-19 we made the decision to hold the workshop virtually and later on, in postponing the event, we knew to not ignore the realities of this time and the history of racial inequity in this country. These choices led us to more carefully craft the goals we had initially set for ourselves late last year.

Hearing from the participants about their own professional and personal experiences in regards to middle-scale housing framed the conversation in a way we could not have imagined, one that drove the workshop in a direction towards proactive change. Many of the strategies proposed include suggestions on the need for cost-efficient construction methods, the need for collaborative financial models, the introduction of diverse and well designed housing typologies, to name but a few.

A few days after the workshop, we received feedback from workshop participants and facilitators on their experiences, which are and will continue to be incredibly helpful to help us envision the future of this recurring event. Some critiques addressed the limitation of our method in asking participants to respond to the RFI in addition to the remainder workshop goals, the ways in which racism is difficult for folks to name and integrate in proposed solutions for housing, the need to include more community practitioners in the community development field in these spaces, and so much more. Moving forward we aim to better incorporate this feedback to improve the quality of this environment for future workshops.

In terms of our next steps, we will continue to work towards a more equitable process for the next Housing Innovation Competition, taking into account the incredible strategies and critiques provided to us by this year's participants.

We would like to extend our deepest gratitude to all who embarked on this journey with us and for actively participating in a different rendition of the Housing Innovation Workshop.



What's Next

1. RFI - Housing Innovation Competition

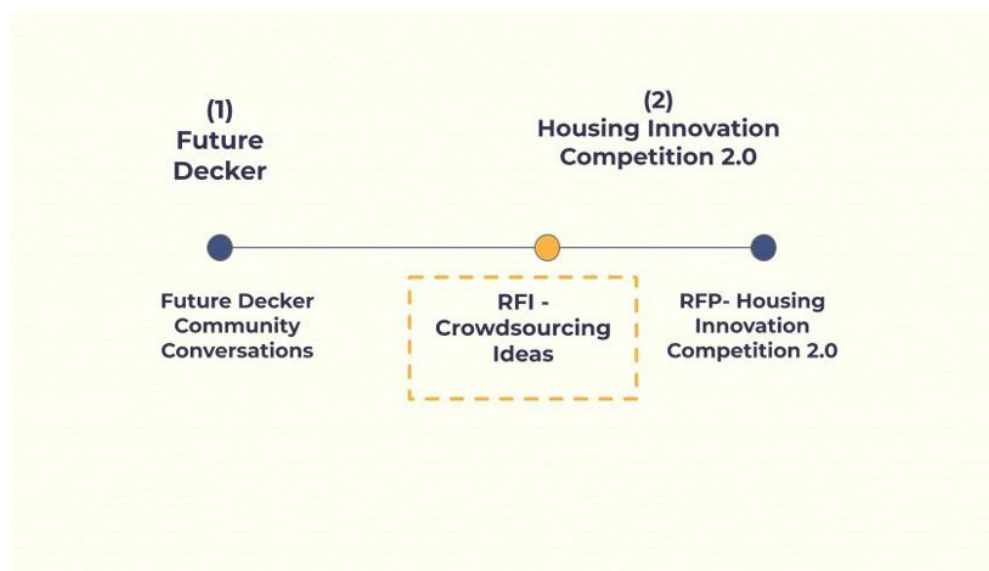
In the next few months, the Boston Society for Architecture and the Mayor's Housing Innovation Lab will announce the first phase of the next Housing Innovation Competition by releasing the Request for Ideas (RFI). Both the MIT's Future Urban Collectives and Real Estate Innovation Lab will continue to support this effort.

2. Upcoming Exhibition

This fall, the BSA website will host the [Future Decker Exhibition](#). The exhibition is part of an ongoing exploration and documentation of the ways in which existing triple deckers have shaped the city of Boston, while inviting residents to envision the future of this iconic New England vernacular building typology.

3. Future Housing Innovation Workshop

The introduction of a virtual workshop provided us with the perspective on how to continue to improve the workshop experience for the participants, as well as the hosts. For future workshops, we hope to combine the best qualities of both our in person and virtual workshops to create an even better experience for all.



2020 HOUSING INNOVATION WORKSHOP | JULY 7 - 8

Distributing Density

Middle-Scale Housing for Sustainable Communities

THANK YOU!



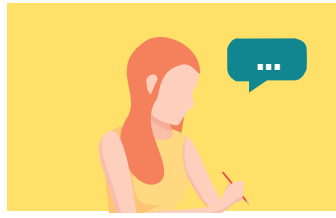
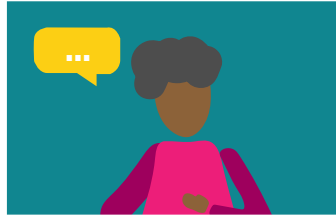
THE MAYOR'S OFFICE OF
**NEW URBAN
MECHANICS**

THE MAYOR'S
**HOUSING
INNOVATION
LAB**

BSA **MIT**

FUTURE
URBAN
COLLEC
TIVES

MIT
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French window

Recessed balcony

Bay window

Arcade

Street trees

Shutters

Biodiversity

Balconies

Water features

Connecting to nature

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