As New York City rental prices rise, creating and preserving affordable housing is critical to keeping New Yorkers in their neighborhoods. To help match more eligible New Yorkers with vacant subsidized units that fit their needs, the New York City Department of Housing Preservation and Development (NYC HPD) partnered with ideas42’s NYC Behavioral Design Team (NYC BDT). The NYC BDT provided a set of prototypes for the redesign of HPD’s online portal for housing applications and recommendations for integrating an income calculation guide into the portal to help people find the right match for them faster.

Summary

Increasing rents and costs of living in the City’s five boroughs are contributing to a growing housing crisis, pricing New Yorkers out of their homes and out of their neighborhoods. The City of New York is committed to preserving and expanding affordable housing to meet its residents’ current and future housing demands and support the rich diversity of its neighborhoods.

HPD is the City agency tasked with promoting the quality and affordability of the city’s housing, which involves financing and regulating affordable units in private developments, and helping low-and-moderate-income families find and apply for these units through a process that is fair, open, and accessible. HPD creates a wide range of income-restricted, rent-stabilized apartments for New York City households, varying in size, price, and location. To place low- to moderate-income households in these units, HPD relies on an online portal known as “NYC Housing Connect.” Every year, well over a million New Yorkers browse and apply for income-restricted units through the portal. Further, a network of “Housing Ambassadors,” trained staff in community-based organizations throughout the five boroughs, work with households one-on-one and through educational events to help them navigate the portal and apply for housing opportunities.

Despite these efforts, many people have found the application process complicated and, at times, confusing. In the City’s original version of the NYC Housing Connect website, launched in 2013, people may have submitted dozens of applications online, only to learn that their income didn’t fall in the qualifying range; or, due to the tens of thousands of applications submitted for each development, they may never have heard back. In addition, applicants often rejected a housing opportunity they applied for because it didn’t ultimately meet their basic needs, like number of bedrooms or public-transit distance to work. Helping people better identify housing units they are eligible for—and that meet their needs—would correct this mismatch and secure housing for more people faster. Facilitating better matching between tenants and income-restricted units also means units are filled faster and valuable affordable housing wouldn’t sit vacant for long.
NYC BDT partnered with HPD to make recommendations for how to more efficiently match eligible New Yorkers with these vacant income-restricted units. We used a behavioral lens to adapt an income calculation guide for online use and recommended key redesign concepts for the new NYC Housing Connect online portal, which launched in Summer 2020 with the goal of improving how New Yorkers apply and are approved for affordable housing opportunities—helping more people find the right homes for them.

Barriers to finding the right unit

To dig deeper into how we might increase the number of households successfully placed in affordable units, our team went through the application ourselves; held in-depth one-on-one interviews with New Yorkers who applied, often multiple times, to units on the original Housing Connect website; and sat with Housing Ambassadors to review their process for submitting applications.

Through this process, we uncovered several behavioral barriers that applicants face when applying for income-restricted units on the original NYC Housing Connect website. First, the housing application process requires households to accurately calculate their annualized income, and that income must fit the income requirements of the unit. Many low- and moderate-income New Yorkers work shift jobs, pick up extra hours, and often juggle multiple jobs, so annualized income is very hard to calculate. The hassles associated with accurately calculating income, a complex and multi-step process, cause applicants to lose motivation, abandon the task, or—more commonly—take shortcuts and “guestimate” their income. If these shortcuts result in inaccuracy, it’s likely the application will be rejected. In addition, households tend to be overconfident in their ability to estimate their income and do not seek the guidance of a Housing Ambassador when submitting this portion of the application.

Relatedly, some units with more bedrooms or in more affluent neighborhoods have a minimum income requirement above what many applicants earn annually. Some applicants may overestimate what they will be earning by the time they are selected for a unit, due to optimism bias. They are confident that their future self will be making enough income to afford a more expensive, income-restricted unit. Adjusting their income upwards disqualifies their application if they do not actually meet the required minimum income.

Finally, the choice architecture of the original website, meaning the order in which units are presented and how their attributes are described, caused households to apply for units that didn’t meet their needs. When an applicant logged into the original website, they were presented with a long list of units, with the most recent listings first. Affected by primacy bias, many households applied to the first few options listed, rather than taking the time to consider the features of the apartment like location, price, distance to public transit, and number of bedrooms. If they were matched with a unit that didn’t meet their needs, applicants then rejected the option, after being approved. At the same time, they may also have missed other units for which they would have qualified and that they would have accepted.
Redesigning the portal

In order to solve for these behavioral barriers, the NYC BDT came up with a set of design recommendations that are reflected in the new 2020 Housing Connect portal. First, we recommended that HPD adapt a step-by-step income calculation guide to sit within the online portal, to reduce the gap between income calculation and the application process and to improve the accuracy of each application. The existing income guide already used a few behavioral levers to encourage applicants to complete the guide, which will be translated into the online version. There is step-by-step guidance through a set of checklists that make the process easier and *endow progress*, providing a sense of advancement toward a goal to increase motivation to complete that goal, as the applicant moves along. Graphics help clarify each step. Plain language *reduces the ambiguity* of technical terms and jargon. Finally, illustrative examples from real people with whom applicants can *identify* both clarify terms and make the document more relatable. HPD’s existing Applicant Income Guide, depicted in the visuals below, is the basis for a dynamic web version that was integrated into the new Housing Connect portal’s 2020 launch.

**Applicant Income Guide**

*Step-by-step overview*

**STEPS TO CALCULATE INCOME:**

1. **Identify all of your sources of income.**
   - Income from *employment* (p.4)
   - Income from *self-employment* (p.5)
   - Income from *other sources* (p.7)

2. **Convert wages into yearly totals.***
   - Hourly wages from an employer *before* taxes and other deductions are taken out
   - *Gross Income* on a pay stub (paid weekly, every two weeks, etc.)

*Money earned from self-employment should be calculated as *NET Income*, which is the amount *after* business and other expenses are taken out.

3. **Add income from all sources together to get your total annual income.**

There are different ways you might receive income.

Some examples:
- A paycheck every 2 weeks
- Tips in cash at each shift
- Any kind of weekly or monthly payment, such as child support, pension, or unemployment benefits
- Holiday bonus every year

**Income might be called different things.**

Some examples:
- Salary
- Wages
- Earnings
- Payments

All of this money is *income*. You will need to include it on your affordable housing application. If you go to an *appointment to confirm your eligibility* for affordable housing, you will need to bring documents to confirm your income.
Second, the NYC BDT recommended that HPD redesign the choice architecture of the portal to encourage households to apply for units that would better meet their needs. We recommended that, prior to viewing a list of units, applicants be prompted to complete a short questionnaire indicating their housing preferences. Questions would capture preferences like location and number of bedrooms and then ask applicants to rank these preferences in order of importance. From there, we recommended the portal present a filtered list based on the results of the questionnaire, to better align applicants with units that meet the needs of their household. The visual below demonstrates one of the questions from the housing preference questionnaire in the NYC Housing Connect portal’s 2020 launch.

**Housing preference questionnaire in the Housing Connect portal’s 2020 launch**

If you are only willing to be considered for re-rental/resale units of specific sizes, locations, accessibility, and/or pet policies, make those choices below. This will limit the types of units for which you may be randomly picked to apply.

We encourage you to keep your options open, and only make specific choices below if necessary.

What size re-rental or resale units are you interested in?

Sometimes, people qualify for more than one size unit. This depends on your income and the number of people in your household. Leave empty if you are interested in any size units.

<table>
<thead>
<tr>
<th>Any size that match my income and household size</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Studio</td>
</tr>
<tr>
<td>□ 1 Bedroom</td>
</tr>
<tr>
<td>□ 2 Bedroom</td>
</tr>
<tr>
<td>□ 3 Bedroom</td>
</tr>
<tr>
<td>□ 4 Bedroom</td>
</tr>
<tr>
<td>□ 5 Bedroom</td>
</tr>
<tr>
<td>□ 6+ Bedroom</td>
</tr>
</tbody>
</table>

**Identifiable example: Helping define an independent contractor**

What is an independent contractor?

An *independent contractor* is someone other people hire to do a certain kind of job when needed. Usually the contractor and the person hiring them have an agreement or contract.

Example: Nicole the Painter

Nicole is a painter and works as an *independent contractor*. She has all of her own paintbrushes, ladders, and other supplies, and people hire her to paint their apartments. Before she begins a painting project for anyone, they agree on how much money she will be paid per hour and sign an agreement. When Nicole is finished painting, she tells the person how many hours she worked, and the person writes her a check or gives her cash.
To further draw applicants’ attention to their choices, a few additional behavioral levers were included in the filtered list. These included highlighting the top three or four listings to emphasize that the first few are “recommended” for the applicant and listing the attributes of the units first by borough, neighborhood, and any ranked preferences of the applicant to reduce the complexity of comparing listings across features that matter to people.

Even before launching the new NYC Housing Connect portal in 2020, HPD revised the search page on its general website to include the short questionnaire and personalized filter for its listings. In addition, HPD’s programming team added a mapping feature that makes listings searchable in a map interface for households that are particularly interested in location over other attributes. The visual below demonstrates some of these features.

Income-restricted listings questionnaire

Takeaway

As a result of this partnership, low- and moderate-income income families can more easily apply for and be placed in affordable housing opportunities throughout New York City, reducing the time spent applying for units for which they don’t qualify, accelerating the filling of vacant units and, more importantly, creating stable housing for the tens of thousands of families who experience housing instability. Other cities can learn from and adapt HPD’s model for connecting households with opportunities, and the behavioral approach to adapting an online income calculation guide, applicant questionnaire, and search page for people seeking affordable housing. This is one of many examples where applying behavioral design to government programs and services helps maximize their impact, save administrative and staff resources, and improve the lives of residents.