Track 11 – Housing, gentrification and socio-spatial dynamics

ICD - An Alternative Affordable Housing Initiative

Nidhi Nautiyal
Ph D Student

School of Architecture and Planning,
Creative Arts Industries,
University of Auckland, New Zealand
nnau001@aucklanduni.ac.nz

Supervisor
Dr Andrew Barrie

Abstract
Affordable housing is a key issue in major urban centers of New Zealand with homeownership rates declining particularly in Auckland. Lack of tenure options is creating gaps in the housing continuum. This paper discusses a people-centered approach that addresses affordability by placing users at the center of housing decisions. An Intergenerational Community Development model or ICD is a specific term coined in this research that redefines affordability as per buyers' financial capacity. ICD comprises three essential components. The *organizational* component of cross-sector collaboration ensures optimum utilization of resources, risk minimization through shared responsibilities and funds through ingenious solutions like cross-subsidization. The *financial* component offers alternative procurement models (APM) as income-compatible tenures for households. The *physical* element offers a variety of architecturally-designed multifamily typologies. A multi-case methodology qualitatively examines 16 UK and US ICDs. The findings reveal ICDs can provide effective affordable housing alternatives if well-executed by the consortium. Also, architects effectively contribute through high-quality sustainable design and a tenure-blind strategy to address affordability. In conclusion, a strong collaboration with clear agendas, robust understanding of APMs and early engagement with architects are essential for ICDs' success. The key, however, lies in user engagement and community consultation during early decision-making processes.

Keywords: Affordable housing, Collaborative housing models, Alternative procurement models, People-centered approach to housing.

1. Introduction

Auckland continues to face an unprecedented demand for housing in recent years (NZPC, 2012; Auckland Plan 2012; PWC, 2018) . Significant growth of 8.5% in the last years coupled with high rates of immigration has resulted in an increase in housing demand, escalation of rental prices and declining rates of homeownership (Council, Auckland profile, 2014, p. 2). "Affordability pressures are particularly evident in Auckland, reflecting the city's high house prices" (NZPC Summary version, 2012, p.4). With a sharp increase in housing demand but limited pathways to homeownership, a lack of choice in tenure options further exacerbates low rates of homeownership. Intermediate renters[1] , in particular, find current pathways to homeownership restrictive in nature. A growing number of intermediate families are unable to transition into homeownership (NZPC Final report, 2012; Goodyear & Fabian, 2014). Such perpetual restrictions in mobility may be due to costs, location or a limited variety of available housing models (Flint-Hartle & Stangl, 2014).

Some suggestions for a long-term approach to developing affordable housing in New Zealand include access to land at below market price through varying degrees of subsidization, and developing financial ingenuity to sustain projects (HSAG, 2015; AC, Nov 2018). Other recommendations to rectify negative housing trends include changes in existing fiscal policies and the addition of new supporting ones (Preston, 2013, p. 59).

Nevertheless, most proposals seem to disregard the buyer's capacity to purchase property *at the time of purchase* and are positioned from the supply end that expects income to match the available housing stock and not vice versa. As such, income-compatible options for interested households are currently missing from the Auckland housing market.

Some of the less explored options for households unable to meet the standard bank lending criteria for homeownership in Auckland are non-conventional tenures also known as shared equity products or alternative procurement models (APM). International research indicates APMs hold the possibility of expanding choices for intermediate renters (Pinnegar et al. AC, Nov 2018). However, researchers caution, the complex nature of APM contracts and its' associated risks, must be first fully examined (Monk and Whitehead, 2010) to avoid "misjudged probabilities" by buyers (Belsky 2013).

APMs or hybrid tenures are either are state-sponsored, offered through a third sector such as housing agents in the UK and Community Land Trust in the US or, utilize a collaboration of stakeholders. Some studies indicate such cross-sector partnerships for housing can mitigate risks associated with experimental housing and offer possible affordable housing solutions. The pathway of public-private partnerships in housing promises opportunities to experiment with housing typologies and leverage public funds against private dollars and create sustainable communities through effective placemaking (Carter & Roberts, 2000; Watts et al., 2000; Bohl, C. C.,2007; Austin 2013). However, when compared to overseas examples of partnership-based housing "good quality affordable housing" largely remains under-serviced and unexplored in New Zealand (Austin, 2013 p.75).

This paper focusses on the above mentioned affordable housing initiatives that take into consideration the income capacity of a buyer at the time of property purchase. Thus, *collaborative endeavours* that utilize *APM as hybrid tenures* to create affordable *multifamily housing* solutions by engaging users in the decision-making processes are termed, Intergenerational Community developments or ICDS by this research. ICD, a three-component multifamily residential model promotes intergenerational mix and adds tenure options to expand housing choices. The main purpose of this paper, therefore, is to examine,

[1] The intermediate housing market is a subset of the households who struggle to afford housing. It is defined as working households in the private rental market who are ineligible for social housing but could not buy a lower quartile home without paying more than 30 per cent of their income to service a mortgage. Auckland Council (2018, p. 4): *Affordable housing in Auckland*.

how do ICD processes create affordable alternatives? And, how can Auckland learn from such a people-centered approach to housing?

However, to understand such processes it is vital to discuss the concept of *choice* in housing and examine what the term *affordable* means from the perspective of a buyer. This paper primarily focusses on opportunities of homeownership through affordable tenures. It first establishes a case of missing choices in tenures and models from the Auckland housing market by analyzing several housing market studies. Later, it utilizes Kings' theory of effective choice in housing (2003) as a theoretical framework to establish the significance of 'information' and 'access' to alternatives as necessary means to empower end users so that they may choose effectively.

A qualitative methodology compares 16 cases of affordable housing from the US and the UK to understand the dynamics between the ICD components and ascertain the legitimacy of the proposed alternative. Later, a summary of findings discusses appropriate options that may be suitable for Auckland.

2. The Auckland housing market – tenure, household structure & models

Key trends

A demographic study of Auckland indicates substantial growth in population in the last two decades with shrinking household sizes and a greater number of families with children in need of affordable housing. Between 2011 and 2016, Auckland's population increased by 154,700 (+10.6%). The growth rate doubled from 1.2 to 2.8% (Auckland Growth Monitor, 2017, p. 8).

Housing affordability is far worse in Auckland when compared to other major urban centers (Johnson et al, 2018). The median price of Auckland houses rose by 65% in the last 5 years and over 90% in the last decade (p.16) and "Between 2012 and 2017 population estimated growth outstripped estimated housing stock growth by 2.1%" (p. 16-20).

Similarly, demographical studies observe noticeable shifts in homeownership patterns, changes in household structures, and interest in previously less preferred housing models in the last couple of decades (Goodyear & Fabian, 2014, p. 18-45).

Rents were also found to be highest in Auckland with a majority of households from low-income group. Thus, 83.7% of the total (35%) Auckland renters found concentrated in the open market may have no option except to pay the market rent (Statistics NZ 2014, p15). The homeownership rate in New Zealand decreased to 64.80 % in 2013 from 66.9% percent in 2006 (Census, 2013) and renting was up 18.5% during the same period (Goodyear & Fabian, 2014, p. 45). In addition to an overall drop in homeownership, the largest falls were observed for working adults in 30s and 40s, possibly comprising households with children. However, tenure preferences in Auckland indicate a stronger interest in homeownership in comparison to renting.

As per a focus group survey from Auckland and Wellington, 58.4% indicated a strong desire for homeownership and only 2% indicated renting as a preferred choice. Also, around 50% of the renters stated insufficient deposits as the primary reason for renting and 43% of indicated renting as a negative experience (Flint-Hartle, Stangl, 2014, p 7-12). Thus, insufficient deposit' appears as the number one obstacle when it comes to property purchase. 'Perceived difficulty of servicing mortgage repayments based on current income levels', was cited as a second barrier in advancing towards homeownership (p 4).

It emerges, it is not just initial 'setting foot' into the property market that poses a challenge for potential homeowners but a long-term financial commitment in the form of a heavy mortgage thereafter, that also causes sufficient uneasiness among house buyers.

Polarized preferences indicate low-income households concentrated in the private rental market and high-income households have a preference for but unable to acquire homeownership. The scenario confirms challenges faced by households to negotiate the widening gap between the two tenures. Thus, with a clear desire to advance into homeownership but an inability of households to do so, suggests, inflexibility in current pathways to homeownership limiting choices for households.

Besides the above limitations, Auckland is also witnessing a significant shrink in the average family size and changing the household composition. An overall trend witnessed in the household structure indicates a reduction in the average household size with a rapid increase in one-person households as well as couple-only households. A projected family distribution by Statistics NZ 2017 suggests the number of couples without children is projected to increase by 64% in a 25-year period between 2013 to 2038 in Auckland. The average household size is projected to further decline from 2.6 to 2.4 people per household between 2006 and 2038. However, multi-story private joined dwellings have increased 3% between 2006 and 2013 suggesting new trends of larger or extended families residing together. Thus, not only is the traditional definition of a family comprising two adults and two children being replaced by smaller households, a demand for a more complex set up of family units and greater multigenerational living maybe on the rise (Goodyear & Fabian, 2014, p. 34-67).

The above-mentioned changes in family typology are significant and must be catered for in designs of future dwellings. Thus, a need to experiment with housing typologies to match changing household structures is apparent.

Trends in preferences for housing stock also reveal interesting findings. Standalone houses remain the highest consented dwelling type as per latest building consents issued in Auckland suggesting, increasing housing unaffordability has had no impact in the popularity of this land consuming- high priced model. According to the Auckland Monthly Housing Update (Building consents), “46% of new dwellings consented in January 2019 were houses, 30% were apartments and 25% were townhouses, flats, units, retirement units, or other types of attached dwellings” (March 2019). However, another parallel trend indicates a sharp increase in the number of consents lodged (and presumably being built) for apartments This trend with high rise apartments continues to be on a steady rise but primarily restricted to the CBD and popular with one-member households, such as students (Apartment Dwellers, 2006 Census).

Thus, there seem fewer incentive for private developers to invest in similar multifamily dwellings in residential zones other than CBD for some reason. Multi-family residential dwellings with common amenities remains an underexplored housing typology in Auckland (Flint-Hartle, Stangl, 2014). Therefore, the lack of alternative family housing models may also explain the polarity in preference towards standalone dwellings. In addition, minimal experiments with collaborative housing also reduce the possibility of experimenting with newer housing models that may offer suitable alternatives for families.

Interestingly, a recent study on housing preferences reveals households’ willingness to consider the apartment typology in a non-preferred location, if the apartment models are well-designed, spacious, affordable and well connected. Thus, households are prepared to consider “something other than detached housing”, such as apartments, other than the first preference of standalone dwellings when faced with financial constraints (p.4). However, in spite of such willingness to consider an alternative model the demand for apartments by families, even in well-connected CBD, remained fairly low in the survey, at “just over 1%”, further suggesting the inadequacy of either space or amenities in CBD apartments (Yeoman & Akehurst, 2015, p.12).

Thus, not only are current tenure options a clean split between renting and the conventional bank mortgages but changing household structures and preferences also need newer models to address housing needs. Till alternative options are available for both, from a buyer’s perspective, a choice may be deemed missing from the current Auckland housing market.

How can choice make housing affordable for households? What are the essential components of housing choices that may enable and not encumber households?

The next segment discusses the concept of choice from the perspective of households and what flexibility to choose entails.

3. Theorizing affordable – the role of 'choice'

Housing choice seems essential for consumers to be able to make suitable housing decisions around tenure, model, location and affordability. For choice to remain legitimate, information and access to resources must be supplied by the stakeholders as essential parameters, such that households can make informed decisions out of the free will. "Choice is an illusion unless there is an actual capability to take decisions" (Brown & King, 2005, p. 73).

King (2003) defines housing choice in the context of "autonomy, liberty, and responsibility", as the ability to choose or "select from alternatives". The choice must allow consumers, "make a preference and thus distinguish between entities", even if, "the alternative is an either/or between two less than perfect solutions" (p. 36). Further adds, choices carry inherent connotations of duty, accountability, and liability by the customer when exercising the preferred option.

Lusk (1997) expresses choice as a bilateral agreement between consumers and suppliers, suggesting, "Suppliers also have a choice over the sector of the marketplace at which they aim and exercise this choice by price and specification". However, cautions, neither party must dominate the transaction and disrupt the flow, failing which, it may cease to be a "sustainable pattern of exchange" and automatically result in the loss of choice (p. 70).

An understanding of choice offered by King (2003) and Lusk (1997) seems applicable to missing alternatives of homeownership from the Auckland housing market. As per King's argument, a lack of choice can be viewed as restricted access to homeownership and, based on Lusk's' advocacy for fairness in supply and demand, one may deem the current equation in the Auckland housing market as a disbalanced equation and therefore likely unsustainable in the long term.

Thus, based on the market findings and the theory of choice, the research conjectures missing alternatives in the current homeownership pathways in Auckland. However, the limiting nature of the current pathways disguises opportunities for experimenting with alternative models and multifamily typologies. The missing elements when put together create a distinct possibility of introducing an alternative homeownership pathway to the market.

Termed as, **Intergenerational Community Developments** or **ICD**, a specifically coined term for the research, such alternatives can be described as a collaborative initiative for affordable housing with a three-element intersection. The elements comprise an organizational, financial and physical element in the form of a multi-sector organization that offers alternative procurement models for multifamily housing.

Figure 1 ICD – A proposed affordable housing alternative
Source: Author

Thus, this paper further examines multiple overseas cases to uncover the dynamics between the core elements of an ICD to better understanding of people-centered housing that involves user feedback for solutions.

4. A Note on methodology

The study draws from 16 selected ICDs with diversity in the type of collaboration, size, and nature of development and variety of housing models. Examining multiple cases in different locations allows for an understanding of the unique set of conditions and the processes behind the formation and operation of ICDs. Multiple case study allows researchers to explore differences within, between and across cases with an aim of either literal replication – predict similar results across cases or theoretical replication – to allow contradictory findings to generate theory (Yin, 2003). Similarly, Eckstein argues, multiple case studies are likely to be more effective in confirming hypothesis rather than generating one as they assist in theory testing especially where a minimal value is attached to a conventional theory, such as, in the initial query stages of the researcher, 1975). Also, as per Flyvbjerg, a few selected cases provide deeper insights behind causes and their consequences and establish validity (2006, p. 229).

The study considers several cases to the point of 'redundancy' (Lincoln Y & Guba E, 1985, p. 210). Once repetition between case credentials begins to emerge, no more cases are added to the selection. Upon reaching the point of saturation (Yin,1994) or point of diminishing return (Glaser and Strauss ,1967) the study finalizes a range of ICDs. The final 16 cases are located all across the city from CBD, abandoned inner city location to large suburban sites. Thus, 4 basic categories emerged based on the location and co-relation with the nature of the development, namely,

- urban infill - small inner-city developments on vacant plot
- estate regeneration - demolition, re modification, addition to existing housing
- suburban developments - new city fringe or suburban projects
- neighbourhood renewal - large scale greenfield transit-oriented developments

The decision to assimilate cases from a design perspective emerges from the fact, even though, the organizational element of a collaboration initiates the processes and the financial component propels major decisions, it is the physical element of housing that actualizes the core intention behind any ICD intervention. Thus, from an architectural perspective, a thorough understanding of an ICD may occur only as a consequence of un-layering the design strategies. Thus, it seemed appropriate to create categories that appear to further an architects' understanding of an ICD. The discussion on findings in this paper is, however, theme-based and generic in nature.

Data collection includes documentary analysis of established housing projects completed in the last 10 years and endorsed by institutes such as the National Housing Institute,USA, Urban Land Institute, USA, U.S. Department of Housing and Urban Development, Community Housing Institute, UK as well as winners of the National Housing Awards, UK, and winners of affordable housing projects of the Royal Institute of British Architects.

5. Discussion on findings

The findings are arranged in three distinct themes corresponding to the core elements of an ICD.

I. Key findings: Collaborative endeavour

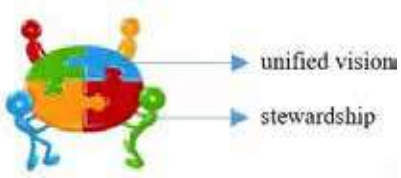

Figure 2 ICD Element 1– Collaborative endeavour
Source: Author

The fundamental step towards creating any ICD originate from the entrepreneurial initiatives of the main housing provider who forms a consortium with other stakeholders. An overall values-based vision then acts as a necessary binding factor. The findings reveal 56% of the initiatives originate from either the state or local councils and 38% of the cases are led by a third sector agent. However, the main purpose of a unified vision is to be able to develop a clear understanding of others' motivations, strengths, limitations, and resources to ascertain the precise nature of housing assistance it may best offer to end users.

The collaboration agenda may range from providing affordable below-market housing for workforce families, creating affordable mixed-income housing for intergenerational living, creating good quality energy-efficient buildings or, in bigger projects, envision complete regeneration of neighbourhoods through housing and infrastructure development.

Also, a unified vision allows clarity to set up early processes of end-user involvement to determine the exact profile, income background and eligibility criteria of prospective households. Such clarity in processes further establishes the necessity of 'stewardship' required to build financial dexterity of households, especially in the low-income category. 'Stewardship' or 'placemaking' refers to guardianship roles that require a housing agent to provide financial mentoring to householders prior to and post-purchase. In 88% of the ICDs, the main housing agent executes extended stewardship roles spanning from pre-sale agreements to active tenancy management and resale.

Most public and third sector housing agents also readily seem to fulfill this obligation owing to their inherent motivation to provide affordable housing to low-income families. The findings reveal 50% of initiatives from public sector agents and 44% from the third sector. The stewardship roles may spread through the entire duration of the property purchasing cycle or may be limited to a single phase.

There also appears a connection between the extent and duration of stewardship with the type of procurement models. However, no direct correlation appears between the sector background of the agent and the duration of stewardship. Also, a likelihood of financial stewardship seems almost unavoidable in ICDs offering 100% affordable homeownership.

II. Key findings: Tenure choices

Figure 3 ICD Element 2 – Tenure choices
Source: Author

- **A holistic view of the housing continuum**

ICDs seem to allow stakeholders the opportunity to serve several segments of the housing continuum through a single intervention by offering multiple APMs simultaneously. Inclusion of a variety of income-compatible tenure options offers choice to the households thereby increasing financial flexibility. A "flexible approach" as per the householders' requirements of "space, standards, and affordability" within the housing continuum ensures suitable allotment of housing, instead of a random distribution of resources (Thorns, 1989, p. 256). "A successful housing system provides shelter for all while facilitating people moving up the continuum to improve their own socio-economic well-being, which can also contribute improving the socio-economic well-being of an entire nation" (IHA, 2017, P. 1)

- **Balancing agendas**

However, offering the above-mentioned choices, in turn, requires stakeholders to experiment with ingenious strategies for financial autonomy. One such consequence of similar strategies that directly affect the end users is affordability clauses of the APM that preserve long term affordability for future families and offer opportunities of asset accumulation through equity building.
Striving for a balance in opportunities of wealth creation and affordability rather than independently offering opportunities for either one, remains the most challenging aspect of alternative models (Jacobus, 2007). Whereas the Shared equity homeownership (SEHO) models from the US are primarily rooted in preserving affordability their UK counterparts shared ownership (SO) and shared equity (SE) allow relatively quick access to homeownership.

- **Opportunities of homeownership**

Opportunities for homeownership and asset building correspond to the percentage of dwellings available for homeownership through APMs, excluding all rental stock.
The findings confirm ICDs offer a diverse range of asset building opportunities for homeowners through alternative tenures irrespective of the size of the development. The affordable homeownership component in the tenure mix fluctuates from 3% to 100%. Also, 4 types of APM are widely utilized for expanding homeownership opportunities in ICDs in combination with other tenures such as social rental, affordable rental, and open market sales, in varying combination. The options include CLT and below market rate homeownership from the US, and shared ownership (SO) and shared equity (SE) from the UK.

33% of ICDs in the US utilize the CLT model and 83% use below market rate homeownership for key workers. Also, affordable housing projects seem to have much wider access to dedicated funding in the US. To safeguard inbuilt community subsidies, long term deed restrictions ranging between 20-55 years may be enforced every time the property renews owner.

In the UK, 90% of cases utilize SO as an effective alternative pathway for homeownership and 20% of the total ICDs utilize the SE as an alternative for mid-income households. SO promises gradual transitioning into homeownership by initially allowing a certain percentage of ownership corresponding to the financial ability of the homeowner. The remaining portion is purchased gradually from housing

agent in affordable 'blocks', with the value of the block based on the current market price of the property. Such a staircasing mechanism undoubtedly introduces initial flexibility but can impose a challenge for households to match continuous escalation in share values usually proportionate to increasing house prices. Similarly, the concept of SE involves a primary mortgage and a silent second mortgage with the housing agent on the reduced portion of the house price. SE poses a tougher lending criterion and a higher expectation from the homeowner to keep up with their financial commitment, a fact that may explain fewer households qualifying for the loan. Nevertheless, with realistic financial goals set by households and financial education both options promise ownership opportunity for households from low-high income ranges.

III) Key findings: Housing outcomes

Figure 4 ICD Element 3 – Housing outcomes
Source: Author

a. Architect's role

Thus, user involvement in early decision-making processes significantly assists an architect in achieving the right balance between economies of scale, optimum resource utilization and quality of housing for which the designers must adopt a broader approach of 'community development with housing provisions' in ICDs.

ICD processes eventually rely on design to translate the original intent of the housing agent. The architectural contribution encapsulates the vision of the stakeholders, expectations of the community and spatial requirement of the residents. However, architects must be involved early in the project. Findings reveal, in 75% of the cases, the architects were employed during planning continue to be part of the collaboration till the construction stage.

Earlier inclusion seems to offer two benefits. Firstly, entrepreneurial roles of an architect requiring engagements with the planning authorities have a direct time and costs savings for stakeholders. Efficiently prepared planning applications directly lower costs for the users and/ or establish long-term affordability for the housing providers. Also, architects working in the pre-design planning stage can reduce recurrent costs for affordable housing developers by locking-in long term savings through energy efficient strategies.

Secondly, facilitation roles of architects allow community agenda to become an intrinsic part of the design process from the start. Architects engage users in fundamental decision making in such a bottom-end approach to housing. User engagement again proves beneficial directly in two ways. Firstly, 'prior approval' by the client shortens lengthy planning application processes thereby saving development time and costs (by avoiding reapplication and hearing) and speeds up construction processes. Secondly, end-user engagement and information gathering during interactions in workshops, open days and community consultation events result in continuous refinement of design from an early stage. The decisions may comprise neighborhood regeneration through holistic planning, transit-oriented housing development, site-specific master planning, energy efficient dwelling design and; most importantly, an income-neutral design approach.

b. Specific features of ICDs

- **Transit-oriented development- TOD**

It is noted, 56% of the ICDs are TODs irrespective of the size of the development.

All cases occur either near an existing rail corridor or adopt efficient commuting strategies for an effective linkup with the existing facilities. Therefore, proximity to existing public infrastructure seems one of the fundamental decisive factors for initial master planning that may directly impact vehicular traffic & car parking decisions. Transport plans also act as vital pre-design parameter dictating site planning, massing and open space distribution of the housing development. Well-catered transport provisions also allow the developer to apply for minimal onsite parking in the planning application and in some cases declare the development completely car-free. Overall, councils often seem to review a proposal's 'travel plans' to ensure feasibility studies have been carried out by the developers to cater to a pedestrian-friendly development and access to public transport.

- **Street frontage & corner treatment**

'Boundaryless' design features as a site response seem essential in community housing developments such as ICDs to allow the neighbouring resident to interact with the new development. Interactive corner features and deliberate setbacks to accommodate street furniture facilitate interaction. However, the degree of interaction can be controlled to safeguard privacy for the residents through design. Street furniture such as seating, landscaped trees, and bicycle racks can balance dual agendas of interaction and intrusion by adding a unique threshold treatment at the street level and offering privacy to the ground floor residents at the same time.

- **Pedestrian ways & open spaces**

Site planning in ICDs seems to lay a lot of emphasis on pedestrian-friendly design. Nearly 88% of the cases show preference to pedestrians and cyclists over vehicular traffic and cater to features such as landscaped courts, seating, planters, child-friendly play areas and small parks along with the pedestrian ways. Pedestrian pathways in multifamily residential dwellings encourage resident participation and promoting safety through neighbourhood watch.

Similarly, landscaping appears integral to overall design unification. It fosters interaction through carefully planned break out spaces. However, privacy and crime prevention must be balanced through effective landscaping. Too much foliage around open spaces can reduce visibility and hinder vigilance of common spaces. Clear visual access also seems essential for effective adult supervision of children playing outside.

ICDs also seem to offer a variety of open spaces including 75% providing large open greens, 56% incorporating smaller pocket parks ,56% catering to children's playground, 44% offering a communal vegetable garden for the residents and 1 case with an open amphitheatre topographically aligned to the natural slope. Large single open spaces also minimize maintenance work for the management.

However common challenges of a single open space with overlapping functions remain to segregate intergenerational requirements. Therefore, outdoor environments for multi-generational residents may benefit from a hierarchy of open spaces. A combination of open areas can offer privacy with smaller 'quiet zones' for elderly use and large playgrounds for the younger residents.

- **Shared facilities**

Nearly 63% of the developments offer a community center to its residents for social gathering. Interestingly, 34% of the cases such spaces double up as an indoor child play area or a creche. The provision of shared facilities with regular housing in ICDs lends it the 'plus more' factor, in contrast to, only dwellings offered by regular multi-residential developments. The communal facilities act as a

binding factor to facilitate resident interaction. Some designs encourage intergenerational mix between seniors and children by deliberately placing provisions for the elderly next to a childcare center.

Smaller ICDs with a limited area incorporate either a shared vegetable garden, a small green with some seating or a communal room. Larger ICDs offer a more diverse range of facilities to its residents. Overall, ICDs with a greater market sales component may provide more indoor facilities such as a leisure center and those with a larger affordable component tend to offer shared outdoor spaces. Exceptional cases include a swimming pool, fitness center and an amphitheater.

- **Multiple typologies in the same development**

ICDs seem to offer multiple choices in housing typologies for families. Overall, 63% of the ICDs offer mixed typology catering to multiple sizes and tenures, 31% offer only high rise apartments.

The housing choice ranges from single storey standalone dwellings, detached townhouses, semi-attached duplexes and triplexes, double storey flats and row housing to condominiums with shared areas in multi-story apartments and high-rise apartment blocks.

- **'Tenure blind' design**

One of the characteristic features of ICD lies in tenure-neutral design. 81% offer full tenure blind design, 13% offer partial tenure blind and 6% deliberately offer tenure specific typologies.

One of the main objectives of an ICD designer remains to adopt an income-neutral architectural vocabulary to conceal the tenancy background of the residents. This visual architectural homogeneity referred to as a 'tenure blind' approach aims at effectively blurring the financial status of the homeowners behind a uniform external treatment. Thus, multifamily residential living can offer a new approach to reduce stigmatization through 'type' in housing.

It appears, even though an in-depth knowledge of APMs may not be essential for architects of mixed-income housing, familiarising oneself with the financial background of prospective end users helps to develop a greater understanding of their housing aspirations that ultimately enhances the design quality.

Summing up ICDs

Overall findings reveal, 63% of cases reflect extensive people's participation from the planning phase. It appears, user involvement as a fundamental approach to housing solution can prove successful with transparent stakeholder interactions that throughout empower end users. Early community engagements mutually benefit both parties. Resident participation helps stakeholders better understand the nature of the housing need, financial capability of the households and integrated concept of housing and community developments. Innovative solutions as a result of public participation also create a sense of pride and belongingness among the residents. Similarly, customized, cost-effective and community-focused solutions created with prior approval of the community not only eases the process of gaining preliminary consents from the regulatory authority but also, saves short- and long-term costs for the stakeholders. Cost savings can occur through reduced proposals for planning and minimal delays in project execution.

Early engagement of architects from the project conception stage seems beneficial to ICD processes. Early architect-stakeholder consultation can address multiple design issues during site feasibility studies. Community consultation allows the final design to reflect diverse needs through various housing typologies. In addition, ICDs seem to provide multiple opportunities for architectural design to integrate dwelling design, income diversity and a sense of community as one experience.

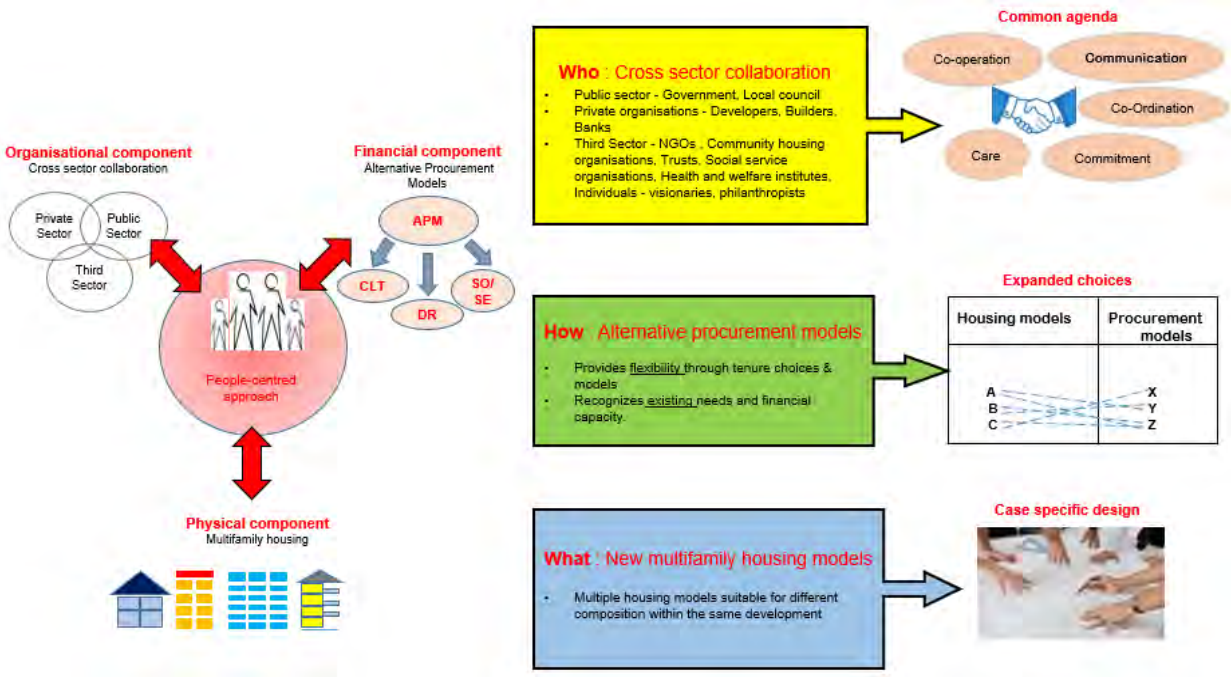

Figure 5 ICD – A people-centered approach to affordable housing
Source: Author

Thus, housing outcomes through ICD comprise a broad, holistic approach to housing that encapsulates a social, financial and physical dimension tailored for the users.

Overall findings reveal ICD can prove effective affordable housing alternatives if well-executed by the consortium. It appears the nature of collaboration has a direct bearing on the financial component of an ICD. The availability of finance, in turn, dictates the choices of APM collaboration may offer in the development. Such parameters further reflect on the density of the housing development, variety of housing models and size of the dwellings. Thus, housing outcomes through ICD comprise a broad, holistic approach to housing that encapsulates a social, financial and physical dimension tailored for the users. However, the processes must be transparent, thorough, mutually beneficial and flexible to accommodate accompanying uncertainties that may arise at any stage of the development.

Learnings for Auckland

An effective housing collaboration requires the involvement of all three sectors, each with clearly defined roles. Participation from private developers allows building the market rate component with sale profits acting as a subsidy for the affordable component. Similarly, third sector agents seem particularly effective financial stewards as they are able to closely monitor the financial performance of the households. Again, the state seems more suited as facilitators providing land and initial capital for investment. Local councils can also assist with expediting planning proposals and granting approval for infrastructural development. Thus, each sector has a distinct role to play in collaboration.

A multisector partnership with pre-defined roles is also likely to create transparency amongst the agents and preserve mutual interests in the overall proceedings. A multi-sector representation ensures a balance between dual agendas of safeguarding affordability and asset building opportunities for homeowners.

Evidence also indicates, the nature of partnerships bears a direct impact on fundraising processes for the development. Raising equity, particularly when subsidies are either non-existent or low, assists the collaboration to overcome financial constraints.

The absence of overarching policies that incentivize private developers and safeguard affordability in new build developments, currently inhibit explorative housing experiments in Auckland. Therefore, an ideal constitution for a potential ICD collaboration in Auckland must consist a private sector agent working, a third sector and a public-sector agent with a mutual stake in the development for all such that, private dollars can be leveraged with public funds effectively. This strategy can be successfully utilized irrespective of the scale of s development as evident in the overseas cases.

After the setup of a cross-sector collaboration with a clear agenda and priorities for different income groups, a spectrum of alternative tenures can be selected for Auckland. This paper recommends a range of homeownership models for the Auckland housing market. However, to fully grasp the merits and risks, develop a relational understanding between all products, and generate an effective cross-subsidization; the models must operative in the context of housing development and not through individual new builds in the open market.

The US-based CLT models seem to offer maximum stability to non-state low-income households who seek stability tenure and experience benefits of homeownership. Individual equity building opportunities may be limited in such models that are primarily focussed on the preservation of community equity. However, the stewardship component remains maximum in CLTs.

Government-funded key workers in the mid-income category who are unable to afford market rate homeownership but succeed in securing a partial deposit for slightly lower house prices and, financially capable of furnishing home loan thereafter, may considerably benefit from the 'below market rate sale' model from the US. A rental version of below market rate may work equally well for such income stable workforce households with low homeownership priorities but requiring stability of tenure. Either tenure assigns dedicated number of units as permanently affordable. Also, due to long term affordability covenants, both versions fully justify dedicated state funding for essential housing.

Shared ownership models from the UK act as a hybrid between renting and ownership. Since the model allows a gradual build-up of ownership based on individual financial capacity while rent may or may not be payable on the remaining part, it requires a thorough understanding of 'how the passive portion is bought back' on behalf of the household. The seeming flexibility of 'buy what you can when you can' can be misleading particularly if the clause requires mandatory purchase of shares based on the market value within a time frame. Such clauses may then prove financially cumbersome for low to mid-income families. Therefore, although an effective alternative to renting, shared ownership may not be suitable for households with either fluctuating or unsteady sources of income. Post-occupancy financial data to ascertain risks of such a model and the financial constraints imposed by the new market is essential prior to its transference to parallel economies.

'Shared equity' model from the UK, offering a silent second mortgage with a housing agent suitable for income-stable mid to high-income households. Asset building opportunities may be slightly higher through this model due to the use of minimal or no state subsidies. Although, a restriction on market rate sale is desirable and must be monitored through resale conditions, for the affordability agenda to remain in part. The shared equity model also imposes maximum financial responsibility on the homeowner partly due to reduced financial stewardship from the agent.

Overseas cases also offer insights on how a combination of housing typologies can be utilized within the same development for different household compositions. This includes lifestyle options such as semi-detached townhouses, midrisesemi-attached townhouses with common courtyard spaces and, spacious high-rise apartments with family-friendly amenities. Also, effectively collaborating with a multi-sector agent, processes of community consultation and applying tenure blind strategies offers new areas of learning for the architects. Also, ICDs demonstrate, sustainability concepts and affordable dwellings can remain intertwined concepts for affordable housing solutions.

6. Conclusion & Future scope

Successful outcomes through ICD processes rely on deep engagement and positive interactions between multiple sector agents, each independently yet collectively executing their respective pre-defined roles. However, ICDs demand a greater level of co-ordination, co-operation, and co-operation from individual stakeholders of the collaboration as compared to housing projects without alliances.

The approach considers housing and community as fused concepts and thus adds a dimension of community participation as a prerequisite to house design and master planning. It, therefore, encourages designers to not view housing as an isolated response but to develop a holistic view that considers symbiotic associations between new housing, extended neighborhood, and the city. ICD design processes can also prove powerful tools in naturally creating a social mix as an automatic result of a tenure mix.

Understanding and implementing ICDs may require a shift in perspective from the stakeholders in Auckland, a fundamental deviation from the linear equation of demand and supply with which we currently view housing issues.
Meanwhile, an initial impetus for ICDs may require an atmosphere of interest to raise funds through effective stakeholder collaboration and reliant mechanisms like cross-subsidization for financial sustainability of the projects. Thereafter, ICD mechanisms may quickly become robust with increased multi-party interest that allows greater innovation, transparency, and efficiency in the processes. In addition, sophisticated, technologically superior and environmentally efficient design decisions can further enhance housing outcomes. A people-centered approach remains the key to its overall success.

This paper establishes the merits of collaborative housing developments. The research also opens avenues for architects to look into community housing models with tenure blind design as an expansion of their existing knowledge field. It encourages building professionals to research APMs to develop an overall understanding of user-centered affordable housing initiatives. It creates a platform for policy debates about a people-centered approach that utilizes a choice-based theory to develop a deeper understanding of housing and cities as a whole. The scope of the current study is limited to homeownership models. However, further exclusive research on rental ICDs may especially benefit low-income households and vulnerable groups.

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