

Housing for Artisan: Assessment of the Housing Need and Solution

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Abstract - Artisans are active participants in the economy and the providers of society's art and craft services. However, they lack a suitable living environment and the necessary amenities to maintain their way of life. As a result, people may take a different course in life, abandoning community beliefs. They do, however, have a lot of potential in the city and may easily use it to contribute to the city's culture and civilization. They can easily become the keepers of their culture and crafts if they have a better area to live that support their way of life. They can earn money and maintain their families if they have adequate home. We can simply rely on their skill to keep our culture alive. Architecture should be long-term and inclusive. As a result, I've decided to work on artisan group housing so that they can continue to serve the community. It's not just about the design approach; it's about the entire systematic process that ensures the end user can afford it. Parts of the equation, such as family forms and lifestyles, are constantly changing. The most difficult issue is overcoming preconceived notions about the subject, some of which are incorrect. The design ideas and tactics are informed by the literature and case studies of projects. The principles and tactics might motivate designers to develop better, more affordable housing that benefits all parties involved.

Key Words: Affordable Housing, Artisans etc.

1. INTRODUCTION

Housing is an important part of maintaining a reasonable standard of living. To meet this level, society provides not just competent health care but also cheap housing, sufficient jobs to cover living expenses, and support services for those in need. Housing affordability, on the other hand, is a persistent problem. Everyone, not only low-income people, requires affordable housing. A typical household's single largest expenditure is on housing and housing-related products. When looking at a low-income family's budget, these expenses are much more obvious, with the house coming in first, followed by food. (Goldberg 1983)

"Housing is not simply a basic human need; It determines our access to jobs, services, stores, and significant other individuals in our lives by defining our community. It holds not just our belongings, but also our hopes and fears." (Stone 1993)

"Individuals' available money, capacity to find work, health, and social inclusion are all affected by adequate housing."

Housing programs were created to address households that lack the means to buy or rent adequate, suitable housing. Since the 1950s, the Indian government's housing policies have progressed significantly. While the objectives of "planned development" were initially more welfare-oriented, they eventually became driven by a well-defined system of economic interests. At the same time, the government's role has gradually shifted from that of a housing provider to that of a facilitator of housing activities. The government has clearly established itself as a facilitator throughout this time. It is currently encouraging the private sector to participate in housing efforts for all segments of society, while taking a back seat in all of these operations. (Mukherjee 2016)

1.1 Methodology

This study is proposed to be done in three parts. The first part discusses affordable housing from the beginning of its creation to its provision today. It also includes a discussion about the impact of affordable housing to the development of main city as well as the flow/connection of people and buildings; affordable housing typologies, perceptions, challenges and opportunities; and the role that such housing can play in becoming a catalyst in helping to revitalize mid-sized cities urban centres. The second part of this study will contain a variety of case examples/precedents from which affordable housing projects will be evaluated that are represented from various locations in India. The third part will be analysis of the art and artisans who are going to be benefitted by this research. From these case studies and previous research, a set of design guidelines will be produced. At the end this research will conclude providing highlights of the research finding and recommendations.

1.2 Limitation

This study is limited to housing for artisans to live & work altogether; artisans of chikankari and similar arts related to embroidery Like Ari- zardozi, Mukesh, Jali Work, cloth cutting, stitching, printing, final stitching, washing, pressing, etc. are only considered.

2. BACKGROUND

2.1 Housing

The current state of infrastructure in India's cities is deplorable. Housing availability, in particular, is a major source of stress in India, with an estimated 80 million households living in slums due to a lack of affordable housing. The need for cheap housing in India is anticipated to rise much more as the Indian middle class grows. (IBEF 2012)

Table -1: Definitions of affordable housing in India (as developed by KPMG and CREDAI)

Income Category	Income Level	Size of Units	Affordability
EWS	<INR 1.5 Lac per Annum	Up to 300 SqFt.	EMI to Monthly Income 30-40 %
LIG	INR 1.5 Lac to 3.0 Lack p.a.	Up to 600 SqFt.	
MIG	INR 3.0 Lac to 10.0 Lac p.a.	600 to 1200 SqFt.	

2.2 The Scale of Problem

Given that India's homeless population in 2011 was only 1.77 million, the country's housing shortage does not appear to be severe (0.15 per cent of the total population), a small decrease over the previous decade, as seen in Table 2.

Table -1: Rural and Urban Homeless Population in India in 2001 and 2011(Population in million)

		2001	2011	Decadal Growth %
All India	Total population	1,028.61	1,210.57	17.7
	Homeless population	1.94	1.77	-8.8
Urban	Total population	286.31	377.11	31.7
	Homeless population	0.78	0.94	20.5
Rural	Total population	742.3	833.46	12.3

Source: Census 2011

The homeless population makes a minor contribution to the housing crisis. When the replacement demands of houses in poor physical condition (due to age and structural durability), as well as those that offer inferior living circumstances (due to the amount of congestion inside the house), are factored in, the situation becomes acute. Housing shortages in rural and urban areas are not the same. In rural locations, for example, the state of the physical construction of the house is a far greater worry than in urban areas where congestion must be resolved.

Trends in urban population growth are accompanied with increases in housing shortages, as shown in Figure 4. It's discouraging to see that, despite multiple housing projects introduced every 5-10 years, housing shortages have been steadily increasing in absolute terms.

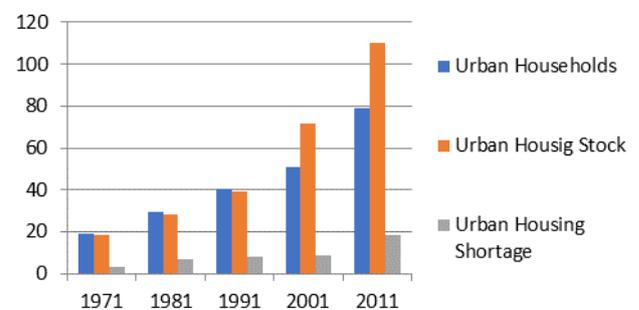


Fig -1: Housing Stock, Housing Shortages, and Urban Households in India, 1971-2011 (million)

Households living in nonserviceable (nondurable) housing + households living in obsolescent housing + households living in congested housing + households that are homeless = housing shortage.

Source: National Buildings Organisation (2013).

2.3 House Area and Congestion

A healthy constructed environment necessitates a quality home with enough privacy. The toleration of a congested living environment is compelled by a large household size and low household income, which is worsened by expensive housing prices. One room is usually shared by 2-3 people (average house size is two rooms, and average household size is 4.9 people) (Census 2011), indicating crowded living. Housing circumstances haven't improved much, in fact, they've gotten worse as house sizes have shrunk and the number of people sharing rooms has increased.

2.4 Housing Affordability

In policy terms, affordable housing is defined as housing where tenants or owners do not pay more than 30% of their income before taxes on rent or mortgage (30 percent

includes utilities but not furnishings or cable). For the purposes of this research, affordable housing is defined as housing that is reasonably priced in relation to its size and quality. All other essential requirements, such as food and clothing, are likewise affordable when housing is affordable. All housing should be suitable in terms of protecting residents from the harsh environment while also being structurally sound. Housing that is both inexpensive and appropriate is critical to living a healthy life.

2.5 Artisans in India

India is a country of farmers, but it is also a country of artisans. Thousands of unappreciated artisans and craftspeople labour tirelessly to create Indian art. Over thousands of years, this art has continued to evolve. India's traditions and rituals tend to generate a variety of activities and opportunities. (Dasara 2013)

The artisan tradition grew out of local beliefs and the necessities of the common people. Furthermore, both foreign and domestic trade have played an important part in the formation of India's varied artisan forms. India's artisan traditions have withstood the test of time and a number of foreign invasions, and they continue to thrive today. The Indian handicrafts men's willingness to absorb and assimilate new ideas is largely attributable to their open-mindedness. (Dasara 2013)

India is a handicrafts powerhouse. Every Indian state has its own particular ethnic identity, as well as a diverse legacy of handicrafts and art works. Some crafts traditions emerged out of need, while others emerged simply as a result of man's natural desire for all things beautiful. Regional history, social climate, religion, culture, climate - natural resources and population all had a role in the development of India's different ethnic craft traditions." The history of Indian traditional crafts has remained unmoved in its brilliance and richness to this day. (Dasara 2013)

2.6 Potential of India's Handicraft Sector

India is an industrialised country still many people find employment in traditional production systems, craftsmanship, and legacies from handmade commodities. These artisans are the backbone of India's non-farm economy. To make a living, an estimated 7 million craftspeople work in the craft industry. Approximately 63 percent of artisans are self-employed, whereas 37% work for a living. (Government of India 2011)

Despite the fact that many businesses support craft-based businesses, most craft projects remain disorganised, and artisans struggle to make ends meet. Due to a lack of markets, fading abilities, and difficulty transitioning to new markets, a large number of artisans have relocated to

metropolitan areas in pursuit of low-wage, low-skilled work in industry. According to the United Nations, the number of Indian craftsmen has declined by 30% in the last 30 years, suggesting the need to reinvest in artisans in order to preserve history, culture, and a vital source of income. (Jena 2010) The revival of the handicrafts industry can help artisan communities better their economic, environmental, and social conditions.

Economic Opportunities:

The handicraft sector is likely to provide skilled craftspeople with permanent work and a steady income. The global market for handicrafts is worth USD400 billion, with India accounting for less than 2% of it, giving a huge opportunity for expansion. (Mittar 2017)

Environmental Benefits:

Manufacturing processes used in handicrafts have significantly less carbon emission, encouraging the vernacular materials as well as organic materials where possible.

Social Empowerment:

Women's empowerment is also aided by the production of crafts. Art education has the potential to raise future generations' academic standards. It is critical for philanthropy to recognise the monetary potential of the handicraft sector by investing in high-impact, scalable methods that can boost livelihoods in a long-term manner.

3. LITERATURE REVIEW

3.1 Policies

Housing policies in India have progressed significantly since the 1950s; initially, they were welfare-centric, but have now evolved into economic-centric policies. The government's role has shifted from that of a provider to that of a facilitator of housing. (Mukherjee 2016) As the first phase, the policies in India were divided into four phases, with the first two decades (1950s to 1970s) focusing on integrating all elements of society. The second phase, from the 1970s to the mid-1980s, shifted the focus to the economically disadvantaged (EWS) of society. The third phase, which lasted from the 1980s to the 2000s, was primarily concerned with the physical availability of housing as well as housing financing structures. The final phase (from the 2000s to the present) saw the government's role as a housing facilitator evolve. In this study, I concentrate on housing policies in the last phase, from 2000 to the present.

The graph depicts the fall in rental housing stock in India over the previous five decades, as urbanisation levels increased. The shift in government policy and

programmes toward home ownership in metropolitan areas, at the expense of rental housing, is not unique to India, but has occurred in a number of countries. For a long time, many countries, led by the United States, have prioritised home ownership as a major goal, resulting in the so-called "home ownership movement." However, this trend toward "home ownership" has resulted in the emergence of speculative bubbles in housing markets, as well as an increase in house price. House prices in Indian cities have risen to the point where owning a home has become unattainable for the vast majority of households. (Nallathiga 2016)

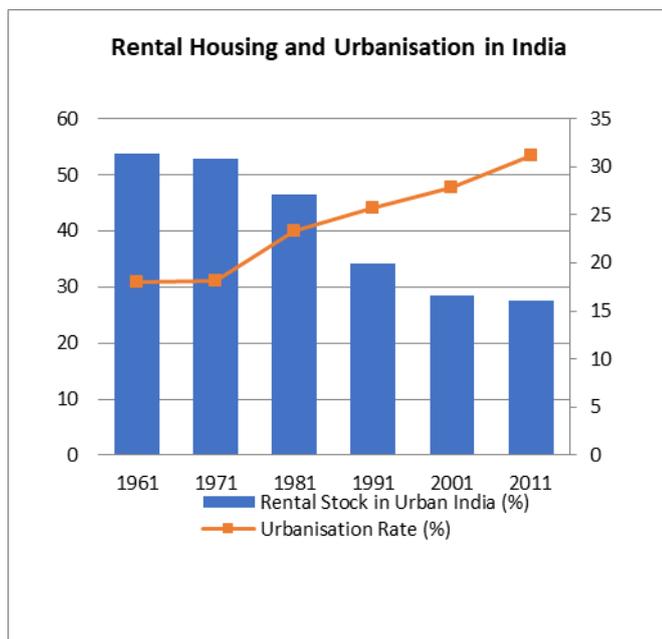


Fig-2: Rental Housing and Urbanisation in India

Source: KPMG - NAREDCO (2013)

3.2 Urban Centres

The problem of suburban development and the resulting decline of key areas prompted a shift in focus away from residential development and toward business, institutions, and manufacturing. In Indian cities, as a result of zoning restrictions and policies that divide uses, it was uncommon for the above to mix.

Cities that have a reputation for being appealing and livable use multi-land use patterns in their metropolitan centres. Unfortunately, single land use zoning disrupts the fabric's movement. Layering programmes in a building aids in the creation of beneficial mixed-use developments. Buildings on the street level, for example, might have shops and restaurants (commercial), followed by offices, and finally residential. The top-floor residential area gets more sunlight, fresher air, and less noise from the streets

below. This method has shown to be successful in European cities such as Paris, where pedestrian traffic has increased, and public transportation use has climbed. (Schoenauer 1994) Zoning should aid in the encouragement and shaping of new projects as well as the promotion of change.

3.3 Typologies

There is no such thing as a single type of affordable homes. Row houses, apartments, single and semi-detached dwellings are all examples of it. All sectors, corporate, public, and non-profit, can provide these housing types. These structures can have a variety of tenures, from rental to co-operative ownership to ownership. From temporary to permanent housing, affordable housing can refer to any element of the housing continuum. (Norberg-Schulz 1985) (See figure)



Fig-3: The Housing Continuum

Source: 2020 Housing and Homelessness Annual Report

3.4 Residents

The possibilities for how a house and its operations are perceived are endless. Housing is a product with several levels of meaning for various people. It is, in its most basic level, a shelter. (Friedman 2005) The literature assessment indicates that housing is a complex and multidimensional subject. Housing in India is often a family's most valuable possession, and it can be a source of tremendous pride. The image and perceived condition of one's accommodation has a significant impact on one's sense of self: housing is often a family's most valuable possession, and it can be a source of tremendous pride. Living in substandard housing, on the other hand, can be a source of incompetence for many artisans. The majority of those who live in the housing are not proud of it, especially if the design and materials utilised are of poor quality.



Fig-4: Living conditions of chikankari/zar zardozi artisans

Source: Author

3.5 Affordable Housing; affordable for long run

Developing affordable housing, as well as maintaining it affordable in the future, is a difficulty. Prior to 2001, federal subsidies were used to fund social housing developments. The subsidies are tied to the specific units, not the people who live there. Over the next few years, the federal subsidies on these existing units will run out. One major worry is how to maintain existing stock affordable after subsidies expire. Because materials are more expensive, as well as government laws and bureaucratic red tape, approval processes, and zoning and land use policies, the cost of new building is growing. These issues have caused stakeholders to reconsider how housing is built, opening up new possibilities and opportunities. To assist balance rising costs, all sectors have attempted new techniques. To save money, the private sector has attempted leasing property, refurbishing and/or converting existing buildings, developing infill sites, and being receptive to innovative designs. The not-for-profit industry has also experimented with new financing channels by implementing cost-cutting measures that integrate the work of various faith organisations and charities (ie. Habitat for Humanity). Municipalities have explored a variety of front-end approaches to affordable housing, including giving property, modifying zoning restrictions, speeding up the approval process, and lowering or eliminating municipal taxes. (MoUHPA 2016)

3.6 Dwelling Components

Although the number of rooms per dwelling has increased, the number of people per dwelling has decreased. Smaller families with childless couples, single parents, elderly widows, and non-family households are on the rise. One of the fastest growing household categories is working-class singles. In India, the nuclear family, which is on the decline, has driven the housing stock. As actual incomes have fallen, consumers have been increasingly interested in smaller, more inexpensive homes. As a result, a design opportunity exists to bring the dwelling's scale back down to a human scale, a manageable size, and to construct a new type.

3.7 Communities with less affordability

The proximity of affordable housing to the local workforce or low-income households might be critical for those who would otherwise have to live outside of the neighbourhood where they work. Having a choice of affordable housing options dispersed throughout a city allows needy families to stay near to relatives and supports without having to leave their hometown.

India is a huge and diversified country in terms of geography. National policies or solutions aren't adaptable enough to fit every circumstance on the ground. It allows policies and programmes to be more targeted at specific

local housing requirements. (Gopalan 2015) However, other populations have been targeted by the new Affordable Housing Program. As a result, if a project delivers housing for a certain goal, it has a better chance of securing funds. The recent reauthorization of the Affordable Housing Development Act focused on a particular form of housing.

4. CASE STUDY

4.1 Belapur Artist Village by Charles Correa

It offers a way to "engage meaningfully with planning and policy discourse by redefining challenges and providing a set of flexible solutions." Ar. Charles Correa created a low-cost incremental housing style for artisans. Located one kilometre from New Bombay's city centre and covering six hectares of land. A model portraying the ancient pattern of life in India, with a link to the new modern framework. Belapur is located by a little river at the foot of a brown valley.

This project is based on Correa's thoughts on the nature of community and housing. He came up with the concept after observing the spatial hierarchy of individual privacy against public gathering. He has established a link between the private area of each individual residence (doorstep), the common courtyard, and the community's larger public space (maidan). The village's design geometry is a straightforward translation of this terminology.

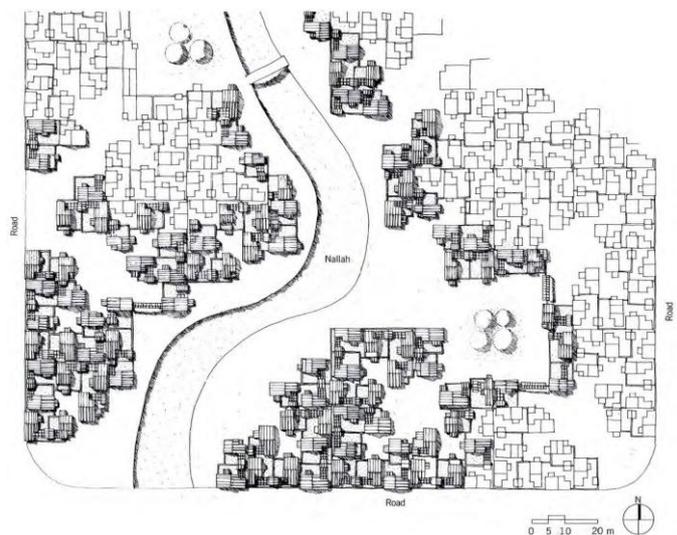


Fig-5: Sitemap of Belapur Housing

Source: Swarnabh Ghosh, The Avery Review, From Scenery to Landscape: Charles Correa by way of Buckminster Fuller.

Charles Correa designed a cluster of seven dwellings, each with an 8 × 8 m centre courtyard. In addition, he combined

three clusters of seven dwellings to create a larger courtyard measuring 12m x 12m.

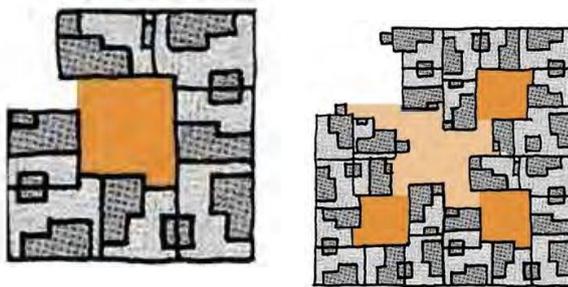


Fig-6: Cluster Plan of Belapur Housing

By introducing incrementality to each housing complex, Correa has reflected an architectural language. He gave the customer the option of building according to their perceived needs and increasing when money became available. To avoid mocking communal discrepancies of equity, the plot sizes for each were rationed from 50 to 100 sq.mt.

'Open-to-the-sky space' is crucial to each family in India, even if it means maintaining territorial privacy. As a result, Correa has built each residence to include a private yard with a latrine block. These blocks are also coupled to reduce the number of service runs.

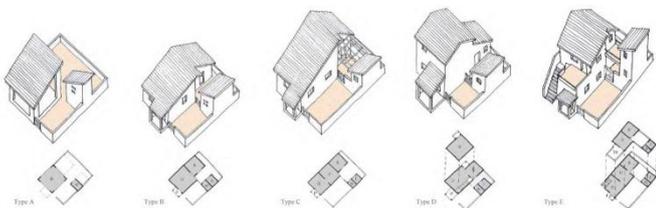


Fig-7: five house typologies of Belapur Housing

4.2 Aranya Community Housing by B V Doshi

Social Context

Aranya Low-Cost Housing in Indore was commissioned by the Indore Development Authority and co-funded by the World Bank and India's Housing and Urban Development Corporation (HUDCO) to alleviate the housing and shelter scarcity that existed at the time. As the number of slums, illegal settlements, and shelter shortages grew, it became critical for the government to address the problem in a cost-effective and well-served manner.

Approach

Doshi created an integrated method for mixed-income groups with the goal of bringing them together. The response was solely based on an awareness of people's basic requirements and the fact that space and design

ultimately revolve around the user. Over 6500 people live in the housing township, which is divided into six parts. Doshi chose to set up a framework for the family, with a plot that included provision for services, a toilet block, and a brick plinth to build on.

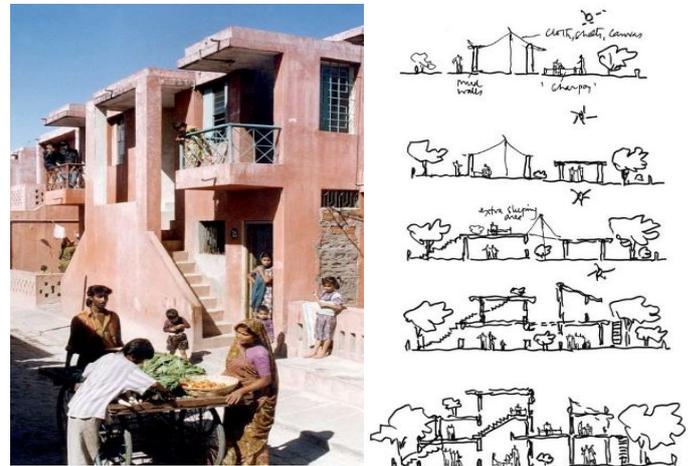


Fig-8: Street House relationships

A courtyard was shared by every ten clusters of dwellings. Green spaces were provided for each of the six sectors, as well as a larger public space for the entire township. The user had complete control over how much to create and what combinations to employ. Every house had its own personality due to the diversity in entrances, staircases, verandahs, and buffers.

Doshi included a kit of features, such as a staircase, openings, railings, overhangs, and verandahs, that allowed families to customise it to their specific needs. He designed and built 80 model homes for the families, all of which differed in size, spatial layout, mass, and movement. People might choose from houses with one to four bedrooms, depending on their financial situation. The close closeness of two residences serves to shade the shared courtyard between them.

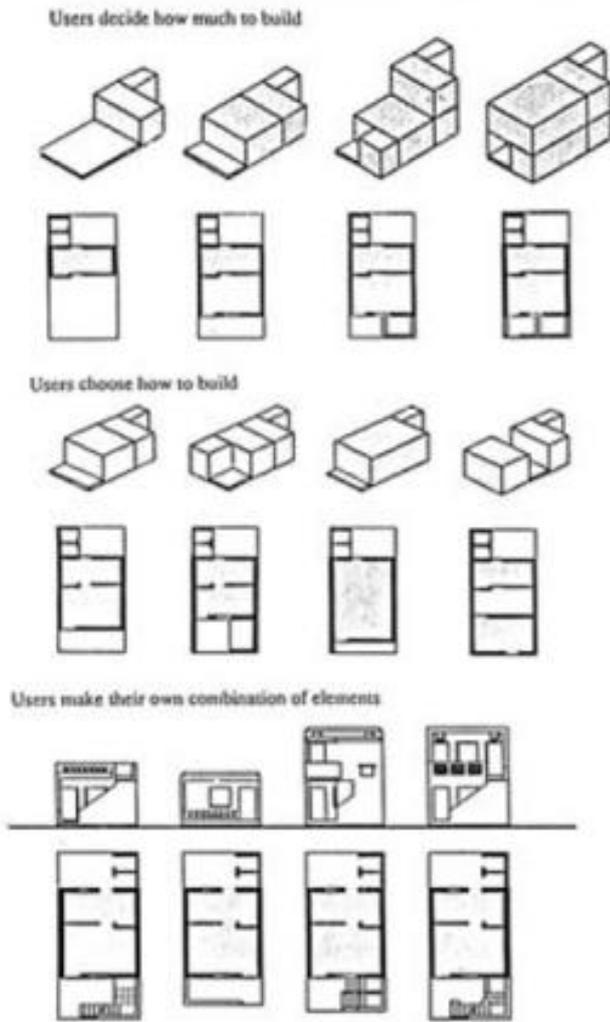


Fig-9: Variation in House and Forms

Source: Vastushilpa Foundation

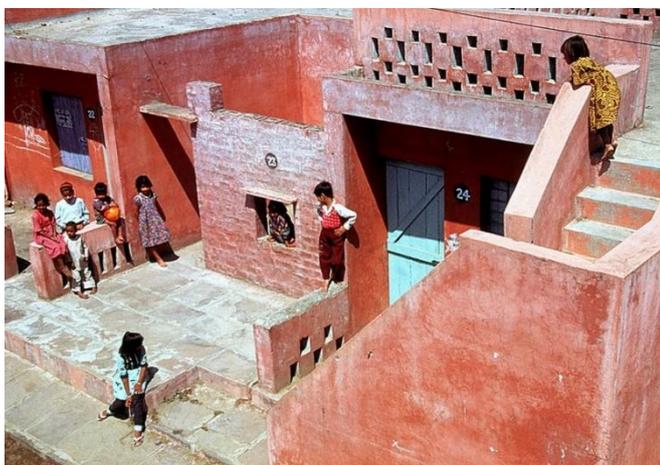


Fig-11: Space interactions and interconnectivity

Source: Vastushilpa Foundation

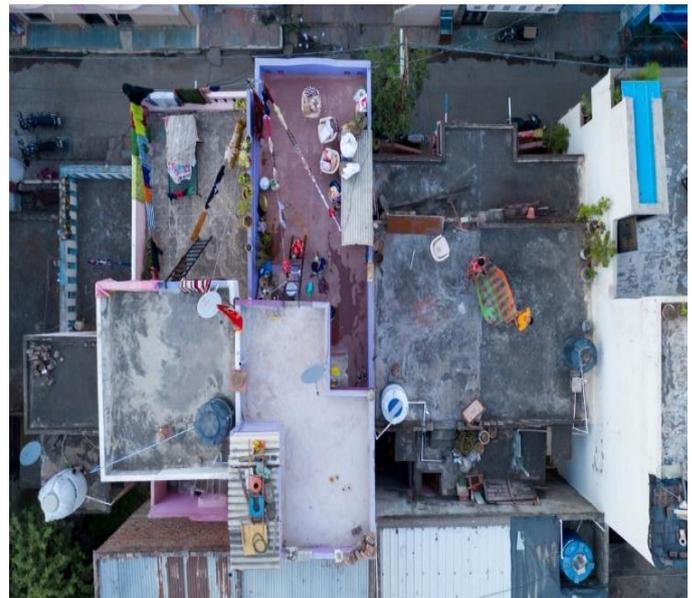


Fig-12: Space interactions and interconnectivity

Source: Vastushilpa Foundation

5. ANALYSIS

5.1 Process of Chikankari

There are procedures for styling and designing, such as aari zari, gota patti, mukeish, jaali, and so on. Chikankari is a method and process that entails delicate and artistic hand stitching on a range of textile fibres. Highly detailed work is done using simple techniques to adorn stunning designs on plain or light-colored cotton cloth. The 6 steps mentioned below are basically the whole process.

1. Fabric selection for the product to be made.
2. Fabric cutting to appropriate measurements and stitching, if the product is stitched.
3. The design is printed using a block printing technique known as "chhapayi" in the region. The design to be worked on is first printed on plain cloth. The colour solution is prepared by mixing glue and indigo, and the wooden block is dipped in it. The fabric is then printed with it. Butis, floral designs, and borders will all be represented by distinct blocks. The printing procedure in Lucknow is carried out by a different set of artists who specialise in printing. The cloth has been printed and is now ready for embroidery.



4. Actual Lucknow chikankari hand embroidery work, done by trained artisans over chhapayi motifs, woven with a needle, thread, and a frame that securely grips the fabric. Using needle and thread, the embroidery is done over the printed design pattern. Using various techniques, the artist makes classic patterns. In one product, different sorts of stitches can be manufactured.

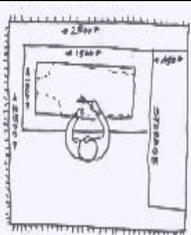
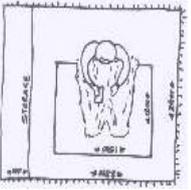


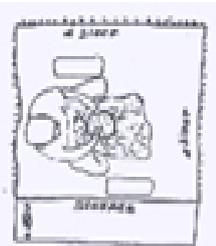
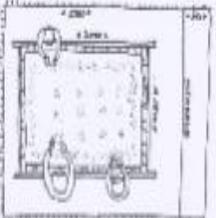
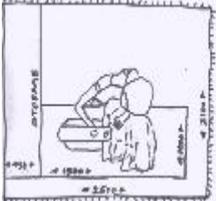
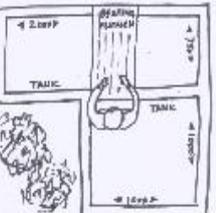
5. After the item is submitted by an artisan known as a "karigar," it is washed, polished (known locally as "charakh"), and pressed.



6. The final part of the manufacturing process is washing. After the embroidered job is completed, the cloth is soaked in water and washed to remove the block printed blue colour. After that, it's starched and ironed to make it rigid. The completed product is now available for purchase. Thread cutting, final finishing, and packing are all steps in the process.

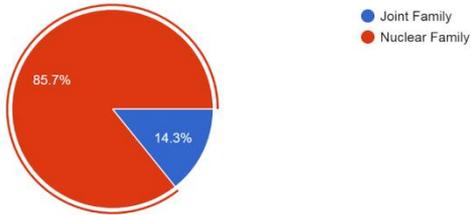
5.2 Spatial analysis of Chikankari Art work

Type	Area Required	Surveyed Area	Remarks
 <p>Cutting</p>	Area for cutting cloth 5 sqmt + Storage and circulation 2 sqmt. = Total 7 sqmt.	 <p>space to put cloths. They adjust with living space.</p>	<p>No proper space or table for cutting, storage</p> <p>Work requires good lighting. Instrument and sometimes power tool used, need proper storage area. Separate working space admirable to increase productivity.</p>
 <p>Printing</p>	Area for cutting cloth 5.5 sqmt + Storage and circulation 2 sqmt. = Total 7.5 sqmt.	 <p>congested dwelling.</p>	<p>Printing area need separate fixed space which bothersome for artisan living in</p> <p>Work requires good lighting and ventilation cos chemicals use in printing. Storage for blocks and chemicals used in printing</p>

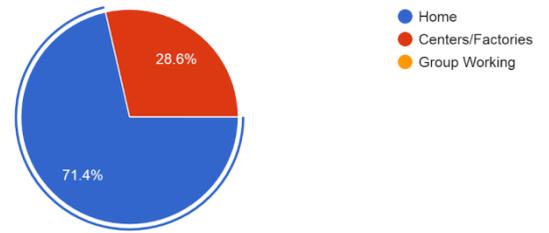
 <p>Chikankari work</p>	<p>Area for cutting cloth 4.2 sqmt + Storage and circulation 1.8 sqmt. = Total 6 sqmt.</p>	 <p>No separate space for work and storage, adjust work with living space which hinder day to day life activities.</p>	<p>This is very delicate work need good lighting, natural light is best for the artisans. Clean and separate area will stop soiling cloths.</p>
 <p>Zari-zardozi work</p>	<p>Area for cutting cloth 7 sqmt + Storage and circulation 3 sqmt. = Total 10 sqmt.</p>	 <p>This work needs more space than any other allied art work. People find it difficult to do household work while working.</p>	<p>This is also very delicate work need good lighting and natural light is best for the work. Clean and separate space and storage needed to stop soiling the cloth.</p>
 <p>Stitching</p>	<p>Area for cutting cloth 5 sqmt + Storage and circulation 2 sqmt. = Total 7 sqmt.</p>	 <p>Artisans adjust working with living space and have no proper storage which creates unorganised space in daily life which hamper productivity</p>	<p>Stitching requires instrument stitching machine, sometimes operate by power need dedicated working and storage area. Good lighting require to bring fine work.</p>
 <p>Washing</p>	<p>Area for cutting cloth 4 sqmt + Storage and circulation 2.5 sqmt. = Total 6.5 sqmt.</p>	 <p>washing need separate area with living space and drying. Pressing job is adjusted with living space</p>	<p>Need good lighting and ventilation for the job. Chemicals use in washing so proper storage is required. For drying dedicated space is required.</p>

5.3 Socio-economic Status of Artisans

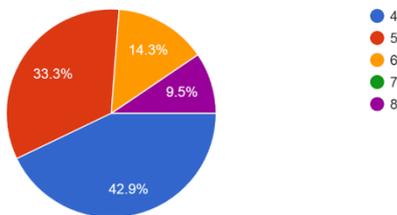
Family Status



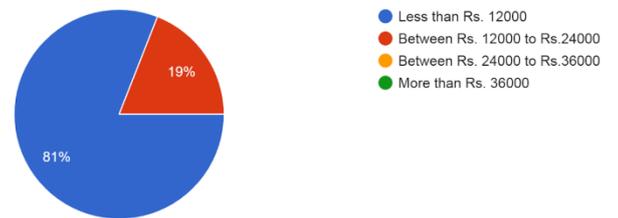
Preferred Working Place



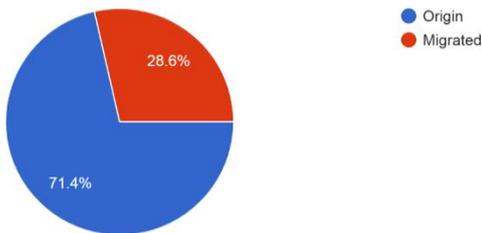
Family Members



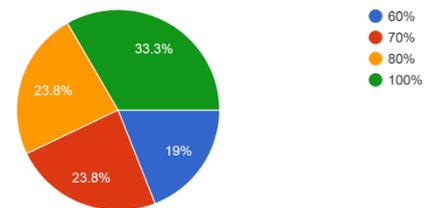
Family Income per Month



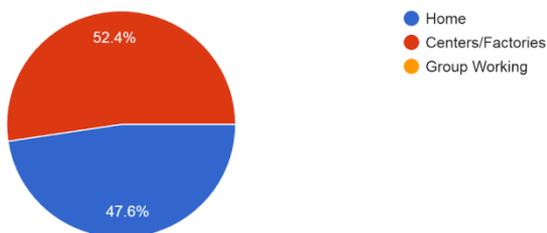
Origin/Migrated



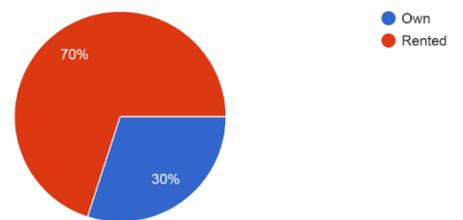
Family Expenses per Month



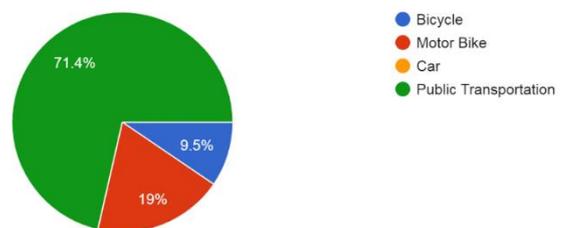
Current Working Place



Current Housing Status



Transportation Mode



6. RECOMMENDATION

Design Elements	Approach
1. Character	A smaller building, there are fewer individuals to meet. Create a unique exterior with a variety of elements. Individual units should be able to be personalized.
2. Diversity	Allow for social interaction and a welcoming community. Different sizes of units should be available for different sorts of households. Multiple room units should be available.
3. Access/open spaces	Provide access at ground floor where possible. Balcony/terrace provides private open space. Rooftop gardens allows shared spaces.
4. Location	Public transportation should be in reach. Amenities should be near.
5. Proportion	Design types like detached houses. Fewer units and a low-rise building.
6. Design features for safety	Visible main entry and less units per entry gives informal surveillance. Less units per building and per floor allows less residents who can be known. Provide ranges for street visibility.
7. Affordable	Design repetitive units. Design for suitable concentration for the site and for building budget. Provide energy saving features in the design

7. CONCLUSION

A sincere appreciation for handicraft prompted the study to examine each craft's practical and operational needs, as well as the artisan's work pattern and the setting in which they are performed. This research assisted in the development of a programme to create a feasible operational housing concept complementing the user's requirements.

The creation, activities, and spatial arrangement were studied using literature and case studies and survey. The conclusions drawn from these case studies and survey such as circulation and spatial arrangement, aided in the development of the most practicable design to support such a historic community. The research also recommended incorporating architectural aspects such as character, diversity, access/open spaces, location, proportion, safety design features and affordability and a shared working environment to create an authentic yet unique and sensible design.

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