From Slum to Social Infrastructure: Co-Designing a People's House for an Informal Settlement – Case Study of Sahlabad, Shiraz

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Abstract

Informal settlements continue to present one of the most persistent challenges to urban development in rapidly growing cities, particularly in the Global South. These settlements are typically characterized by inadequate infrastructure, social exclusion, and limited access to formal urban services, yet they represent sites of resilience and community initiative. In the case of Shiraz, Iran, the Sahlabad settlement exemplifies these conditions, where residents face multiple socio-economic and spatial disadvantages. This research investigates the role of a community (People's) house as a catalyst for enhancing public participation and collective action in such contexts. Employing a mixed-methods case study approach, the study draws upon field surveys, participatory workshops, and spatial analysis to identify design strategies that align with local needs and cultural values. Findings demonstrate that a community house fosters social interaction, strengthens neighborhood identity, and provides a platform for participatory decision-making. The study highlights the architectural and social significance of such facilities and proposes design principles that can guide future urban upgrading strategies in informal settlements in Iran and beyond.

Keywords: Informal settlements, public participation, community facilities, community house, social sustainability.

Highlights

- Designs a community "People's House" as social infrastructure for Sahlabad informal settlement.
- Integrates surveys, SWOT analysis and participatory workshops into the design process.
- Connects spatial strategies directly to participation, social cohesion, justice and everyday safety.

1. Introduction

Informal settlements represent one of the most pressing urban challenges of the 21st century, affecting over 1B people worldwide and continuing to expand rapidly across developing nations (Davis, 2013; Un-Habitat, 2020; UN-Habitat, 2004). Informal settlements are commonly formed in contexts where formal urban systems lack the capacity—or political will—to address the housing needs of vulnerable populations, including rural migrants seeking economic opportunities in cities. These settlements, characterized by inadequate housing, limited access to basic services, and insecure tenure, emerge primarily as a consequence of rural-urban migration, economic inequality, and insufficient formal housing provision (Davis, 2004; UN-Habitat, 2004). Yet their proliferation is not solely the outcome of demographic or economic pressure; the emergence of informal settlements reflects deeper systemic issues within urban governance, structural disparities, and uneven development policies that fail to provide low-income groups with access to adequate, affordable, and secure shelter (Roy, 2005; Un-Habitat, 2020).

The complexity of informal settlements extends beyond physical deficits to include social, economic, and cultural challenges. In addition to lacking basic services such as water, sanitation, and electricity, these areas often lack social infrastructure—schools, health centers, gathering spaces, and community facilities—that is essential for social cohesion and the development of social capital (Dempsey et al., 2011; Klinenberg, 2018a). Without such spaces, residents frequently face stigmatization, limited political representation, and exclusion from planning processes, resulting in what Holston (2008) terms "urban citizenship deficits" (Holston, 2008). These conditions erode trust in public institutions and undermine the foundations needed for meaningful participation in upgrading efforts (Putnam, 2000; Woolcock and Narayan, 2000).

This research addresses a critical gap in understanding how architectural and urban design interventions can support community participation in informal settlement upgrading. While substantial literature exists on participation and upgrading strategies, fewer studies explore the specific role of community facilities in cultivating social capital, strengthening collective identity, and offering sustained platforms for engagement in low-income urban contexts (Klinenberg, 2018b; Mitlin and Satterthwaite, 2004). The significance of this study lies in its integration of architectural design thinking with participatory development approaches, demonstrating how the physical configuration and programming of a neighborhood-level "People's House" can be informed by local needs and cultural practices (Gehl, 2011; Hamdi, 2013). By focusing on the Sahlabad settlement in Shiraz, the research

contributes empirical evidence from a Middle Eastern informal context that is underrepresented in the international literature on community-based upgrading.

The Sahlabad settlement in Shiraz, Iran, provides a compelling case through which to examine these dynamics. The proposed "People's House" serves as both the design outcome and methodological instrument of this research. Rather than applying a generic or externally derived model, the research seeks to understand community needs, preferences, and lived experiences through direct engagement with residents. The design process, informed by field surveys, participatory workshops, and spatial analysis, aims to produce a community facility that responds to local cultural practices, economic constraints, and spatial realities.

This study contributes to the domain of participatory design in resource-constrained environments, illustrating how architectural processes can be adapted to engage marginalized communities. It adds to the emerging body of work on social infrastructure in informal settlements by demonstrating how modest, context-responsive facilities can catalyze broader community development processes. In particular, this research aims to answer the following questions: 1) How can the design of a People's House in the Sahlabad neighborhood of Shiraz encourage resident participation and contribute to the upgrading of informal settlements? 2) What architectural and community-based strategies can enhance quality of life by fostering participation and social interaction among the residents of Sahlabad?

2. Background

Informal settlements continue to pose some of the most persistent challenges to urban development in rapidly growing cities, especially in the Global South (Mitlin and Satterthwaite, 2012; Un-Habitat, 2020). These settlements typically arise where formal urban systems fail to meet the housing needs of low-income and migrant populations (Davis, 2004; Roy, 2005). Their formation reflects not only demographic pressures but also broader social, economic, and governance deficiencies (Mitlin and Satterthwaite, 2012). Despite serving as essential entry points for new urban residents, informal settlements frequently exhibit inadequate infrastructure, social exclusion, and limited access to formal urban services, with over one billion people worldwide living in such conditions (ESCAP, 2023; UN-HABITAT, 2024; Un-Habitat, 2020).

As scholarship and practice have evolved, approaches to informal settlement upgrading have shifted significantly (Huchzermeyer, 2008; UN-Habitat, 2004). Early strategies focused on demolition and relocation, treating informal settlements

primarily as urban problems. Turner's foundational work in the 1970s reframed informal settlements as community-driven solutions, advocating for self-help housing processes that empower residents and value local knowledge (Turner, 1976). Later urban design theorists, including Sitte, Cullen, Alexander, and Madanipour, emphasized experiential, sensory, and socially responsive urban environments—ideas that influenced more participatory, incremental, and culturally grounded upgrading approaches (Alexander, 1987; Sitte, 1945; Gordon, 1961; Madanipour, 1996; Moughtin, 2007). By the early 2000s, global development discourse embraced in situ upgrading and collaborative planning as essential strategies (Mitlin and Satterthwaite, 2012; UN-Habitat, 2004). According to contemporary planning theories (Table 1), participation, trust-building, and resident empowerment have become central to sustainable urban development (Arnstein, 1969; Healey, 1998; Dempsey et al., 2011).

Table 1: Theories of residents' participation (spatial and visual perception)

#	Theory Developer	Year	Title of Theory/Text	Key Concepts
1	Camillo Sitte (Sitte, 1945)	1945	The Art of Building Cities	Continuity of visual perception in pedestrian movement
2	Gordon Cullen (Gordon, 1961)	1961	Townscape	Attention to successive visual perspectives in designing urban spaces
3	Ralph Erskine (Erskine, 1982)	1982	Urban Space	Attention to elements and multisensory aspects of public urban space
4	Aldo Rossi (Rossi, 1984)	1984	Urban Architecture	Attention to multisensory and collective aspects of public urban space
5	Christopher Alexander (Alexander, 1987)	1987	A New Theory of Urban Design	Gradual growth and non-engineered order of urban spaces
6	Cliff Moughtin (Moughtin, 2007)	1999	Urban Design: Street and Square	Understanding the essential elements of urban design with emphasis on the role of streets and squares in the city
7	Ali Madanipour (Madanipour, 2003)	2000	Design of Urban Space	Rethinking urban design with reflexive approach on social-spatial processes of urban space

However, significant challenges continue to constrain meaningful participation in informal settlement upgrading. In Sahlabad, for example, mistrust of authorities,

limited familiarity with participatory processes, and the unpredictable nature of informal-economy employment limit residents' ability to engage consistently. Power imbalances between communities and professionals often lead to tokenistic rather than genuine participation (Cooke and Kothari, 2001; Cornwall, 2008). The heterogeneity of residents—differing in migration histories, cultural backgrounds, and socioeconomic status—further complicates consensus-building (Mitlin, 2008; Rigon, 2022). These conditions, common across informal settlements globally, hinder long-term engagement and weaken the continuity of participatory processes (Mitlin and Satterthwaite, 2012).

Understanding participation in informal settlements requires recognizing the role of social capital. Features such as trust, networks, and shared norms enable cooperation and collective action (Putnam Robert et al., 1993; Woolcock and Narayan, 2000). Woolcock and Narayan (2000) highlight the importance of bonding, bridging, and linking forms of social capital, all of which are often limited in informal settlements (Woolcock and Narayan, 2000). Community facilities—including community centers or "People's houses" play a vital role in strengthening these forms of social capital (Dempsey et al., 2011; Hamdi, 2013). They provide spaces for interaction, dialogue, education, organizing, and connection to external institutions. Research in environmental psychology and urban sociology shows that physical design directly influences patterns of social interaction, sense of safety, and collective identity (Newman, 1973; Whyte, 1980; Gehl, 1987). In resource-constrained informal settlements, well-designed, flexible, and multifunctional community spaces are especially valuable.

International experiences further highlight the importance of community-centered approaches. The Orangi Pilot Project in Pakistan demonstrated the success of bottom-up, technical-support-oriented interventions in sanitation and community infrastructure (Hasan, 2006; McGranahan and Mitlin, 2016). In contrast, large-scale programs such as KENSUP in Kenya reveal the difficulty of sustaining participation without ongoing community engagement mechanisms (Huchzermeyer, 2008; Muraguri, 2011). Latin American upgrading—particularly the Favela-Bairro program—illustrated the significance of integrating social infrastructure and community spaces into physical upgrading strategies (Riley et al., 2001; Brakarz et al., 2002). These cases collectively underscore that successful interventions must combine participatory processes, social infrastructure, and long-term capacity building (Mitlin and Satterthwaite, 2012; Dovey et al., 2020).

Despite this accumulated knowledge, important gaps remain. Much existing research treats physical upgrading and social programming separately, and few studies explore how architectural design can actively support social capital

formation and participatory governance within informal settlements (Huchzermeyer, 2008; Dovey, 2012; Satterthwaite and Sverdlik, 2021). Participatory design processes tailored to resource-limited environments, particularly in Middle Eastern contexts, remain under-documented (Mitlin and Satterthwaite, 2012). There is a need for clearer frameworks that integrate community-center design, participatory methods, and social-capital-building strategies (Dempsey et al., 2011; Hamdi, 2013).

The Sahlabad settlement in Shiraz, Iran, provides a representative and insightful case for addressing these gaps. With its organic spatial growth, mixed building typologies, limited public amenities, and fragmented social networks, Sahlabad embodies the challenges common to informal settlements in the region. At the same time, its existing—but unstructured—community relationships present opportunities for targeted social and architectural interventions to support community development. Examining Sahlabad allows this research to investigate how a community center can enhance participation, strengthen social networks, and contribute to sustainable upgrading through context-responsive architectural design.

3. Methodology

The methodological framework for this study is grounded in a critical realist philosophical position, recognizing that informal settlements possess material, spatial, and social structures that exist independently of the researcher while also acknowledging that these structures are interpreted through cultural experience and community knowledge. This orientation is particularly appropriate for research in complex urban environments such as Sahlabad, where physical constraints, social dynamics, and cultural norms continuously interact. We argue that architecture functions not only as a technical discipline but also as a form of inquiry capable of linking empirical observation to design-based intervention.

To this end, the research adopts a mixed-methods case study strategy, reflecting the need to investigate Sahlabad within its real-world context, where the boundaries between environmental conditions, social processes, and design solutions are blurred. The methodological sequence follows a staged, iterative logic in which project requirements, design development, and pattern modeling inform one another. This logic is used here as the study's guiding structure and is represented in the workflow diagram shown in Fig. 1.

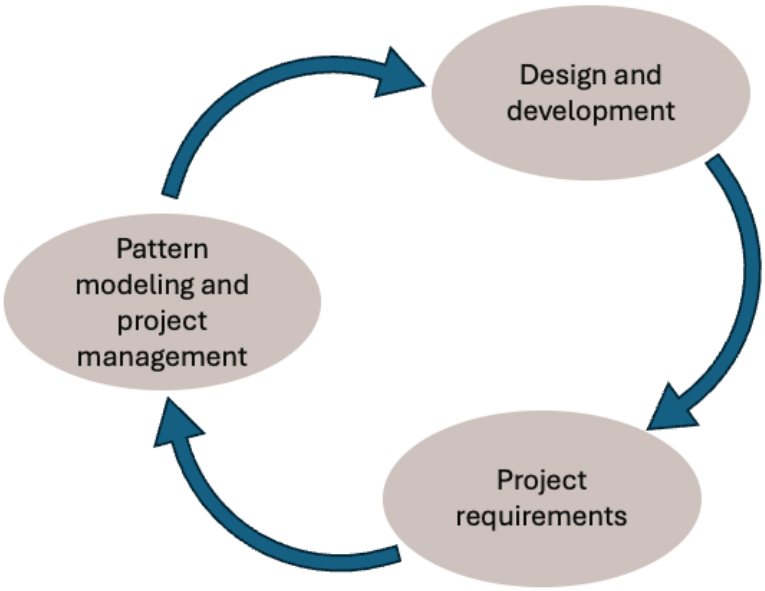

Figure 1: Conceptual Model for Creating a People's House in an Informal Settlement.

The research process began with a comprehensive literature and document analysis, incorporating international scholarship on community-based facilities, architectural theory, participatory design, Iranian planning policies, and previous upgrading initiatives. This stage also included analysis of maps, aerial imagery, and historical documents to situate Sahlabad within broader patterns of urban expansion and socio-spatial exclusion. Combining theoretical inquiry with contextual documentation—ensured that the subsequent design process remained grounded in an accurate understanding of both global models and local realities.

Following this, an extensive physical site analysis was conducted to document urban morphology, circulation paths, building conditions, microclimates, informal gathering spaces, and infrastructural gaps. Field instruments included direct observation, photographic recording, spatial mapping, and environmental assessment. These observations provided critical insight into the spatial and environmental variables that influence community behavior and inform the architectural requirements of the proposed People's House.

Quantitative data were collected using structured questionnaires administered in Persian by trained facilitators familiar with the community. The instrument comprised 18 items divided into three sections and was specifically developed for this study. The first section (items 1–4) captured socio-demographic characteristics, including nationality/ethnicity, age group, household size, and educational attainment. The second section (items 5–9) assessed needs and preferences related to the proposed People's House, asking respondents to indicate preferred adult

courses (such as English language, artistic, health and sports, religious instruction), desired programs for adolescents (including recreational and vocational activities and information technology), willingness to cooperate in neighborhood development if the center were established, and perceptions of which physical spaces (sports grounds, parks and green areas, a library) and service types (health services, spaces dedicated to women, social meeting spaces, educational facilities) were most lacking in Sahlabad. The third section (items 10–18) consisted of a five-point Likert scale (from "strongly disagree" to "strongly agree") measuring residents' attitudes towards the potential impacts of a local cultural–social center on quality of life, social interaction, economic opportunity, knowledge, and children's and adolescents' well-being.

Conceptually, the survey operationalized several constructs used in the analytical framework. Demographic structure was captured through items 1–4. Service and space needs were explored through items 5–6 and 8–9, which addressed desired educational and cultural programs, preferred adolescent activities, and priority physical facilities and services. Residents' readiness to participate in neighborhood development was addressed in item 7, which asked whether they would be willing to cooperate with the People's House and how frequently. Perceived benefits of a People's House were measured through the attitudinal battery in items 10–18, which tapped expected improvements in quality of life, social interaction, economic opportunity, knowledge, and the management of children's free time and delinquency.

Completed questionnaires were coded and entered into Microsoft Excel for analysis. Given the exploratory and design-oriented nature of the research, data were analyzed using descriptive statistics (frequencies and percentages). Responses to the Likert-scale items (10–18) were examined as individual indicators and interpreted collectively as expressions of residents' perceived benefits of establishing a People's House, rather than being subjected to inferential statistical testing. For clarity, the questionnaire domains and their corresponding items are summarized in Table 2.

Table 2. Survey domains and questionnaire items

Domain / construct	Items	Example content
Socio-demographic characteristics	1–4	Nationality/ethnicity, age group, household size, education level
Educational and cultural needs (adults)	5	Preferred adult courses (English, artistic, health/sports, religious, problem-solving, etc.)
Youth program needs	6	Preferred activities for adolescents (sports/recreation, vocational skills, IT/computers, handicrafts)
Willingness to participate	7	Readiness to cooperate in neighborhood development and expected frequency of participation
Preferred physical spaces	8	Need for sports grounds, parks/green spaces, library or other facilities
Perceived service deficits	9	Missing local services: health/medical services, spaces for women, social/meeting spaces, educational
Perceived benefits of People's House	10–18	Attitudes toward the impact of a cultural–social center on quality of life, cohesion, economy, knowledge and children's leisure

The final phase consisted of participatory design workshops intended to engage residents directly in shaping the spatial and functional qualities of the People's House. These workshops employed visual communication tools—diagrams, sketches, exemplar images—to facilitate dialogue and ensure inclusivity across educational backgrounds. Participants discussed preferred activities, spatial arrangements, functional adjacencies, and management strategies. This co-design process involves user participation, flexibility, and iterative refinement, reinforcing the research objective of grounding architectural decisions in local priorities and lived experience.

Throughout the study, data interpretation followed the analytical structure, organized around key variable categories. For clarity and completeness, these variables are reproduced here as Table 3, which summarizes how each category contributes to the evaluation and development of the People's House:

Table 3. Research variables and analytical framework

Variable Type	Description
Dependent Variable	The People's House (its spatial design, programming, and expected impact on community interaction)
Independent Variables	Site conditions, climate, available materials, and construction technologies
Mediating Variables	Community demographics, social capital levels, established social networks, interaction patterns
Moderating Variables	Infrastructure quality, neighborhood connectivity, and environmental context

These study variables guided the analytical process, ensuring that design decisions were informed by both the physical environment and social dynamics of Sahlabad. This multi-layered analytical structure supports a rigorous evaluation of how architectural intervention can influence community outcomes. Ethical considerations were central to conducting research in a vulnerable informal settlement. All participants provided informed consent, and the research objectives and potential outcomes were communicated clearly to avoid raising unrealistic expectations. Engagement was coordinated with local leaders to ensure cultural sensitivity and community approval. These measures underscore the researcher's responsibility to prevent harm, respect community agency, and ensure that participation is voluntary and meaningful.

Several limitations were acknowledged early on. The single-case design constrains external generalization, although the depth of contextual analysis supports analytical transferability to comparable settlements. Linguistic and cultural differences were mitigated through the involvement of local facilitators, though some interpretive filtering may have persisted. The participatory design approach may introduce tension between resident preferences and technical or regulatory constraints; such tensions were managed through transparent discussion during workshops. Validity was strengthened through triangulation of field observations, surveys, and participatory insights, as well as through extended engagement with the site and community. The combination of descriptive, analytical, and participatory methods ensures that the findings reflect both the material realities of Sahlabad and the architectural potential of a community-responsive People's House.

In parallel with the fieldwork and participatory activities, the architectural proposal was developed using a set of standard digital tools. Initial volumetric and spatial modelling was carried out in SketchUp, allowing rapid exploration of massing options and relationships between the building and its urban context. Detailed two-dimensional drawings, including plans, sections and elevations, were produced in AutoCAD for accuracy and technical coordination. The three-dimensional model was then exported to 3ds Max, where lighting and material studies were undertaken and final visualizations were rendered using V-Ray. Diagrammatic representations and post-production of the rendered images were completed in Adobe Illustrator and Adobe Photoshop in order to clarify the design concept, circulation patterns and program distribution for communication with both academic and community audiences.

4. Results

4.1. Socio-demographic and economic profile of Sahlabad

Sahlabad is located on the south-eastern fringe of metropolitan Shiraz and covers approximately 1.56 km^2. In 2006 the settlement accommodated 21,111 inhabitants in 4,511 households, with an average household size of 4.4 persons; by 2013 the population had risen to about 26,500 residents Within the wider system of informal settlements in Shiraz, Sahlabad has a medium–high gross density of around 128 persons/ha. An aerial view highlights a fine-grained, organically grown fabric surrounded by major arterial roads and industrial facilities (Fig. 2).

Figure 2: Aerial View of Sahlabad

The age structure is skewed toward youth and young adults. The majority of residents fall into younger age cohorts, which implies significant demand for housing, employment and educational and cultural facilities. The proportion of women is relatively high, which, together with a large share of unemployed young men, shapes specific social and safety needs in the neighborhood.

Migration has played a central role in the development of Sahlabad. Most households originate from rural areas of Fars province or small towns in other provinces, and moved to Shiraz primarily in search of employment and affordable housing. Low rents, cheap land and proximity to work opportunities were decisive motives for choosing Sahlabad as a place of residence. These migration dynamics have created a heterogeneous population with diverse needs but generally low and unstable incomes.

Economically, Sahlabad is characterized by a high share of low-income and informal employment. The neighborhood has the highest proportion of residents working in agriculture (about 23% of employed residents) among the informal settlements analyzed in Shiraz, due to the presence of cultivable land around the settlement. Many residents also work as industrial laborers in nearby factories, construction workers, drivers or small-scale vendors; only a small minority holds formal public-sector jobs. Unemployment levels in Shiraz more broadly have increased markedly over recent decades, exacerbating economic precarity in settlements such as Sahlabad. Table 4 summarizes key demographic and spatial indicators for Sahlabad.

Table 4. Key demographic and spatial indicators for Sahlabad

Indicator	Value	Source
Site area	approx. 1,564,225 m^2 (≈156 ha)	Detailed plan & field survey
Population (2006)	21,111 residents	
Number of households (2006)	4,511 households	
Average household size	4.4 persons/household	
Population (2013)	26,511 residents	
Gross residential density	≈128 persons/ha	
Main employment sectors	Agriculture, industrial and construction labor, informal services; low share of formal public employment	

4.2. Perceived problems and social sustainability challenges

Household surveys and secondary data reveal a cluster of interrelated social problems (Table 5). Residents identify insecurity, health deficits and overcrowding as the most pressing issues in the neighborhood.

Table 5. Main perceived problems in Sahlabad

Problem type	Share of respondents (%)
Insecurity, presence of troublemakers and drug users	28
Inadequate hygiene and sanitation	16
High congestion and overcrowding	21
All of the above problems simultaneously	16
No major problem reported	19

These issues are closely linked to structural drivers such as uncontrolled rural–urban migration, the failure of formal housing policies to accommodate low-income groups, and limited public investment in basic and social infrastructure. The lack of shared, well-managed public spaces and community facilities amplifies perceived insecurity and weakens social cohesion. An age pyramid prepared for the neighborhood (Fig. 3) illustrates the concentration of young people who face unemployment, crime and addiction risks.

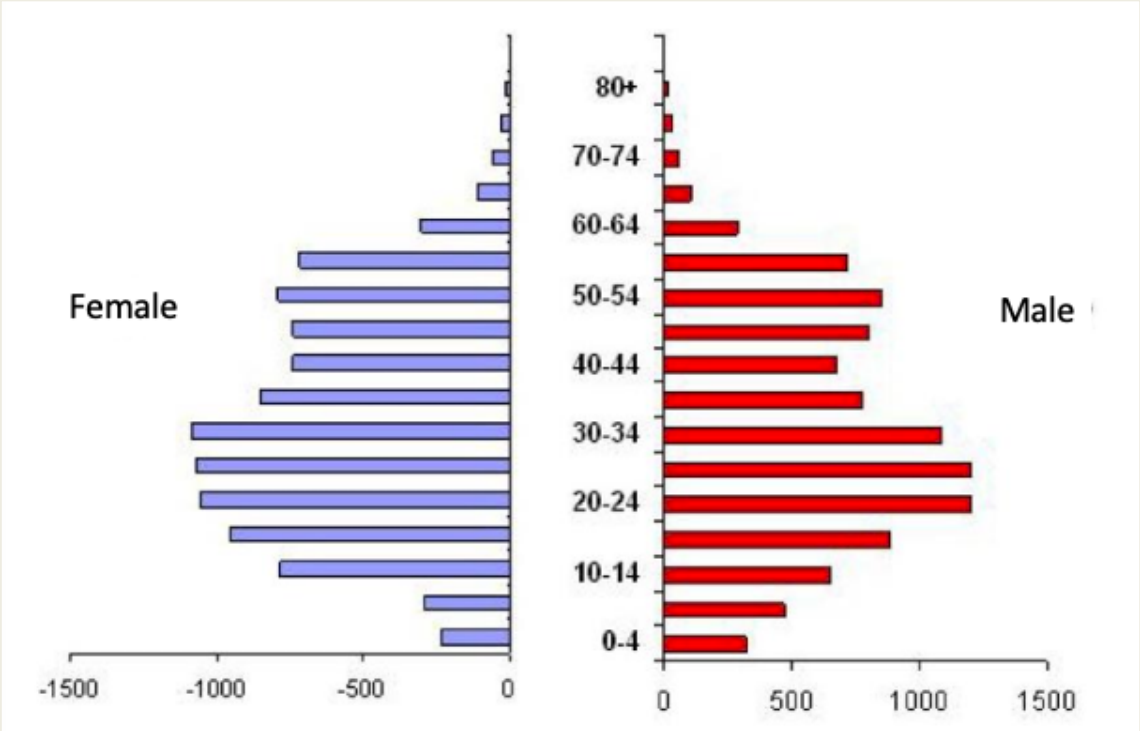

Figure 3: Age pyramid of Sahlabad

From a social-sustainability perspective, Sahlabad exhibits deficits in four key dimensions: justice, social cohesion, participation and security. Opportunities for collective decision-making are limited, cultural and educational amenities are scarce, and existing informal networks are not adequately supported by physical spaces. Together, these conditions reduce residents' sense of belonging and trust in institutions, undermining the potential for community-driven upgrading.

4.3. Spatial and environmental conditions

The settlement has a predominantly low-rise, fine-grained fabric with narrow streets and a mixture of residential, small commercial and industrial uses. Vacant and derelict plots are scattered throughout the area. While the traditional, courtyard-oriented houses and small parcels offer opportunities for incremental upgrading, the lack of clear building regulations and the juxtaposition of buildings with disparate heights and structural qualities generate environmental and visual problems. Fig. 4 illustrates how these conditions translate into a fragmented spatial structure at the settlement scale.

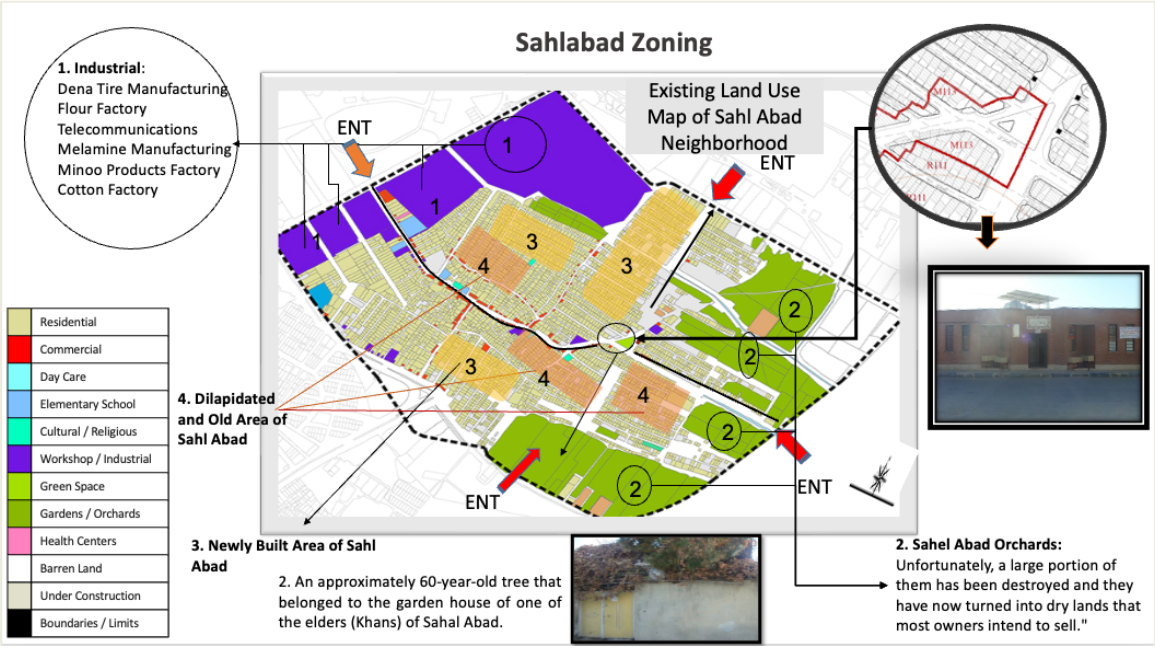

Figure 4: Zoning and sectorization of Sahlabad

The map distinguishes between industrial zones along the northern and western edges, remnants of agricultural gardens, the compact historic core and the more recently developed residential extensions. The project site lies at the intersection of these zones, between the older village fabric and the newer arterial road network,

which underscores its potential to function as a connector and shared focal point for different social groups within Sahlabad.

Public and semi-public open spaces are limited, and there is a significant shortage of green areas, cultural, sports and recreational facilities relative to city planning standards. Industrial activities on the fringes of the settlement create noise, pollution and heavy traffic, while also providing employment opportunities.

As shown in Fig. 5, the immediate context of the project site is characterized by a fine-grained network of alleys, small courtyards and long-established community landmarks, including the neighborhood mosque, zurkhaneh (traditional gym) and the historic “Qaleh” alley.

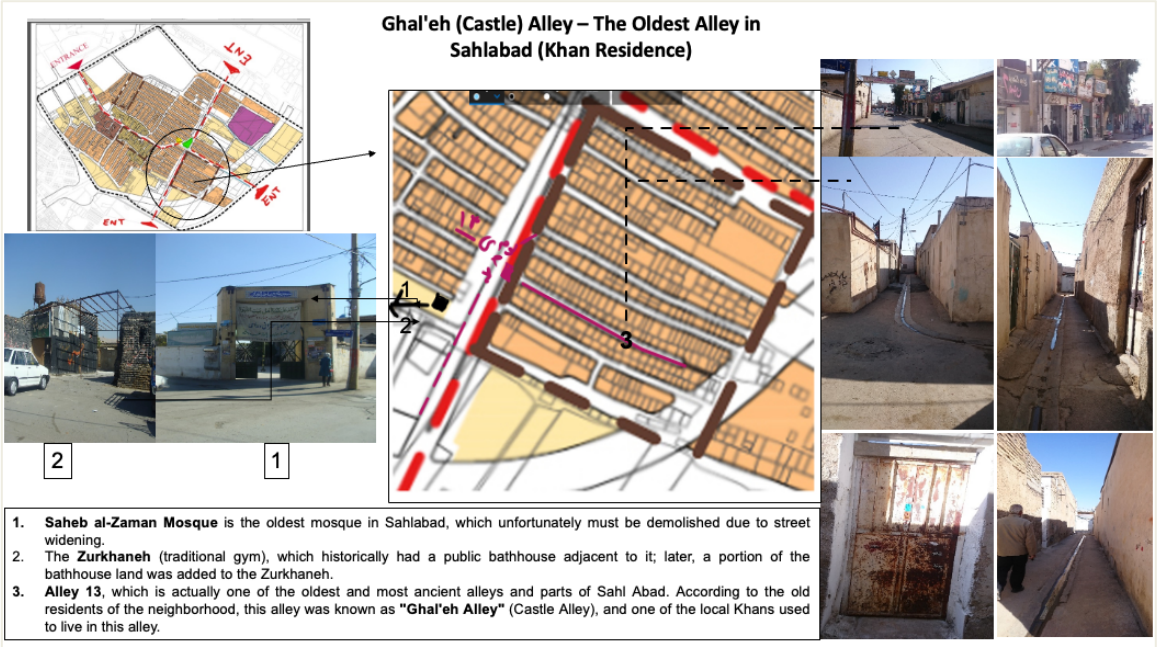

Figure 5: Historic core and alley network around the project area

These elements still organize much of the everyday social life of Sahlabad’s residents despite the physical deterioration of surrounding buildings. The proximity of the site to this historic core reinforces the argument for locating a People’s House here, where it can extend and modernize existing patterns of sociability rather than create an entirely new, disconnected center.

To synthesize these observations, a SWOT analysis was carried out, drawing on detailed-plan documents, field observations and community input (Table 6).

Table 6. Summary SWOT analysis for Sahlabad

Category	Key points
Strengths	Fine-grained, predominantly low-rise built fabric; presence of basic services in the wider area; strong informal commercial activity on the edges; proximity to industrial employment; existence of charitable and civic organizations.
Weaknesses	Shortage of cultural, recreational and green spaces; high visual clutter and derelict buildings; inadequate regulations for building adjacency and density; low social cohesion and high levels of crime, addiction and unemployment.
Opportunities	Existing urban-renewal policies and financial tools; potential to use vacant and underused plots for community facilities; ability to strengthen the commercial edge; scope to apply human-centered urban design and learn from successful national and international regeneration experiences.
Threats	Ongoing in-migration of low-income groups, continuing informality and physical deterioration; negative public perceptions of the area; limited private-sector investment due to perceived risk; potential for further social fragmentation and crime if conditions do not improve.

This analytical framework guided the identification of core problems that the proposed People's House should address: lack of safe and inclusive gathering spaces, weak institutional support for participation, limited cultural and educational opportunities, and the absence of a visible, shared focal point for the neighborhood.

4.4. Programmatic needs and functional requirements for the People's House

Based on the socio-spatial diagnostics, literature on social sustainability, and analysis of comparable cultural and community centers in Iran, a set of functional requirements for a People's House in Sahlabad was derived. Precedent studies, including the "Farshchian Cultural Center" in Isfahan and other community-oriented projects, informed the articulation of key programmatic themes such as cultural production, education, counselling, social support and participatory governance.

The spatial program is organized around five main objectives: 1) Enhancing safety and security in and around the facility; 2) Fostering social interaction and cohesion across different age and gender groups; 3) Supporting education and cultural activities for children, youth and adults; 4) Enabling participation and local governance, including neighborhood meetings and workshops; and 4) Promoting

empowerment and livelihood support, such as skills training and counselling. These objectives were translated into specific spatial and operational requirements (Table 7).

Table 7. Functional requirements and spatial implications for the People's House

Objective	Example functions	Spatial implications
Security and territoriality	Controlled entry, reception and information point; passive surveillance by staff and users	Clear main entrance connected to active internal spaces; good visibility to surrounding streets; lighting and sight-lines designed to reduce unsafe corners.
Social interaction and cohesion	Multi-purpose hall, indoor–outdoor gathering spaces, women's room, youth club	Central courtyard or plaza; flexible hall divisible into smaller units; semi-open verandas and terraces enabling everyday encounters.
Education and culture	Classrooms, library/reading room, workshop studios, exhibition space	Quiet, well-lit rooms grouped along circulation spines; possibility to open onto courtyard for events; storage for equipment and materials.
Participation and governance	Meeting rooms, neighbourhood council office, consultation rooms	Accessible ground-floor spaces near entrance; transparent façades to signal openness; movable furniture for different meeting formats.
Empowerment and support services	Small business incubator spaces, counselling rooms, health education	Clustered around quieter wings; direct but discreet access from street; adjacency to training rooms to support integrated programs.

The resulting spatial program is distributed vertically: active public functions such as reception, multi-purpose hall and primary community spaces on the ground floor; educational and workshop spaces on upper floors; and service spaces and ancillary rooms in semi-basement or roof levels. Fig. 6 locates the People's House within the wider neighborhood center, showing its relationship to surrounding streets, commercial frontages and existing social anchors such as the mosque and small shops.

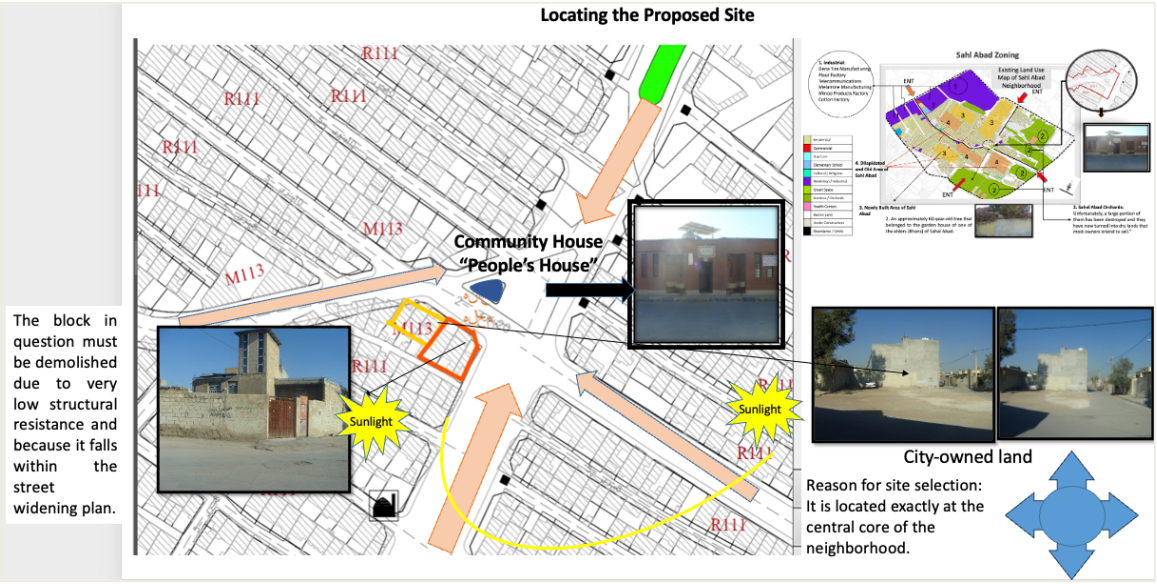

Figure 6: Site selection and position of the People's House within the neighborhood center

By occupying a municipal plot at this intersection, the project strengthens an already recognizable node of activity and ensures that the facility is within easy walking distance of most residents while remaining highly visible from primary pedestrian and vehicular routes.

4.5. Architectural outcome

Using the conceptual model for "creating a People's House in an informal settlement" (Fig. 1), the design process iterated between project requirements, pattern modelling and architectural development. The final proposal articulates the People's House as a neighborhood focal point positioned near existing commercial activity and accessible from primary pedestrian and vehicular routes.

The massing strategy draws on the notion of the traditional Iranian "Mahalleh" (local) center and the typology of an inward-oriented courtyard complex. A sequence of open, semi-open and enclosed spaces creates a gradient from public to semi-private, allowing women, children and other vulnerable groups to participate in activities within culturally acceptable boundaries. Vertical connections between levels are organized around the main void or courtyard, enhancing visual continuity and enabling informal surveillance.

The sequence of diagrams in Figure 7 summarizes this conceptual evolution. The first step involved “reading” the existing fabric by tracing the dominant movement axes and visual corridors through the site.

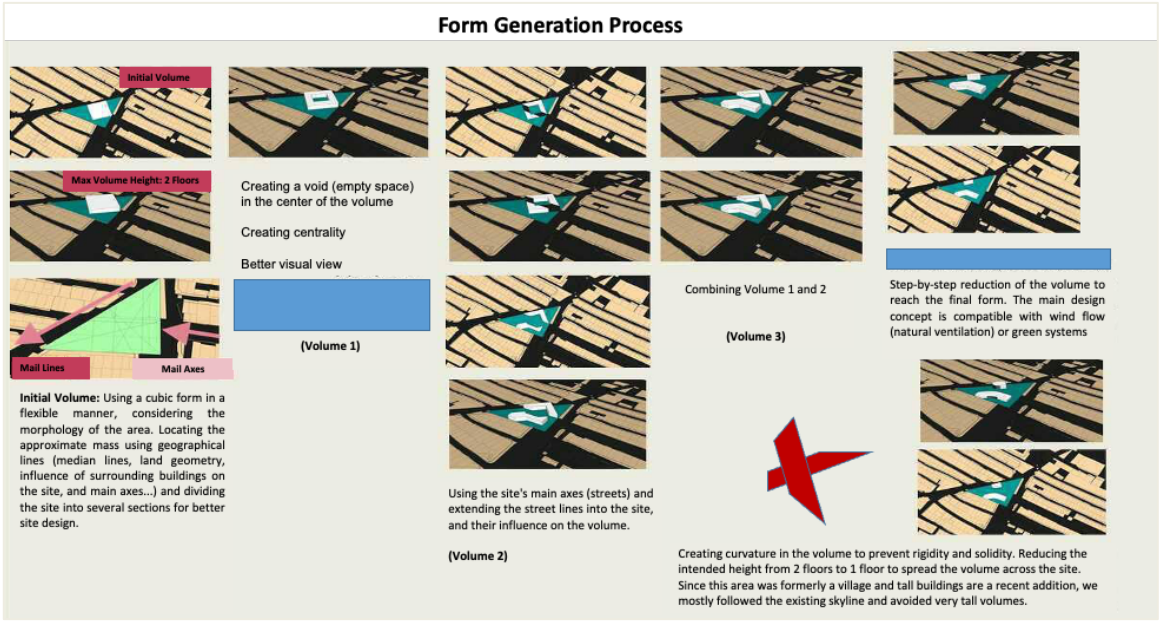

Figure 7: Massing sequence diagrams: reading the fabric, locating the void, and placing the volume

The second step identified a triangular residual space at their intersection as a potential communal void. In the third step, the volume of the People’s House is positioned and carved around this void to create an internal courtyard that both anchors the building and preserves essential desire lines. In this way, the project transforms a leftover space into a legible civic center while maintaining the continuity of the neighborhood’s everyday paths.

In addition to the building itself, particular attention was paid to the design of the surrounding open spaces so that they could support both everyday activities and emergency conditions. Table 8 summarizes the main goals, strategies and design policies that guided the landscape and site layout. Emphasis was placed on structural robustness, simple and easily legible geometry, clear separation of pedestrian and vehicular routes, and the provision of open and semi-open areas that can operate as safe assembly points in the event of earthquakes or other disasters, reflecting both local risk conditions and residents expressed concerns about safety.

Table 8. Landscape goals and strategies.

Goal	Strategy	Policy
Security	Resilience against Natural Disasters	• Use strong, durable, and safe elements. • Create suitable open and enclosed spaces to serve as shelter during critical moments (like earthquakes). • Avoid uncontrolled vegetation (such as boxwood hedges) and avoid spatial complexity to prevent confusion/disorientation.
Spatial Geometry	Structural Strength	• Use strong and durable construction materials.
Spatial Geometry	Physical / Morphological Aspect	• Use simple geometry (like squares and rectangles). In addition to visual beauty and easier perception of the park, this creates open spaces that are responsive to critical conditions.
Flexibility	Spatial Elements	• Maintain appropriate building heights. • Ensure unified (integrated) building construction.
Flexibility (implied)	Spatial Positioning (Location)	• Create convenient and suitable access to all open and enclosed discontinuous spaces. • Provide fast, easy, and safe vehicle access to specific points on the site for service delivery. • Separate pedestrian and vehicle paths using appropriate paving and planting (trees/shrubs).

The final design reconciles site constraints, climatic considerations and budgetary limitations with the social objectives identified by residents and the research. It represents a spatial translation of the social-sustainability indicators emphasized in the thesis—justice, cohesion, participation and security—into concrete architectural elements such as entrances, courtyards, circulation systems and room arrangements.

At the scale of the plot, the overall organization of the building and its open spaces is shown in Fig. 8. The site plan illustrates how the People's House is positioned to reinforce the existing intersection, with its main entrance aligned to the dominant pedestrian axis and the built volume framing a central courtyard. Service access, parking and delivery areas are kept to the edges of the plot, allowing the interior of the site to function primarily as a pedestrian domain. The arrangement of paved

areas, planting and semi-open verandas in Fig 8. reflects the intention to create a permeable civic space that can accommodate both everyday passage and longer stays.

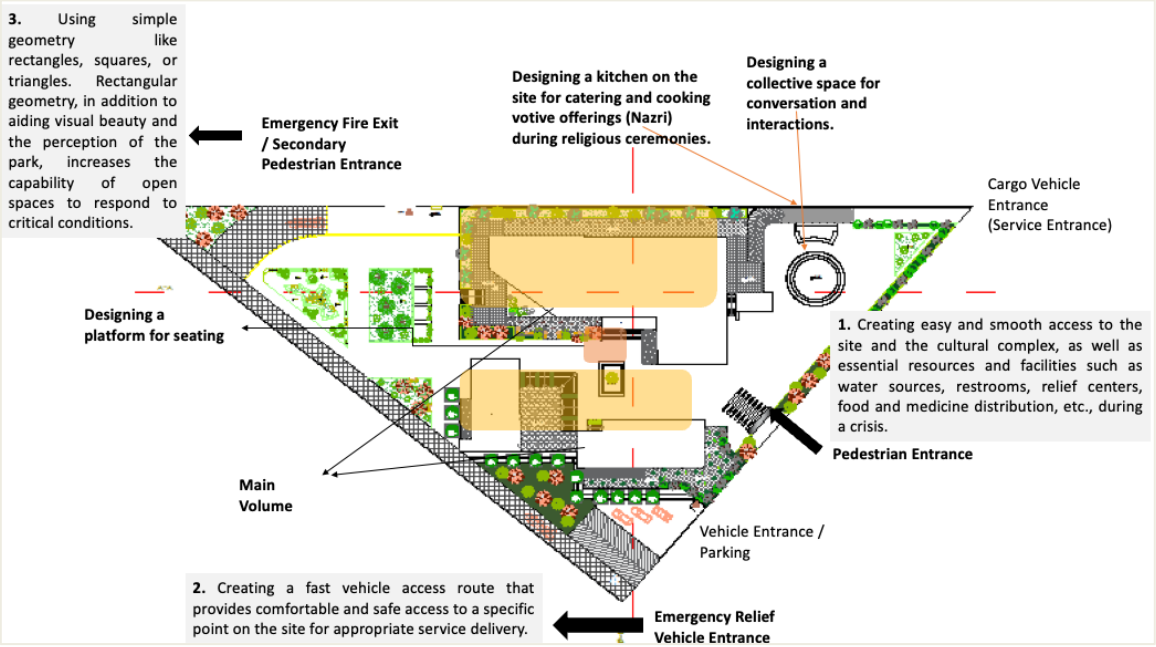

Figure 8: Site landscape plan

The internal organization of the People's House reflects the functional priorities outlined in Section 4.4. On the main ground floor (Fig. 9), the most public and active uses are concentrated around the entrance and courtyard, including the foyer, multi-purpose hall and amphitheater, youth and women's spaces, and information and reception points.

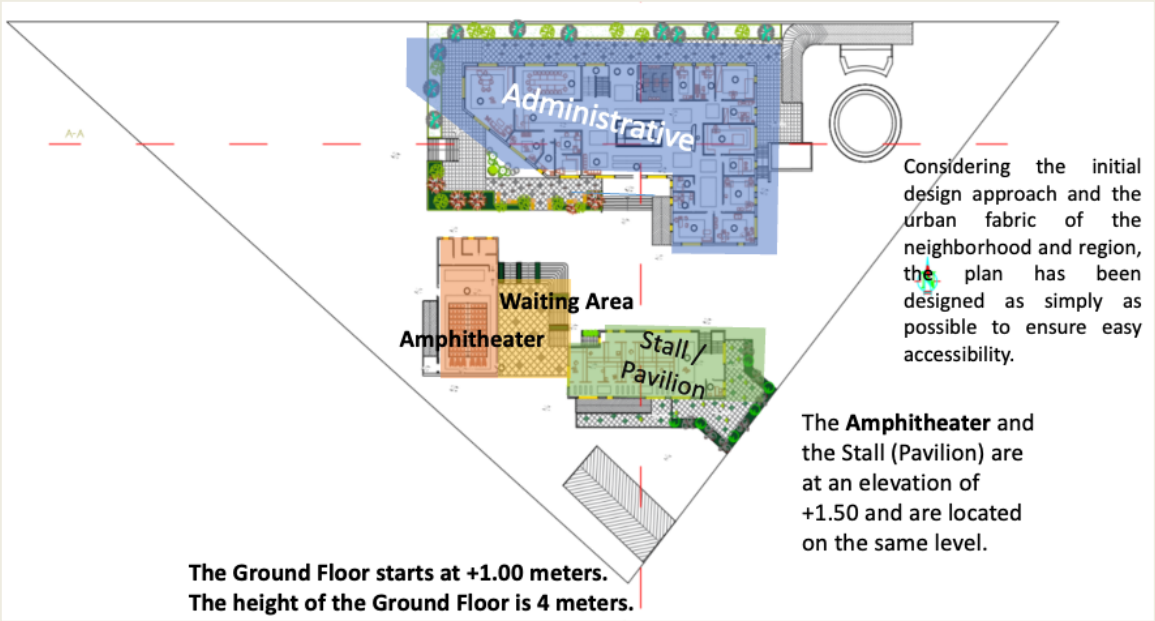

Figure 9: Ground floor (amphitheater, foyer, courtyard, public spaces)

This level is conceived as an extension of the street, allowing residents to enter easily, attend events or meetings, and move fluidly between interior and exterior spaces without crossing strong thresholds. The central courtyard, clearly visible in Fig. 9, acts as the primary social condenser, linking the different rooms and providing a shared outdoor room for informal gatherings and community events.

More specialized and quieter functions are accommodated on the lower and upper levels. The semi-basement (Fig. 10) contains workshops, service rooms and a café–library with direct access to the courtyard via ramps, enabling crafts production, training and small-scale economic activities while maintaining good visibility and safety.

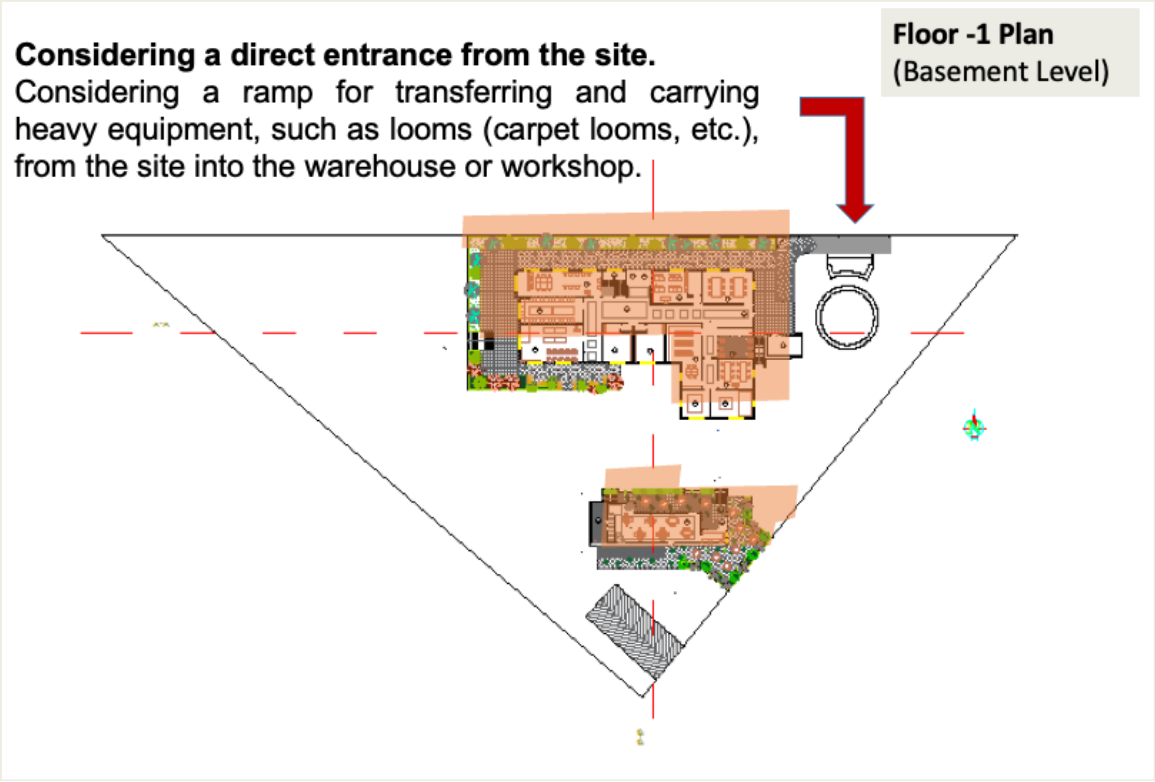

Figure 10: Basement / -1 (workshops, service spaces, café-library)

The first floor (Fig. 11) hosts classrooms, counselling rooms and a small gallery, grouped along circulation spines overlooking the central void. This vertical distribution creates a gradient from highly public, flexible spaces at ground level to increasingly focused learning and support spaces above and below, reinforcing both the social and educational roles of the People's House.

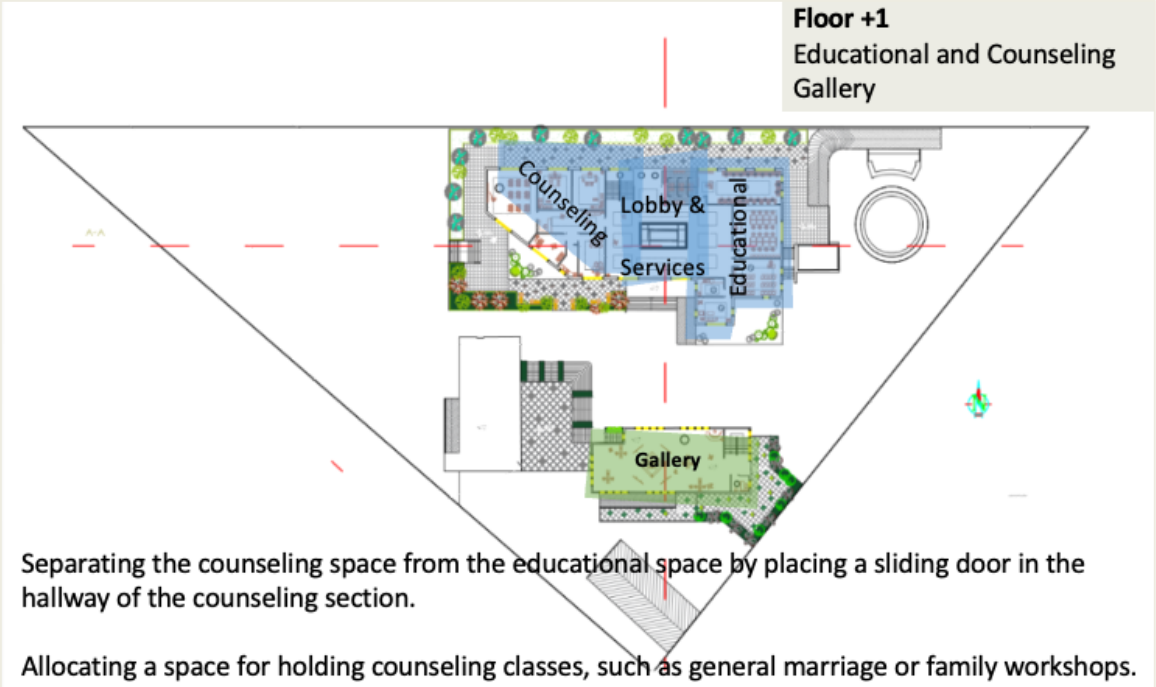

Figure 11: First floor (classrooms, counselling, gallery)

Taken together, the siting, massing and internal organization of the building translate the abstract goals of social sustainability—justice, cohesion, participation and security—into an architectural configuration that is legible to residents and capable of supporting the everyday practices through which community life in Sahlabad is reproduced.

5. Discussion

5.1. Synthesis of findings

This study addressed two main questions: (1) How can the design of a People's House in the Sahlabad neighborhood encourage resident participation and contribute to the upgrading of an informal settlement? and (2) What architectural and community-based strategies can enhance quality of life by fostering participation and social interaction among residents?

The findings show that the proposed People's House directly responds to the principal deficits identified in Sahlabad's socio-spatial profile. The settlement is characterized by high levels of insecurity, a shortage of cultural and educational facilities, and weak institutional frameworks for participation, yet it also benefits from strong informal networks, vibrant commercial activity and the availability of underused land. Situating the People's House at the interface between residential

fabric and commercial edges, and organizing its internal spaces around an accessible public courtyard, leverages these existing assets and concentrates them into a tangible civic platform for collective action.

Architecturally, the project illustrates how relatively modest spatial interventions can structure opportunities for participation. Locating meeting rooms, neighborhood council offices and flexible multi-purpose halls in close proximity to the main entrance lowers psychological and physical thresholds to engagement: residents can attend assemblies, training sessions or consultations without having to navigate long corridors or restricted areas. Dedicated women's spaces and youth areas address gender- and age-specific needs highlighted in the demographic analysis, while remaining consistent with local cultural norms.

The emphasis on open and semi-open spaces, visual transparency and multiple lines of informal surveillance addresses residents' concerns about safety and crime. Active ground-floor functions oriented towards the street and courtyard increase natural surveillance and everyday presence, contributing to a greater sense of security in the immediate surroundings and directly targeting one of the most frequently reported problems in the neighborhood—fear of "troublemakers" and unsafe streets.

By incorporating classrooms, workshop studios and small business support spaces, the People's House also links participation to concrete socio-economic benefits. Skills training, counselling and micro-enterprise support are intended to mitigate unemployment and underemployment among young men and women, which the case study identified as major drivers of poverty and related social problems. In this way the project integrates social, cultural and economic functions, reflecting contemporary understandings of social sustainability as the simultaneous pursuit of quality of life, human development and community self-reliance.

5.2. Contribution to community-based architecture in informal settlements

The Sahlabad People's House contributes to debates on community-based upgrading in informal settlements in three main respects. First, it reframes the community facility not as a single-purpose building but as a social infrastructure node that performs multiple roles: a safe meeting place, a cultural and educational hub, an interface between residents and municipal institutions, and a catalyst for small-scale economic initiatives. This conception aligns with asset-based and participatory approaches that seek to build on existing strengths rather than focusing solely on deficits.

Second, the project demonstrates how context-specific design criteria, derived from detailed socio-demographic analysis and a structured SWOT assessment, can shape architectural decisions in ways that are directly traceable to community needs. The translation of social-sustainability dimensions—justice, cohesion, participation and security—into concrete spatial strategies (such as entrance configuration, courtyard design, visibility and distribution of functions) offers a framework that can inform similar interventions in other informal settlements while still allowing for local adaptation.

Third, the research underscores the importance of process as outcome. Although the thesis primarily presents the design product, the participatory diagnosis and iterative clarification of program requirements constitute an important form of empowerment in their own right. Residents' involvement in articulating problems, prioritizing functions and evaluating design alternatives contributes to the development of "linking social capital" between the community and external actors. Even if the full construction of the People's House is delayed or implemented in phases, the process can leave behind strengthened expectations of participation, accountability and shared decision-making.

5.3. Limitations and future work

Several limitations should be acknowledged. The research is based on a single case in one Iranian city, which constrains the extent to which findings can be generalized to other contexts. Furthermore, the People's House has not yet been fully implemented or evaluated in use; as a result, discussion of its impact on participation and quality of life remains prospective rather than empirically confirmed. Participation during the design phase was also shaped by residents' limited time, irregular work schedules and broader structural factors such as mistrust of government and institutional discontinuities, which may have restricted the range of voices represented.

Future research should therefore focus on longitudinal evaluation of built community facilities in informal settlements, combining post-occupancy studies, ethnographic observation and quantitative indicators of participation, safety and well-being. Comparative studies across different Iranian cities and other Middle Eastern contexts would help clarify which aspects of the People's House model are transferable and which are context-specific. Additional work could also explore governance and financing arrangements that sustain such facilities over time, including partnerships between municipalities, local organizations and residents.

6. Conclusion

The Sahlabad case study demonstrates that informal settlements, despite multiple structural deficits, contain significant latent capacities that can be activated through carefully designed community infrastructure. By grounding the design of a People's House in detailed socio-spatial analysis and explicit social-sustainability criteria, the research outlines a viable pathway for integrating architectural design with participatory, community-based upgrading strategies.

Overall, the findings suggest that a well-located, multi-functional and culturally attuned People's House can operate as a catalyst for participation, social cohesion and incremental upgrading in Sahlabad and, by extension, in comparable informal settlements. Realizing this potential, however, depends not only on an appropriate spatial configuration but also on sustained institutional support, inclusive governance arrangements and long-term commitment to the social as well as physical dimensions of urban development.

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