

*Cracking the  
Affordable Housing  
Crisis in Kansas  
City*

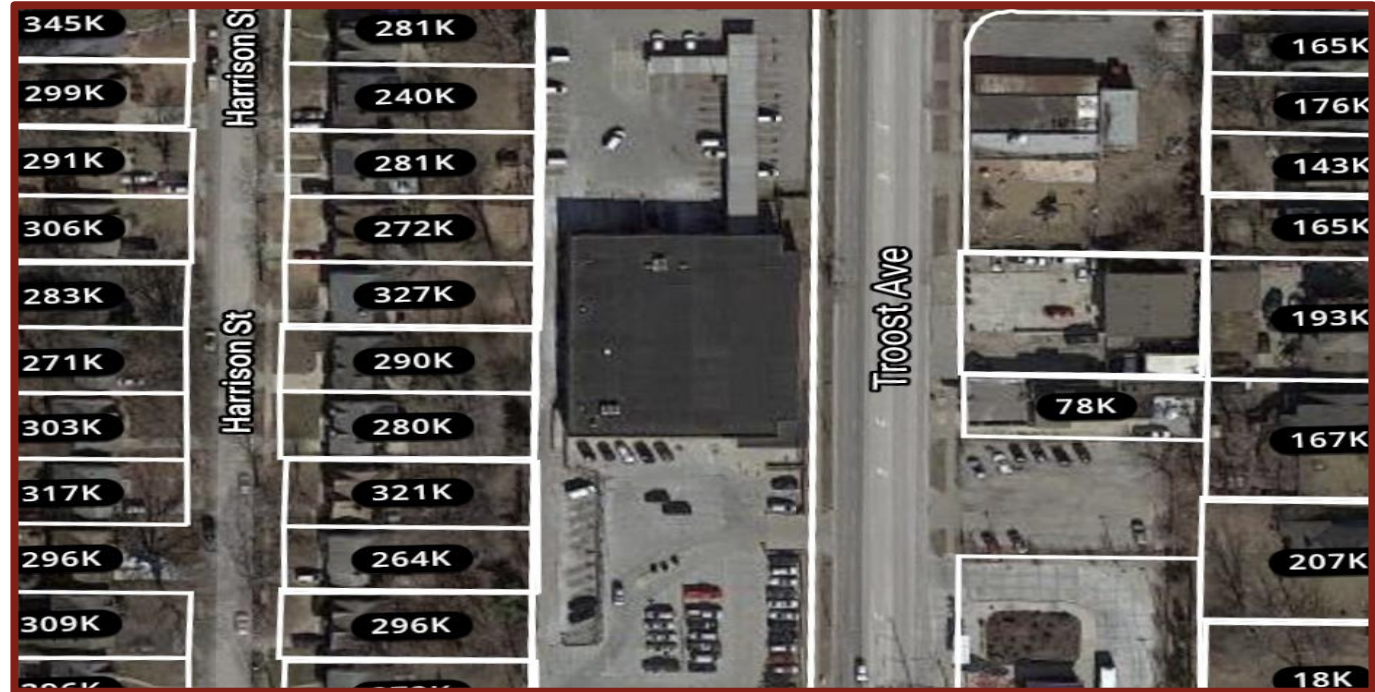
Presented by *Dynamic  
Design & Development:*  
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# *Introducing the problem*

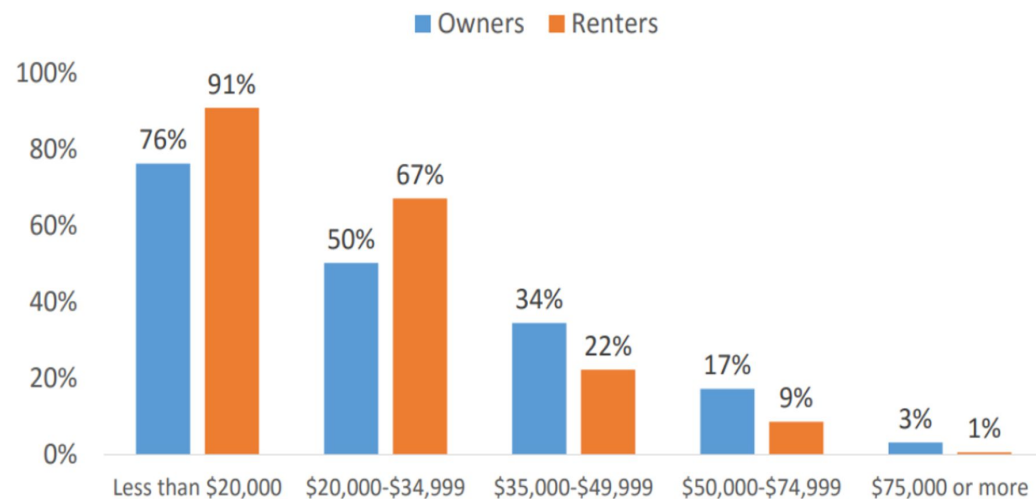
## Short Term Housing Plans and Complex Zoning Created a Housing Crisis in Kansas City

- Overly Expensive Housing
- The Troost Line
- Vacant Plots
- Zoning Issues
- People using most of their salary on demanding housing



# KCMO Affordable Housing Struggles

Percentage of Households that are Cost-Burdened (>30% of income on housing) by Income Groups



## Energy Cost Burden in KCMO



Among 48 metropolitan areas, KCMO is ranked 7<sup>th</sup> highest for energy spending as a proportion of household income ("energy burden"), with 4.5% of income being spent on energy costs



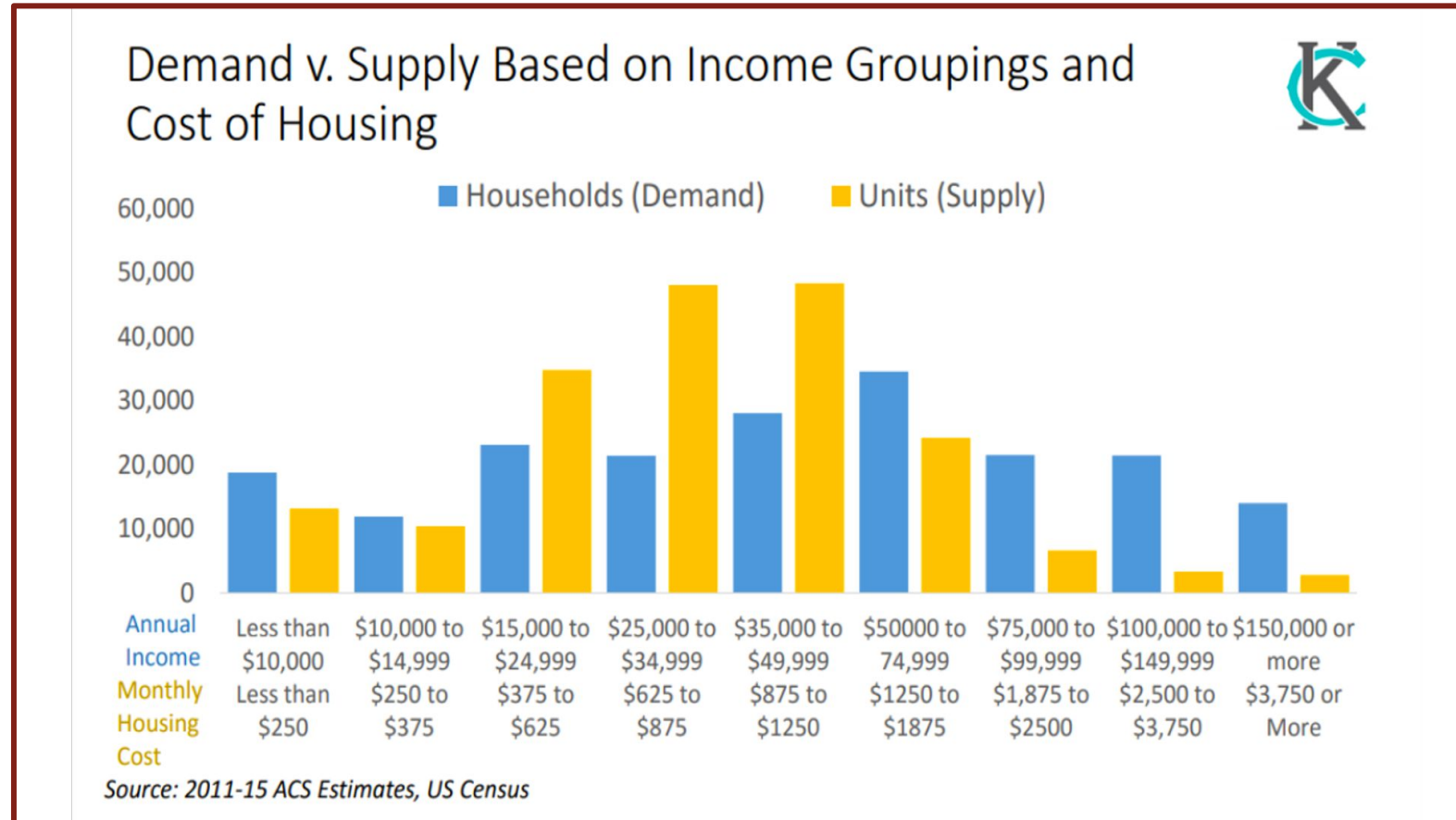
For renter households, KCMO ranks 6<sup>th</sup> highest, with an energy burden of 6.1% of income



For low-income households, KCMO ranks 9<sup>th</sup> highest, with an energy burden of 8.5% of income

Source: *Cracking the High Energy Burden in America's Largest Cities*, ACEEE, April 2018

# Affordable Housing (Supply Vs. Demand)





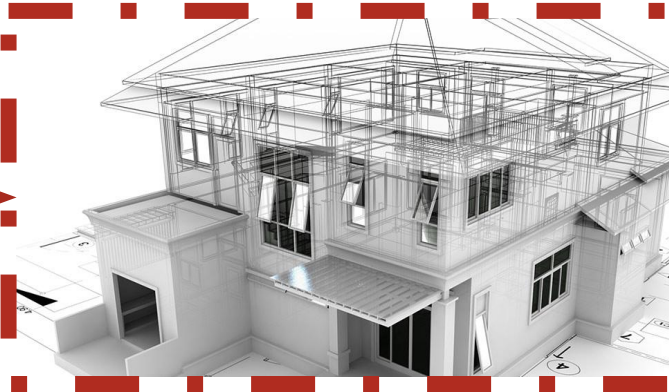
[Currently the design, development, and construction industry is too **fragmented.**]

We want to bring the industry together so we can create **consistency, repetition, and stability** to make everything more **affordable and better** for everyone and the economy.

# *Dynamic Design & Development*



**Finance**



**Design**



**Prefab**



**Construction**



**Housing**

## Financing

- Five way even **Capitol Stack**
- Using **grants** to fund, making rent prices **extremely affordable**

## Opening the Business

- After gaining initial **investments**, we would open a warehouse space to develop our **unique prefab** designs and panels.
- We would be able to **employ residents** of **KCMO** to build the panels and let expert Architect-Developers begin their design process

## Advertising to Clients

- Outreach to **low-income** potential clients to fill out a **Resident Profile Document**
- Design and Develop Housing on a **Unique "By-Need"** Basis.
- Giving Clients **Exactly** what they **need**
- **Saving** on Manufacturing **Cost**

### Reinstitute Funding

- ☐ Supplement Income with Investors
- ☐ Funds Generating From Rent



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- ### Expand!
- ☐ Utilize Funding to Reach Wider KC Metro Area
  - ☐ Open Multiple Offices Nationwide

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- ### Manufacturing & Construction
- ☐ Tight-Envelope, Replicable Panel Design
  - ☐ Streamlined In-House Manufacturing

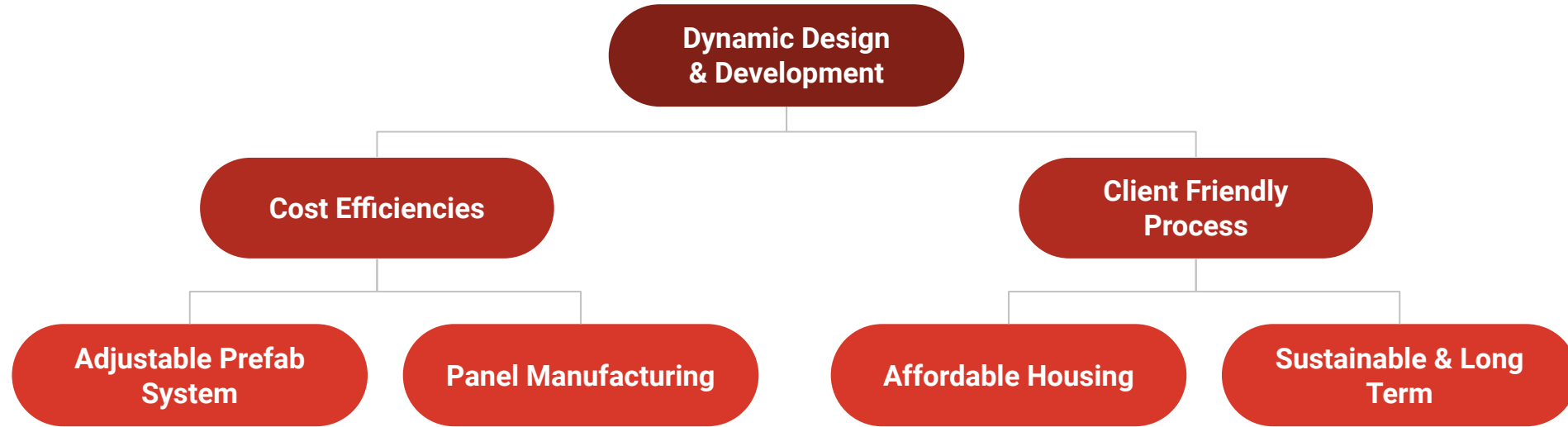


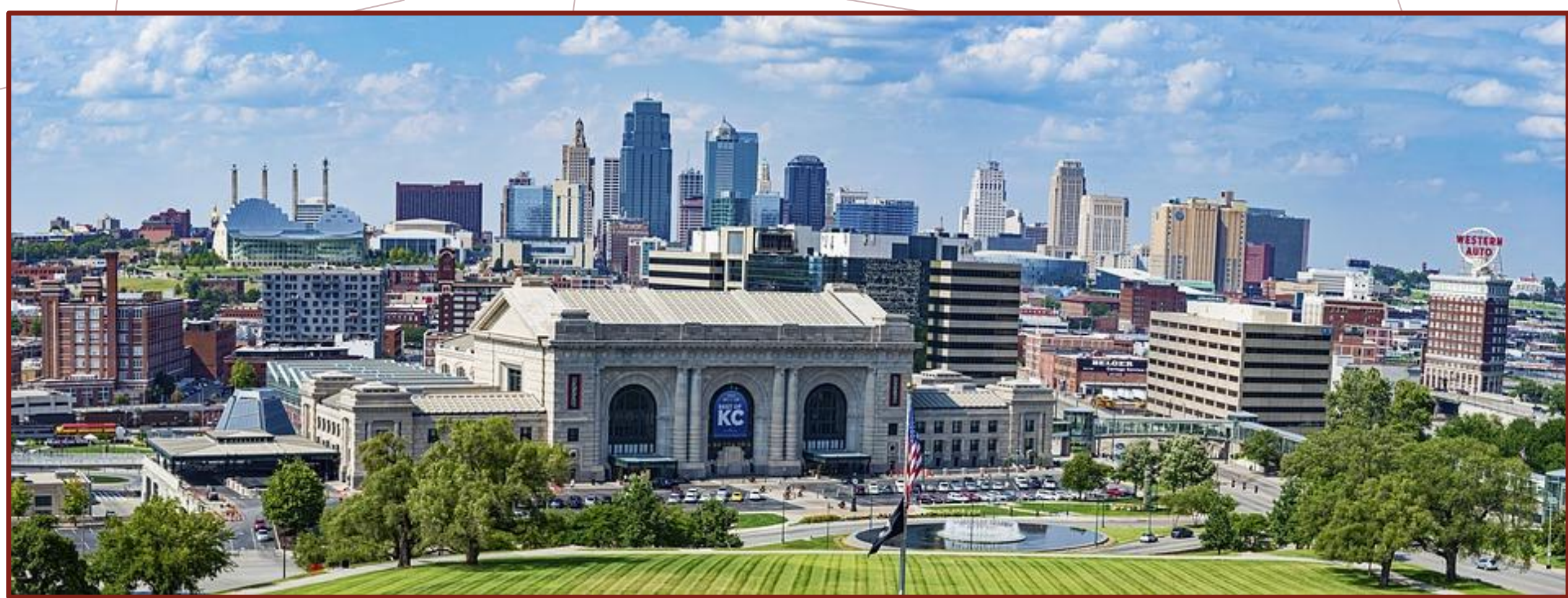


# *What we ask from you*

- An initial \$600,000 to start building our first 15 affordable, sustainable, and dynamic houses
- The typical seed fees for 15 houses in KCMO would cost around 1.53 mil for stick built houses
- We have reduced the cost of constructing 15 houses by an overall 61% price reduction

# As a Final Analysis...





*Thank You  
Entrepreneurship KC*

# *Works Cited -*

- [Architect-developers on the rise](#)
- [Our Story](#)
- [OpenHome Prefab Houses by KieranTimberlake, Lake|Flato, and Bensonwood](#)
- [Water Reuse Technology](#)
- [How Does Solar Work?](#)
- [The Different Types Of Wind Energy](#)

# *Extra Links -*

- [Independent Document Research](#) -
- “Independent Document Research” has more information for the audience to view if desired

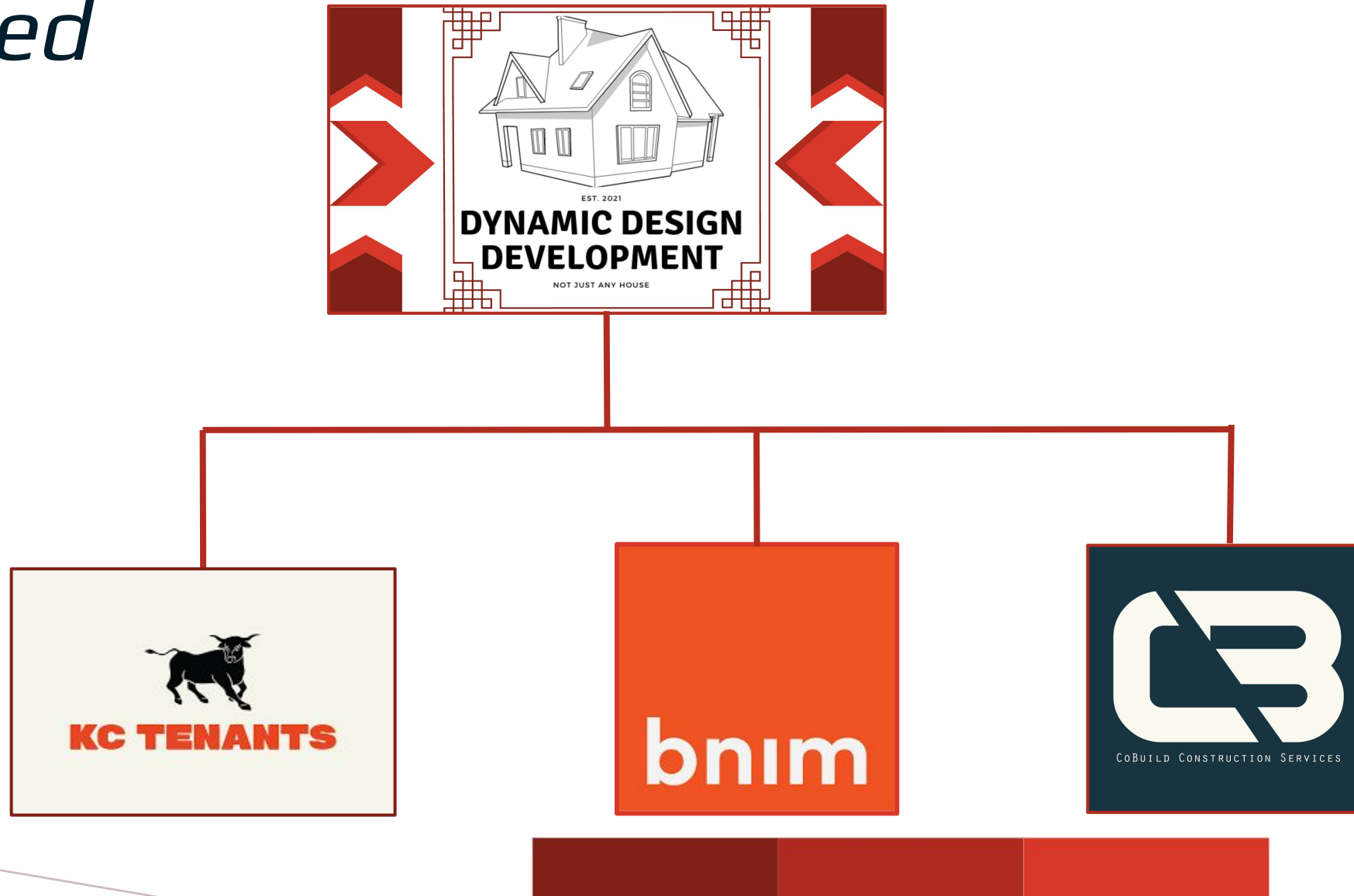
# *Questions and Answers*



# *Info slide: Implementation of The Client (BNIM)*

If approval for our project is gained we have done company outreach and secured 15 interested renters (KC Tenants), a partnership with a manufacturing and construction company (CoBuild), and agreed on consultancy with an expert Architect in the affordable housing development world (Jack Rees with z2zero). These partnerships in conjunction with the crucial involvement of BNIM as a design entity would enable us to engage in an affordable housing development project that would act as a proof of concept for the Vertical Integration, 'By-Need' Design Process, and Prefab Construction discussed in our pitch working together cohesively with a collaborative project mission. After this collaboration occurs as Interns we could oversee discussion of these entities perhaps engaging in a business model that is similar to the one proposed in our pitch. This is a way we believe we could realistically implement a tangible solve to Kansas City's Affordable Housing Crisis

# Implementation of The Client (BNIM): Visualized



# *Info slide: Background/Problem*

Many of our fellow citizens at or below Kansas City's median family income of \$43,000 (for a family of four) are paying much more than the Department of Housing and Urban Development's recommended amount of 30% of their income on housing costs. These Kansas citizens are faced with a shortage of more than 8,000 units. In addition, most residents with very low income (\$26,000 for a family of four), spend 50% of their income on housing. Faced with a shortage of 16,000 units at this level, these families must stretch what is left of their budget to cover transportation, food and basic necessities — so we can see why housing insecurity is exponentially making our low-income neighbors outraged.



# *Info slide: Financing*

The in depth capital stack breakdown is an even 20% combination defined as equity, nonprofit donation, private investment, renter funding, and independent saving/fundraising. We will effectively advertise and pitch to all separated funding avenues on the basis of good faith and promised reimbursement once our business is off the ground and returning a profit margin. The major crux of this financing plan's overall success is our ability to sell the idea to our desired funders. We are choosing this plan because it has a track record of success with other affordable housing projects in KCMO. This plan creates a collaborative attitude with the community which we hope to improve from the fundamental inception of the company. This is created by including the renters, who we would eventually house, in the initial funding of the business, we are allowing them to choose our solution instead of forcing ourselves upon the community and telling them what they need. This client lead attitude towards affordable housing development is something that is maintained throughout the later stages of the business model. On top of this the inclusion of nonprofit investment helps to keep our bottom line costs down and enables us to provide better quality housing for a lower rent in the future. This funding plan combines independent monetary investment in our business, a client lead funding attitude and cost conscious considerations to cleanly and efficiently fund our business.



# *Info Slide: Opening the Business*

Our Funding plan would be utilized for two main purposes, one being, opening a commercial property that would act as our firm office and manufacturing warehouse. The second being, covering the seed cost to get our first 15 affordable houses developed and built within KCMO. As far as the first purpose goes the commercial property would be delineated into two major spaces, the design studio intended for Architect-Developers, and the manufacturing warehouse that will be specialized for the creation of the custom engineered prefab panels that the Architects would utilize to design all of our housing units. Having Architect-Developers instead of two separate employees for the two roles creates control over the development process and helps eliminate some of the animosity that can be found between the two professions in the industry. This also acts as a cost consideration by reducing the overhead fees that would normally be seen as a part of the traditional housing bill. This commercial property would be our business headquarters and would act as the foundation of the business and it's expansion.



# *Info Slide: Advertising*

Next our plan leads to a unique feature of our business model, basing our development and design process on a “By-Need Basis” instead a “Speculative Basis”. Speculative Design has had a stranglehold on the Architectural and Design Industries for far too long. Speculative design is essentially the principle of doing potential client research and creating residential or commercial developments based on this perceived ‘Universal Client Model’ before having any committed clients. This has been particularly prevalent in residential -Suburbia- type neighborhoods and had been spearheaded by Developers because of the attractive profit inflations attached to the business practice. Speculative Design is an arrogant process that breeds cost inefficiencies, miscommunications between the designer and the consumer, and a lack of guaranteed return on any potential housing projects. ‘By-Need Design’ While slightly less profitable, nullifies all of the previously mentioned problems in the context of Affordable Housing Development in KCMO. By-Need Design involves the designers getting to know the housing requirements, wants, financial constraints, and needs of every client so they can develop the best housing for their clients. By-Need Design is more common on corporate commercial and/or high-income housing development projects because of its time requirements and nuanced design challenges.

# *Info Slide: Advertising continued...*

By-Need Design has been shunned in an affordable housing context because of its perceived incompatibility with the current fragmentation of Finance, Construction, Design, Development, and Housing Industries. In our innovative restructured business plan, By-Need Design works to create an avenue for us to develop housing both within the Architectural style of the community and to the unique needs of the community. By tailoring our designs to each individual client, the community feels collaborated with instead of controlled maintaining the business as a client friendly overall model. Our specific process goes as follows; We will engage in community outreach in an attempt to gain client applicants. The applicants will fill out two streamlined secure info sheets; the first asks for generic personal details such as name, age, date of birth, current address (if applicable), and billing information. This first sheet assigns the client applicants an eight digit randomly generated client id number (i.e. Client #1557-3420). This number would then be written on the second form by the client where they indicate their housing needs and preferences. This info includes desired Architectural Style, number of beds and baths needed, max rent that can be afforded without cost burdening occurring, yearly gross financial income, employment, and if they are interested in potential employment in our manufacturing warehouse. This process will gain us clients to collaborate with on our mission to develop affordable housing.



# *Info Slide: Manufacturing & Construction*

We want to develop factories that will produce tech integrated prefab panels. With the tech integrated prefabs we will be reusing water and will have hidden solar panels, that way we can have renewable energy without ruining the appearance of the exterior and interior of the house We will hire residents of KCMO and have them fill out a residential profiler. By hiring residents they are able to have another source of income. When our panels are manufactured we will keep them in a separate warehouse where they are to be ordered and shipped. Since we are using a client based approach, we will not have any extra unnecessary parts. By doing so we will have spent less time on the construction site cutting and measuring, therefore decreasing costs of labor on site. The tech integrated prefab panels after being manufactured and sold, are then sent to the construction site where the workers will use them to build the house, because we're using the prefab method to build our affordable houses we would make building the homes much faster than if we were to do all the construction on site using a stick built method. Construction will be more efficient as well since we are using prefab. Usually a stick built house built from the ground up takes 9-12 months to build whilst a house built with prefab only take 3-4 months to build. Prefab is 10-25% cheaper than building a traditional stick built house, and by doing so we are able to make more tech integrated prefab paneled houses than if we were to try and build each house from the ground up.

# *Info Slide: Reinstating Funding*

Once we have taken a sample size of clients through the entire housing process and are successfully housing them in clean, affordable, and sustainable renting units, we will utilize the profit generating from those avenue streams and re-approach securing funding from private investors to jumpstart the growth of our business. The rent profit will be utilized to sustain the day-to-day operations of the business, and grow a diverse savings portfolio for the future of the business as a whole. This timeline would occur over the first year of our businesses development. At this point we plan on having anywhere from 100-250 Housing Units fully developed and operating. This increased revenue and built up savings portfolio would allow us to move into the next stage of our funding reinstatement. The next stage would be contacting our initial investors to gain an investment boost that would be incentivised by our consistent success that would then serve to launch our business development nationally.



# *Info Slide: Expand!*

Launching our business nationally would involve opening more commercial office and manufacturing warehouse properties in key cities whose housing crisis is similar to Kansas City's situation. We would then begin the arduous process of tweaking and adjusting aspects of our business plan and housing design in order to tailor our solution to the more nuanced and unique problems of each subsequent city we open in. After this point our company as a whole would become self-sustainable and serve the struggling communities of America to provide long-term affordable housing solutions for as long as they are needed.

