

Globalisation-pandemic and its impact on the design of our future homes

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Abstract- Architects design houses, and the occupants turn them into homes. However, in a world of rapid globalisation, fast changing technology and changing family dynamics, the definition of a home is changing in a radical way. This paper aims to study the impact of globalisation on domestic space needs, family behaviour and the architectural brief in India through four parameters of information flow, demographic mobility, digital connectivity and cultural hybridisation. Based on a qualitative observation of the changing lifestyle patterns, a historical analysis of Indian domestic architecture from Harappan civilization to the present day, and a synthesis of the interdisciplinary literature on architecture, sociology, demography and urban studies, this paper outlines the evolution of the concept of 'home' and its probable future course for the next fifty years. Special focus is given to the kitchen as a functional and symbolic space in a home, as a measure of social change and to the consequences of the platform economy and environmental awareness for residential design. In today's world, the change is occurring at an unprecedented rate, as a result of the forces of globalisation. It further elaborates on the experience of adopting a lifestyle that was forced in the context of COVID-19. The paper proposes that the future of Indian housing design needs to break away from the rigid typological constraints and adopt flexible, reconfigurable, and technologically advanced spatial models that can adapt to various household configurations, work-from-home lifestyles, and sustainability goals. Specific design guidelines are suggested, based on the conflict between the human need for permanency and the transient and mobile society.

Keywords: *Globalisation, future homes, kitchen design, smart homes, post-pandemic design, and cultural identity*

I. INTRODUCTION

"The only thing permanent is change." — Heraclitus

The built environment is the most enduring cultural artefact of humankind. A house lives longer than fashion, technology and social norms of its time, and

may last a century or more. But the societies that live within these houses are constantly changing. In today's world, due to globalization, the change happens at an unprecedented rate. The static nature of the house and the dynamic nature of the occupants living in it are growing further apart, creating a significant mismatch between the built form and lived experience. Though the change pattern is global, India as a case study is particularly interesting. It is one of the fastest-growing economies in the world, and its cities are also home to a young, globally connected middle class, and also face a housing shortage of around 18.78 million units as of 2024 (Ministry of Housing and Urban Affairs, 2024). The traditional joint family system, which has been the basis of the spatial arrangement of the Indian house, is being dismantled due to economic pressures, geographical mobility, and shifting social values. The nuclear family is no longer the norm and is being replaced by single-person households, cohabiting couples, and live-alone elderly parents, which demands a whole new architectural approach. Mobile companies release new versions of their products every six months; residential buildings have a design life of around 65-70 years and Indian buildings are often built for more than 100 years. Architects are now in a critical situation: designing for permanence in a world that values impermanence. This paper systematically explores that question and asks: What has changed in the functional, symbolic and social role of the Indian home in the era of globalisation? What are the design principles that should be followed for residential architecture in India in the next 50 years?

A. Scope and Methodology

This is a qualitative, interdisciplinary study. The methodology is a synthesis of the following: a) a historical review of Indian domestic architecture from antiquity till present; b) a thematic synthesis of literature from architecture, sociology, demography,

feminist studies, and environmental science; c) analysis of secondary data such as census statistics, consumer surveys, and housing market reports; and d) structured observation of contemporary lifestyle trends. The geographic focus is urban India, with specific reference to metropolitan centres like Kolkata, Mumbai, Delhi, Bengaluru and Chennai, but the principles developed are applicable beyond these.

II. LITERATURE REVIEW

A. *Globalisation and Domestic space*

Kiggundu (2002) determined that globalisation is a powerful force that affects nearly every facet of both public and private life, and it works through four interlocking mechanisms: trade liberalisation, information technology, cultural exchange and institutional convergence. In the architectural field, Gwendolyn Wright (1980) recognized that the evolution of architecture cannot be divorced from the evolution of human activity, and that architecture both mirrors and influences the societies that it inhabits. King (2004) traced the global diffusion of architectural typologies such as the colonial bungalow which had a profound impact on Indian domestic design, and argued that buildings are 'material witnesses' to the processes of globalisation. More recently, Asquith and Vellinga (2006) have argued for a vernacular architecture paradigm that is not to be homogenized and that maintains cultural identity, which is directly relevant to the Indian context. The idea of 'home' has been questioned in great detail. Dovey (1985) made the distinction between house as a physical structure and home as an emotional experience of living. In the twentieth century, the 'home' became a composite entity in the form of the '*Bari*' (*the residence in the native place*) and the '*Basha*' (*the residence in the place of work*). This separation is important in an age where the physical house is becoming more and more separate from the experiential home: digital nomads might feel more 'at home' in a serviced apartment in a city than in a family house in their ancestral village.

B. *The changing Indian family*

The average household size in India has reduced from 5.57 persons per household in 1981 to 4.0 persons per household in 2023 and is expected to reach 2.8 persons per household in 2047 (Census of India, 2023; NFHS, 2021). This demographic compression as shown in

Table 1, is a result of the nuclearisation of the Indian family, increasing age at marriage, decreasing fertility rates and the spatial spread of family members for educational and occupational purposes. Desai and Banerji (2008) reported that the nuclearisation of this process has been accelerated since 1991 with the economic liberalization. It has created employment opportunities that demand geographical mobility, especially in urban areas. The corollary is a dramatic increase in single-person households: NSSO data (2022) reveals that the share of single-person households has increased from 3.7% of urban Indian households in 2001 to 8.4% in 2022. This is a segment with great architectural implications, because it means that the housing units must be smaller but independent, with all services.

C. *Technology and the Home*

The Internet of Things (IoT) has changed the way the home is viewed as a passive environment in which people live their lives, to an active and responsive system. The term 'smart home' was coined by Aldrich (2003) as an integrated environment that supports the activities of the residents. In 2023, the penetration of smart homes in urban India was 14% and is expected to grow to 39% by 2030 (NASSCOM, 2024). Voice control, automated climate control, remote security monitoring, and AI-powered appliance scheduling are quickly becoming a part of high-end residential developments. In some cases, it is no more a luxury but a need. Also game-changers have been the platform economy businesses like food delivery, home maintenance and short-term rental that are changing the space needs of the home. If food (of any choice) can be delivered to a dwelling unit within 30 minutes (which is much less than the procurement and preparation time) at any time of day or night, the argument for having a large, well-equipped kitchen in each unit becomes much less compelling. The effort and energy of cooking are not included in the argument.

D. *COVID-19 as an architectural catalyst*

COVID-19 was an unprecedented natural experiment in residential design. The home was transformed into a workplace, a school, a gym, a restaurant and a sanctuary, Garber (2020) noted. According to Knight Frank's (2021) Global Buyer Survey, 57% of global respondents adjusted their home-buying priorities due

to Covid-19, with home offices, outdoor space and access to nature becoming more important than a city centre location. The report by JLL Research (2021) indicated that larger apartments (3BHK and above) in suburban and peri-urban areas were seeing a surge in demand in India, especially due to the normalisation

of remote work and the desire for more private outdoor space. This change is a challenge to the prevailing model of centralised urban housing, which had been the norm in the previous decade of Indian residential development.

Table 1: Evolution of Average Indian Household Size (1981–2047 Projected)

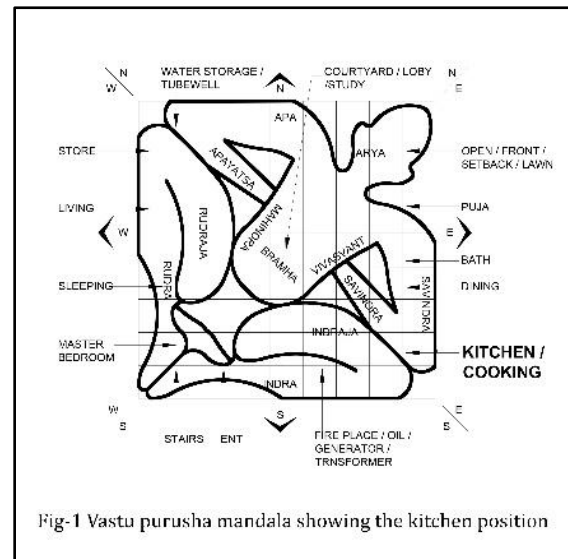
Year	Avg. HH Size (persons)	Urban Single-Person HH (%)	Nuclear Family Share (%)
1981	5.57	2.1%	~38%
1991	5.32	2.8%	~44%
2001	5.03	3.7%	~52%
2011	4.57	5.9%	~61%
2023 (est.)	4.00	8.4%	~72%
2047 (proj.)	2.80	~16%	~82%

Sources: Census of India (1981–2011), NSSO (2022), NFHS-5 (2021), projected estimates by author based on demographic trends.

III. HISTORICAL EVOLUTION OF THE INDIAN HOME

A. Pre-Colonial domestic architecture (3000 BCE – 1600 CE)

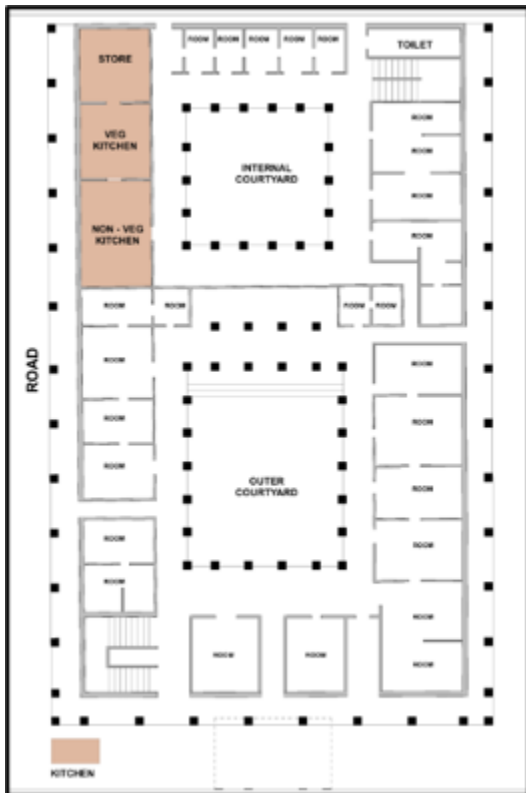
The earliest evidence of systematised domestic architecture in the Indian subcontinent comes from the Indus Valley Civilisation (c. 3300–1300 BCE). The excavations at Harappa and Mohenjo-daro show evidence of advanced urban planning, including multi-story buildings constructed from bricks, private courtyards, covered drainage systems, and distinct functional areas (Kenoyer, 1998). Kitchens were usually placed in courtyards or at the back of the house, according to both hygienic and social considerations: cooking was a semi-public act, often carried out by women in a common area of the house. Domestic architecture after the Harappan period was very diverse in terms of region, religion and social class. The Hindu text *Manasara* (c. 5th–7th century CE) was the first to document the *Vastu Shastra* system of spatial organisation, which involved the alignment of domestic spaces with cardinal directions and cosmological principles through *Vastu purusha Mandala* (Fig 1).



The kitchen, *agnyasthana* or 'fire place', was prescribed in the south-east of the house, which is related to the deity Agni. Even today, this ancient prescription continues to affect the placement of kitchens in Indian homes, with many home buyers demanding south-east facing kitchens according to *Vastu*.

B. Colonial transformation (1600–1947)

The arrival of the East India Company and the subsequent British colonial rule led to the most radical change of Indian domestic architecture since the Indus Valley period. The British adopted the bungalow from the Bengali term *bangla*, which refers to a single-storey thatched house, and used it as a standard typology for colonial officers (King, 1984). The colonial bungalow formalised a number of spatial innovations: a distinct front-back division between public reception spaces and private domestic functions; a servants' quarter and detached or semi-detached kitchen, both for hygienic reasons and for racial politics; a veranda as a transitional space between interior and exterior; and a compound wall to demarcate the domestic territory. Colonial bungalows' kitchens are a site of negotiation of race, religion and hygiene. Muslim builders generally built completely separate kitchens and Hindu builders built the kitchen but gave it a separate entrance. The Hindu households had two different kitchens (Fig-X) for vegetarian and non-vegetarian cooking, a religious and caste-based spatial practice which still exists in many homes in India today, albeit in a modified form.



C. Post-Independence housing (1947–2000)

The trauma of Partition and Independence in 1947 resulted in an immediate and huge demand for urban housing. The government's response was in the form of creation of Housing Boards and planned township developments, which resulted in standardized residential typologies, LIG (Lower Income Group), MIG (Middle Income Group) and HIG (Higher Income Group) flats, which focused on quantity rather than spatial quality. These apartment typologies contained a particular domestic arrangement, a kitchen (Fig-X) at the back of the dwelling, usually 5–8 square meters, for one woman to cook for a nuclear or extended family. In the 1960s, large residential tower blocks were built on the outskirts of major cities, under the influence of the International Style and especially of Le Corbusier's Chandigarh project. Although these buildings were initially hailed as positive, they were socially problematic as the shared courtyard space, which had been an integral part of traditional Indian domestic spaces, had disappeared.

D. Liberalization and globalization (2000–Present)

The economic liberalisation and the IT boom of the 1990s and 2000s unleashed a wave of residential development, which changed the aesthetics and typology of Indian housing. Gated communities with amenities like swimming pools, gymnasiums,

landscaped gardens and round-the-clock security became the ultimate goal of the new middle class. The open plan kitchen, adopted from the western residential architecture, was a status symbol as compared to the closed rear kitchen of the post-Independence period. But, as this paper contends, this

embrace of western spatial models has been done without due consideration of Indian climatic conditions, cooking practices (high-heat cooking with oil generates a lot of aerosol and odour) and social norms.

Table 2: Timeline of Key Influences on Indian Domestic Architecture

Period	Era	Key Architectural Influence	Kitchen/Home Characteristic
3300–1300 BCE	Indus Valley	Grid planning, brick construction	Courtyard kitchen; semi-public cooking
5th–7th CE	Classical Hindu	Vastu Shastra cosmology	SE kitchen (Agni), courtyard hierarchy
1600–1857	Early Colonial	Portuguese & Mughal hybrid styles	Detached/semi-detached kitchen; caste-specific zones
1857–1947	British Raj	Bungalow typology; EIC cantonments	Formal front-back separation; servants' quarters
1947–1980	Post-Independence	Chandigarh; LIG/MIG/HIG Housing Boards	Standardised rear kitchen 5–8 m ²
1980–2000	Modernisation	International Style tower blocks	Loss of courtyard; compact urban flats
2000–2020	IT Boom	Gated communities; global lifestyle brands	Open-plan kitchen as status symbol
2020–present	Post-COVID	Remote work; platform economy; smart homes	Multi-functional home; reduced kitchen emphasis

Source: Author's compilation based on King (1984), Kenoyer (1998), Madigan & Munro (1999), and field observation.

IV. VECTORS OF GLOBALIZATION RESHAPING THE HOME

A. Information Technology and connectivity

The smartphone has been the most influential domestic technology since the discovery of electricity. Digital connectivity has revolutionized the way Indians interact with their homes, with more than 800 million internet users in India as of 2024 (TRAI, 2024). The home is no longer a haven from the information environment, but rather a node that is always on. This has several spatial implications. First, all rooms now must be able to serve as a work or study room, which means they need to be well lit, acoustically separated and have the necessary electrical facilities. Second, the home entertainment

center has moved from the living room TV to screens in each room, diminishing the importance of the common living room. Thirdly, social interaction is taking place increasingly digitally, which means that large living areas are no longer necessary. The paradox highlighted by Primack et al. (2017) is especially relevant: research indicates that spending more than two hours a day on social media doubles the risk of feeling socially isolated, which can have a negative impact on the social role of the home as a space for human connection.

B. The Platform economy and home services

The bundle of food delivery, domestic services, and short-term lodging on digital platforms has turned into the commercialization of functions that were once

carried out in the home. In 2023, the food delivery agencies combined to process more than 4 million daily food delivery orders in India (RedSeer Consulting, 2023). These platforms are very successful at 'outsourcing' domestic work to service providers, which means that the amount of space and equipment needed in the individual dwelling unit is reduced. The impact on kitchen design is huge. Many households may no longer need to cook intensively, as justified by a fully equipped kitchen, a full-sized range, multiple storage cabinets, and dedicated prep areas, if they consume 4-5 meals per week from delivery services. For a large percentage of urban Indian households, a small kitchenette with the ability to reheat and cook light meals may be adequate.

C. Demographic mobility and the nomadic generation

India's internal migration has peaked: The Census 2011 counted 455 million internal migrants, which is estimated to have risen to more than 600 million by 2023 (NSSO, 2022). The mobility of labour, especially among the 15-35 age group, is fundamentally changing residential demand. Young professionals are more inclined to rent rather than buy, and to look at the home as a stepping stone than a long-term destination, with rental accommodation, co-living spaces and service apartments becoming the preferred choice. For this generation, Twenge and Campbell (2019), in their analysis of generational value change, state that 'success is not measured by owning property, but by experiencing richness'. The

architectural answer to this demographic is co-living, a residential typology that brings together small private rooms with high quality communal facilities: professional kitchens, co-working spaces, social lounges and concierge services. By 2023, more than 200,000 people were already living in co-living spaces in Indian cities, as offered by co-living operators like Stanza Living, Zolo, and OYO Life, showing the extent of demand for this typology.

D. Environmental consciousness and sustainability

The global sustainability agenda, crystallised in the United Nations Sustainable Development Goals (SDGs) and reinforced by growing local concern about air quality, water scarcity, and urban heat islands, is increasingly shaping residential design priorities in India. The Bureau of Energy Efficiency (BEE) introduced the Energy Conservation Building Code (ECBC) in 2007 and its residential extension in 2018, mandating minimum energy performance standards for new housing. The COVID-19 pandemic accelerated ecological sensitivity: surveys by Anarock Property Consultants (2021) found that 74% of Indian homebuyers considered 'green features' important in their post-pandemic home purchase decisions, up from 31% in 2019. Passive design strategies, orientation, natural ventilation, shading, thermal mass, that have been traditional features of Indian vernacular architecture are being revalued as both environmentally and economically rational choices.

Table 3: Platform Economy Impact on Indian Home Space Requirements

Platform Category	Key Players (India)	Traditional Space Displaced	Architectural Implication
Food Delivery	Swiggy, Zomato, Dunzo	Full kitchen, pantry	Kitchenette (8–12 m ²) may suffice
Home Services	Urban Company, Housejoy	Dedicated utility/laundry room	Reduced utility space
Short-term Rental	Airbnb, OYO	Guest bedroom	Convertible/multi-use rooms
Remote Work Platforms	Zoom, Teams, Google Meet	Commute time → home office	Dedicated home office mandatory

Platform Category	Key Players (India)	Traditional Displaced Space	Architectural Implication
Co-living Platforms	Stanza, Zolo, OYO Life	Full apartment	Private room + shared amenities model
Smart Home IoT	Alexa, Google Home, Philips Hue	Manual controls, dedicated panels	Integrated tech infrastructure throughout

Source: Author's compilation; market data from RedSeer Consulting (2023), JLL Research (2021), NASSCOM (2024).

E. Work timing

With the rise of remote work and global appointments, work schedules have completely shifted. The biological rhythms have been altered due to this change. Thus, while a worker might begin their day at 8 pm and finish at around 2 to 3 pm, requiring some refreshment during that period. The traditional concept of fixed lunch or dinner hours sitting together is no longer relevant, as delivery platforms are available round the clock to meet this demand. Meanwhile, the other members of the family may be sleeping during that time. This shift has a significant impact on how the kitchen space is used in an apartment.

V. THE KITCHEN AS A SOCIAL BAROMETER

From courtyard to open plan: a spatial history

No space within the Indian home has undergone more radical transformation than the kitchen, and none more accurately mirrors the social changes of each era. From the semi-public courtyards of Harappa to the segregated colonial service kitchen, the closed 'women's room' of the post-Independence flat, and the contemporary show-kitchen that doubles as a dining and social space, each spatial configuration encodes a specific set of social relationships, gender norms, and technological capacities. The closed rear kitchen to open plan kitchen was one of the most ambivalent developments, as Madigan and Munro (1999) suggested it was supposed to make cooking more social, and more democratic, but it also removed the 'backstage' where domestic workers (usually women-FigX) could perform their duties without constant social interaction. The open kitchen highlights the 'host-servant' dichotomy in permanent form, and this

can further reinforce rather than lessen the gendered expectations of domestic labor.



Source: "CHURNING," featured on page 101 of the 1915 book *The Harim and the Purdah: Studies of Oriental Women*, authored by Elizabeth

A. The Gender Dimension

The Malayalam film *The Great Indian Kitchen* (Jeo Baby, 2021) was a cultural flashlight on the discussion of kitchen space and gender in India, where the domestic kitchen can be a place of confinement for women. Although there has been substantial improvement in the participation of women in the workforce, women in urban India are still disproportionately burdened with unpaid domestic labor, with 37% of women working in the formal sector in 2023 compared to 23% in 2011 (ILO, 2024). According to the National Time Use Survey (MoSPI, 2019), Indian women spend an average of 299 minutes a day on unpaid domestic and care work, while Indian men spend an average of 97 minutes (Fig-X). Thus, the kitchen design has a direct equity aspect. Over-engineered, labor-intensive kitchen, where women are the main operators, perpetuates unequal distribution of domestic labor. On the other hand, a small, efficient, tech-enabled kitchen that takes less time and physical strain can enable more equitable kitchen configurations. The technological path to domestic

labor reduction is the increasing number of smart appliances, dishwashers, robotic cooking assistants, and delivery services.



Source: The great Indian kitchen movie

B. Defining households: the census contradiction

According to the Census of India, a household is 'a group of persons who normally live together and have a common kitchen. This definition poses a paradox, as the official policy still requires a kitchen in each

dwelling unit as a precondition for it to be counted as a legitimate household, while demographic and lifestyle trends indicate that the shared kitchen is becoming less relevant for household formation. The Census Bureau of America has already started to investigate how to describe and measure the living arrangements of Americans beyond the family/nonfamily binary, using terms like cohabiting or unmarried couples, and POSSLQs (persons of the opposite sex sharing living quarters) (U.S. Census Bureau, 2022).

India's urban planning and housing policy needs to face a similar definitional shift. A household-based definition of housing policy based on the shared kitchen may lead to the creation of housing units that are too large for single-person households, wasteful in terms of environmental impact, and unaffordable for the increasing number of young migrants in urban areas who do not require a full domestic kitchen.

Table 4: Kitchen design evolution in Indian homes

Era	Location in Home	Size (approx.)	Social Character	Gender Dynamics
Pre-Colonial	Courtyard/rear	Variable / open	Semi-public; communal	Collective women's space
Colonial Bungalow	Detached/semi-detached	20–40 m ²	Strictly segregated	Servant-operated; owners absent
Post-Independence Flat	Rear/service zone	5–8 m ²	Private; invisible	Primary female domain
2000s Apartment	Integrated/open plan	8–15 m ²	Display space; social hub	Performative; shared but unequal
2030s+ (Projected)	Flexible / modular	5–20 m ² (variable)	Optional; tech-mediated	Gender-neutral; AI-assisted

Source: Author's synthesis from Kenoyer (1998), King (1984), Madigan & Munro (1999), and survey data.

VI. COVID-19 AND THE ACCELERATED SPATIAL TRANSFORMATION

The COVID-19 pandemic (2020–2022) compressed several decades of residential design evolution into two years, functioning as a brutal accelerant of pre-existing trends while introducing entirely new spatial requirements. Three primary effects are identified.

A. The home as workplace

In 2019, around 8% of India's formal workforce worked remotely, a number that grew to 35% in April 2020 during the first lockdown (NASSCOM, 2020). As of now, although the percentage of full-time remote work has subsided to about 18% of formal sector workers, hybrid work is now the norm in the technology, finance and media industries. This

demographic has made the need for a separate home office or at least a 'flex room' that can be used as a bedroom and office a must-have feature in residential design.

B. Minimalism and the rejection of excess

The pandemic has led to a major rethinking of the link between spatial scale and quality of life. Social events were not allowed and large reception rooms and elaborate entertainment areas became redundant. At the same time, the more time spent at home, the more people became aware of the quality of the environment, such as light, ventilation, acoustic comfort, and access to outdoor space. According to survey data from Anarock (2021), 68% of Indian home buyers after the pandemic considered 'quality of indoor environment' as a key factor when considering residential properties, rather than just square footage.

C. The full kitchen's fall

Ironically, the pandemic also drove a replacement of home cooking with delivery services for a large part of the urban population, who were forced to stay home for long periods. The financial and convenience aspects of food delivery via an app versus the time, effort and waste of cooking every day were persuasive for couples, singles and older residents. According to Knight Frank (2021), 43% of urban Indians surveyed said they were cooking less complete meals per week since the pandemic and were turning to delivery services. The functional needs of the kitchen were reduced.

VII. DESIGN GUIDELINES FOR FUTURE INDIAN HOMES

Drawing together the historical, sociological, and technological analyses presented above, this section proposes eight evidence-based design guidelines for residential architecture in India over the 2025–2075 planning horizon.

Guideline 1: Adopt a flexible, reconfigurable spatial vocabulary

The 65–70 year design life of a building demands that its spatial organisation accommodate multiple cycles of household formation, lifestyle change, and technological evolution. Fixed-wall typologies that

prescribe a permanent kitchen, a defined number of bedrooms, and a formal sitting room are structurally obsolete on the day they are built. Future residential design should employ a lightweight, movable partition system by incorporating demountable walls, sliding panels, fold-away furniture, and multi-purpose fittings that allow residents to reconfigure their spatial organisation without structural intervention. Japanese architects such as Shigeru Ban have pioneered such systems through the 'shinkenchiku-sha' (new construction) approach that treats domestic space as a continuously adaptable organism.

Guideline 2: Introduce a scalable kitchen typology

Rather than mandating a single kitchen specification for all household types, residential designs should incorporate a scalable kitchen typology: a compact kitchenette (8 to 10 sqm) as the baseline unit for single-person and delivery-dependent households, upgradeable to a full domestic kitchen (15 to 20 sqm) by the expansion of modular cabinetry and appliance bays. The kitchenette baseline must include high-performance ventilation (essential for Indian cooking regardless of scale), an induction or hybrid hob, a countertop oven/microwave, and a compact dishwasher. Shared 'community kitchens' at the building amenity level can provide full professional-grade cooking facilities for residents who wish to cook elaborate meals without maintaining the infrastructure in their private units.

Guideline 3: Modify the minimum standards in the NBCS and Building Rules

The design of houses follows certain norms. In order to incorporate future trends into house design, the minimum standards that are set out in the Building Rules and National Building Code, need to be modified.

Guideline 4: Mandate dedicated remote work spaces

All residential units of 2BHK and above should incorporate a dedicated work alcove or flex room with: wired Ethernet connectivity, a dedicated electrical circuit for computing equipment, acoustic separation from adjacent sleeping spaces, and artificial lighting that meets ergonomic standards (500 lux at desk level,

with glare control). In 1BHK units, a 'work nook' of minimum 2.5 sqm integrated into the bedroom design should be standard. Building-level co-working facilities provide shared alternatives for residents who cannot accommodate a private office.

Guideline 5: Integrate passive environmental design

Future Indian houses should re-instate and technologise the passive environmental strategies of vernacular architecture: building orientation designed for cross-ventilation and solar control; deep verandas and *chajjas* as solar shading devices; courtyard or atrium elements to provide stack-effect ventilation; thermal mass in floor construction; and green roofs or solar PV as standard features. Indian Green Building Council (IGBC) Green Homes Rating system offers a practical way to measure these attributes. Ensure that all new residential buildings are at least 3-star IGBC Green Homes certified by 2030.

Guideline 6: Design for demographic diversity

The housing stock needs to support the entire range of household types, single people, couples with no children, nuclear families, blended families, elderly people ageing in place and multi-generational households. Design standards should include barrier-free design features (ground floor access and amenities accessible to wheelchair users) in all new multi-family housing, adaptable bathrooms (reinforced walls for future grab-rail installation, step-free shower access) in all units, and universal design principles throughout circulation and common areas. These provisions are not an optional add-on but a demographic imperative, especially in the context of India's rapidly ageing population, which is expected to reach 319 million

people over 60 years by 2050 (United Nations Population Fund, 2023).

Guideline 7: Embed smart technology infrastructure

The following should be standard in all new residential construction: Gigabit Ethernet to every room, a home automation controller hub, smart metering for electricity, water, and gas, and a solar-ready electrical panel. Smart home technology should be designed to increase the autonomy of the occupants, so that they can live independently, reduce the domestic labour, and optimise the use of energy and water, critically, and not only for technological novelty. Design and procurement criteria must include the difference between technology that is used to serve the resident and technology that is used to monitor or commercially exploit the resident.

Guideline 8: Reimagine the home's relationship with the City

The pandemic has shown that homes that are designed only as a retreat from the city are not enough. In the future, the house should be more consciously integrated into a network of shared facilities at the neighbourhood level: productive green spaces (community gardens), quality common spaces and co-working spaces, shared mobility facilities (electric vehicle charging, bicycle storage), and, crucially, public realm quality, making the space between houses as liveable as the space within. This neighbourhood-level integration can be achieved through the 'fifteen-minute city' model, which was pioneered by Carlos Moreno (2020) and has been adopted in Paris, Bogotá and Melbourne, and should be systematically adopted in Indian cities.

Table 5: Summary of proposed design guidelines for future Indian homes

SN	Guideline	Key Design Response	Target Metric / Standard
1	Flexible Spaces	Movable partitions, fold-away furniture	60% of internal walls demountable
2	Scalable Kitchen	8–10 m ² base, upgradeable to 20 m ²	Shared community kitchen at podium level
3	Home Office	Flex room or work alcove in every unit	Min. 2.5 m ² , 500 lux, acoustic separation

SN	Guideline	Key Design Response	Target Metric / Standard
4	Passive Environment	Vastu/vernacular orientation, deep eaves, courtyard	Min. IGBC 3-star Green Homes
5	Universal Design	Step-free access, adaptable bathrooms	100% visitability in new MF housing by 2030
6	Smart Infrastructure	IoT backbone, smart metering, solar-ready panel	Gigabit Ethernet to every room; BEE 5-star
7	City Integration	15-minute neighbourhood, shared amenity layer	Amenity ratio: 1 community hub per 200 units

Source: Author's synthesis; standards reference from IGBC (2023), BEE (2023), and Moreno (2020).

VIII. DISCUSSION: LIVING WITH CONTRADICTION

The main paradox that is discussed throughout this paper is the paradox of permanence and impermanence. The same person who changes their cell phone every two years could live in the same apartment for a lifetime. A young professional who loves to travel and live in different countries, may, when children come into the picture or a parent develops a chronic illness, suddenly yearn for a home and a sense of stability. Architecture must be able to accommodate both of these human realities at once. This is nothing new. Indian vernacular architecture has always been in a state of seeming paradox: ancient and adaptive, prescriptive and flexible, cosmologically determined and practically responsive. What today's Indian architects are challenged to do is to re-discover this ability to be creative and contradictory: to build homes that are stable and flexible, private and communal, technologically sophisticated and environmentally conscious, global and cultural. The profession of architecture needs to change. The knowledge and skills that are needed to build well-trained professional architects in today's market is not well represented in course curricula as this paper's author noted. India's architectural education is in dire need to include interdisciplinary approaches such as sociology, behavioural science, environmental psychology, data science and gerontology. Without a working knowledge of demographic shifts and platform economy trends, the architect is not capable of designing for the client's 50-year building life.

Policymakers, too, are confronted with a redesign challenge, one of regulatory frameworks. Regulatory traces of a social model that is quickly outmoding include building codes that require a minimum size for a kitchen in every household unit, housing finance requirements that demand a certain number of bedrooms for loan eligibility, and zoning codes that prohibit mixed use in residential zones. The design guidelines proposed in Section VII require updating these frameworks to include co-living, remote working, kitchen-less units, multi-generational housing and mixed-use development.

IX. CONCLUSION

This study argues that the impact of globalisation on Indian residential architecture is not just an aesthetic or stylistic one, but a structural one that is changing the fundamental spatial arrangements, family systems and lifestyle that determine the needs of a home. The kitchen, as an indicator of social change, is a vivid example of this: from the Harappan courtyard to the colonial segregated service room, from the post-Independence women's domain to the modern open-plan display area and now to a scalable, technology enhanced, optional amenity, the kitchen's evolution is a concise and comprehensible example of the progression of Indian domestic life. Seven evidence-based design guidelines have been developed, recognizing that future Indian homes should be flexible enough to accommodate the various family structures and lifestyle trends that have come about as a result of globalization; sustainable to meet India's environmental responsibilities; technologically

advanced to cater to the need for remote working and independent living; and culturally grounded to retain the human values of warmth, hospitality and multigenerational care that are integral to Indian domestic culture. The development of India's residential future transcends a simply technical barrier. It is a cultural imagination exercise, and as Heraclitus would have said, the only thing that remains constant is change itself, which means that architects, planners, policymakers and citizens must move beyond the traditional typologies and design of residential units.

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