



## HALF HOUSING

Elemental  
Iquique, Chile

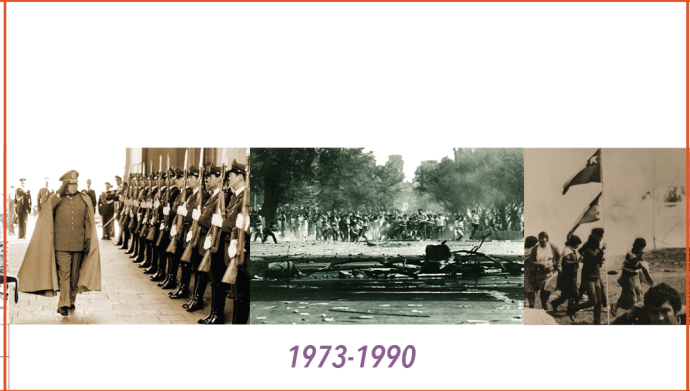
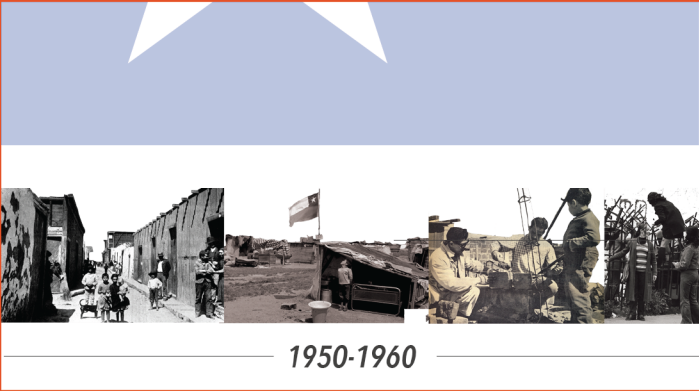
*original*



*expanded*



HISTORY



COUP D'ÉTAT

LIBERALISM

SOCIALISM

Dictatorship

NEO-LIBERALISM

SOCIAL REFORM

NATIONALIZATION

PRIVATIZATION

SUBSIDIZATION



*de la toma*

*de tierras a la*

*toma de la sociedad*



*from the seizure*



*of the land to the*

*seizure of society*



(translation, top right-down, to top left-down)  
 WE FIGHT FOR MORE THAN A HOUSE.

MPR - Peoples' Revolutionary Movement

We also fight for a fair salary for all workers for the health of the children we fight.

For the education of our comrades and the children of our comrades we fight.

For Chile to be a truly workers' country, for Chile to be a socialist country.

AND WE ARE NOT GOING TO STAY WITH OUR ARMS CROSSED.



Socialist President Salvador Allende meets with the poladores, 1971.

## Half Housing

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Bria Cole - Jr. Osei Wireko - Raghd Zaout

In the 1950s to 1960s, the Chilean central government attempted a model of individual homeownership that would imitate the American market-oriented model. In response to abysmal social housing conditions, Chileans would seize land to develop their own housing option. People would call themselves the pobladores, roughly translated to "inhabitants." Neighborhoods were built based on solidarity and shared struggle and often offered childcare, libraries, and community meals.



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On September 11, 1973, socialist President Salvador Allende was overthrown by the Chilean military, backed by the United States of America. General Augusto Pinochet assumed power, which began a 17-year regime that explicitly sought to exterminate anyone loyal to Allende, socialism, and leftist ideals.

*Seen above are Secretary of State Henry Kissinger to the left, with Allende's broken glasses to the right.*



After the CIA-backed 1973 Chilean coup d'état overthrew President Allende, ushering a 17-year dictatorship under General Augusto Pinochet.

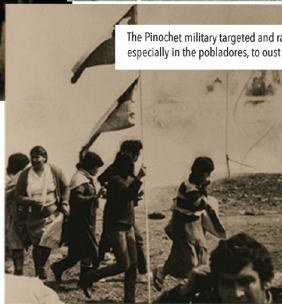
**Chilean Squatters Defy Military State, Hold to Muddy Tent City**  
 SANTIAGO, Chile, Nov. 18.—The military hold on the situation appears to publicly allow for a horizontal fight. Services for daily needs and business are provided by the state, it seems clear to the hundreds of thousands of the squatters who have taken over the city's services, markets and shops. The heavily overpopulated, a 1980s tract built under the Chilean presidential palace has been transformed into a pre-fabricated battleground between thousands of poor families and Gen. Augusto Pinochet's military government. The squatters are organized in a regular city grid and the perimeter fortified by residents who have already faced police in a bloody fight. The program property of the University of Chile is now Camp Raúl Silva Henríquez.

**A Tent City Puts Challenge To Pinochet**  
 Squatters Seeking Land Are Aided by Church

By Jackson Diehl  
 SANTIAGO, Chile, Nov. 18.—The military hold on the situation appears to publicly allow for a horizontal fight. Services for daily needs and business are provided by the state, it seems clear to the hundreds of thousands of the squatters who have taken over the city's services, markets and shops. The heavily overpopulated, a 1980s tract built under the Chilean presidential palace has been transformed into a pre-fabricated battleground between thousands of poor families and Gen. Augusto Pinochet's military government. The squatters are organized in a regular city grid and the perimeter fortified by residents who have already faced police in a bloody fight. The program property of the University of Chile is now Camp Raúl Silva Henríquez.



The Pinochet military targeted and raided neighborhoods, especially in the pobladores, to oust leftist leaders.



Villagers being forcibly evicted from a land seizure, in the Raúl Silva Henríquez camp, 1981.

**Hundreds held after raid in Chile**

**CHILE**  
 Hundreds of people were held after a military raid on a squatter settlement in Santiago, Chile, on Tuesday. The military targeted and raided neighborhoods, especially in the pobladores, to oust leftist leaders. The raid resulted in the capture of several individuals, including some suspected of being involved in leftist activities. The military government under Pinochet was known for its harsh tactics against perceived political opponents.

**Hundreds detained after raid in Chile**  
 SANTIAGO, Chile, Nov. 18.—The military hold on the situation appears to publicly allow for a horizontal fight. Services for daily needs and business are provided by the state, it seems clear to the hundreds of thousands of the squatters who have taken over the city's services, markets and shops. The heavily overpopulated, a 1980s tract built under the Chilean presidential palace has been transformed into a pre-fabricated battleground between thousands of poor families and Gen. Augusto Pinochet's military government. The squatters are organized in a regular city grid and the perimeter fortified by residents who have already faced police in a bloody fight. The program property of the University of Chile is now Camp Raúl Silva Henríquez.

**The Transfer of Populations to the Periphery 1979-1985**

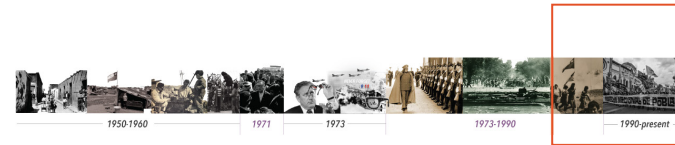
ERADICATION OF SETTLEMENT DWELLERS IN THE METROPOLITAN AREA BY COMMAND OF OBTAINING DESTINATION.



**Half Housing**  
 Elemental | Iquique, Chile | (2005)

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General Pinochet began a massive project of targeting pobladores to capture, torture, and murder leftist leaders. The dictatorship led a massive displacement project, ejecting urban settlements to the city outskirts to pave the way for real estate transfers for the elite. Despite his brutal treatment of people, Pinochet understood that his government needed to provide social housing. The difference was the program would be market-led.



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After 1976, the Chilean economy was restructured to liberalize and stabilize the economy, which meant financing models and foreign investment. The Chilean government began providing subsidies via donations, vouchers for a partial value of a home, or funding for home construction. This model has been adapted by different Chilean leaders. In 1993, Chile returned to representative democracy. Even if the leaders promote a socialist platform, the Chilean government follows a market-led logic. To this day, Chileans still experience widening economic inequality and precarious labor. Currently, Chileans are protesting a subway fare hike, retaliating against the increased cost of living and privatization.



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# HOUSING DEFICIT

**TABLE 1**  
**Estimated Housing Deficit in Chile, 1952–2009**

Year	Total Number of Homes	Deficit Estimate <sup>a</sup>	Deficit as Percentage of Total	Source
1952	1,051,075	242,238	23	Silva and Nieto, 1974 (MINVU, 2009: 11)
1970	1,904,761	400,000	21	Silva and Nieto, 1974 (MINVU, 2009: 11)
1988	2,426,145	856,817	35	MINVU, 1989 (Cummings and DiPasquale, 1997: Table 4)
2002	3,899,448	1,221,098	31.3	MINVU (2004: Table 9; 2009: 84)
2009	5,229,720	805,796	15.4	(MINVU projections)

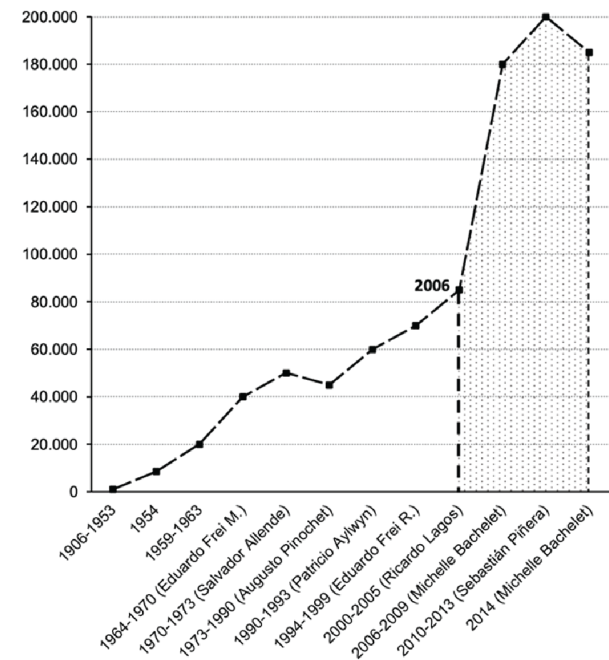
a. The methodology for deficit calculations has changed over time, and therefore the figures are not exactly comparable to one another, but they capture the general trend.

**TABLE 2**  
**The Housing Deficit in Chile, 2006–2010**

	2006	2007	2008	2009	March 2010
Quantitative deficit (new housing needed)	412,349	388,374	364,241	354,014	544,363
Qualitative deficit (housing in need of repair or improvements)	594,904	570,339	531,077	451,782	631,475
<b>Total</b>	<b>1,007,253</b>	<b>958,713</b>	<b>895,318</b>	<b>805,796</b>	<b>1,175,838</b>

Source: MINVU (2010).

Figure 2. Average housing units annually built in Chile per period using government resources.



Source: Valenzuela-Levi, 2016.

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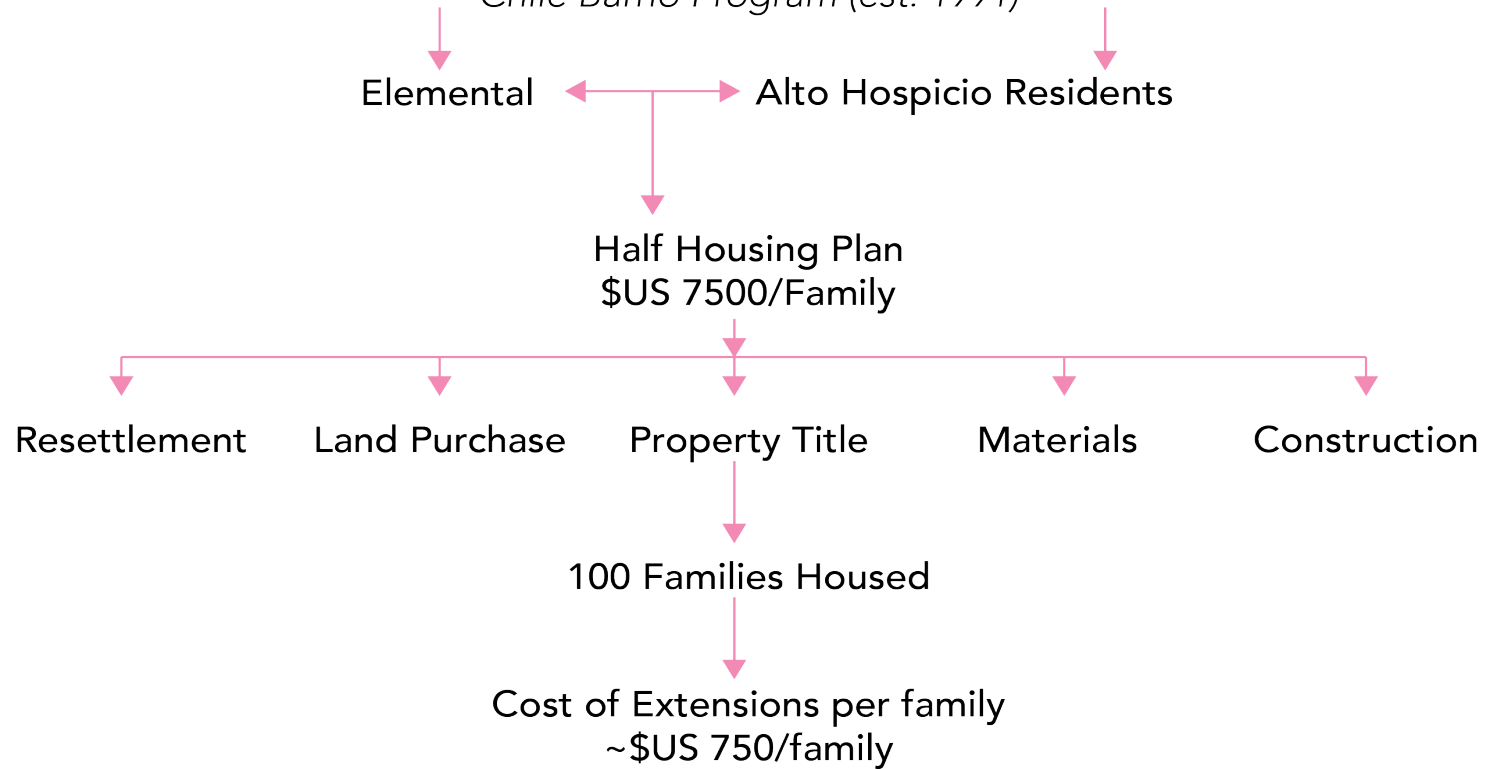
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# GOVERNMENT SUBSIDY SYSTEM

## CHILEAN GOVERNMENT

Ministerio de Vivienda y Urbanismo de Chile.

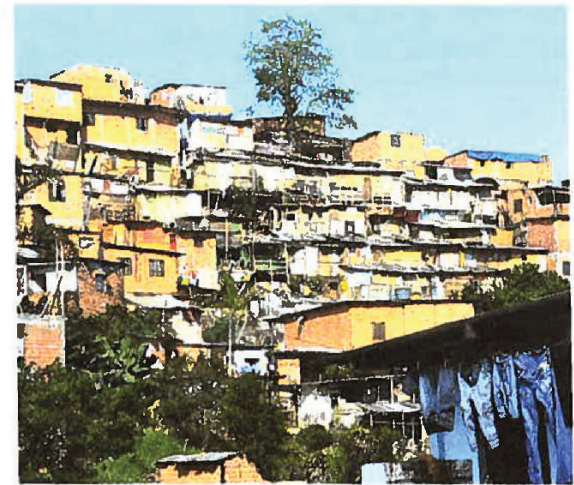
*Chile Barrio Program (est. 1991)*



### Half Housing

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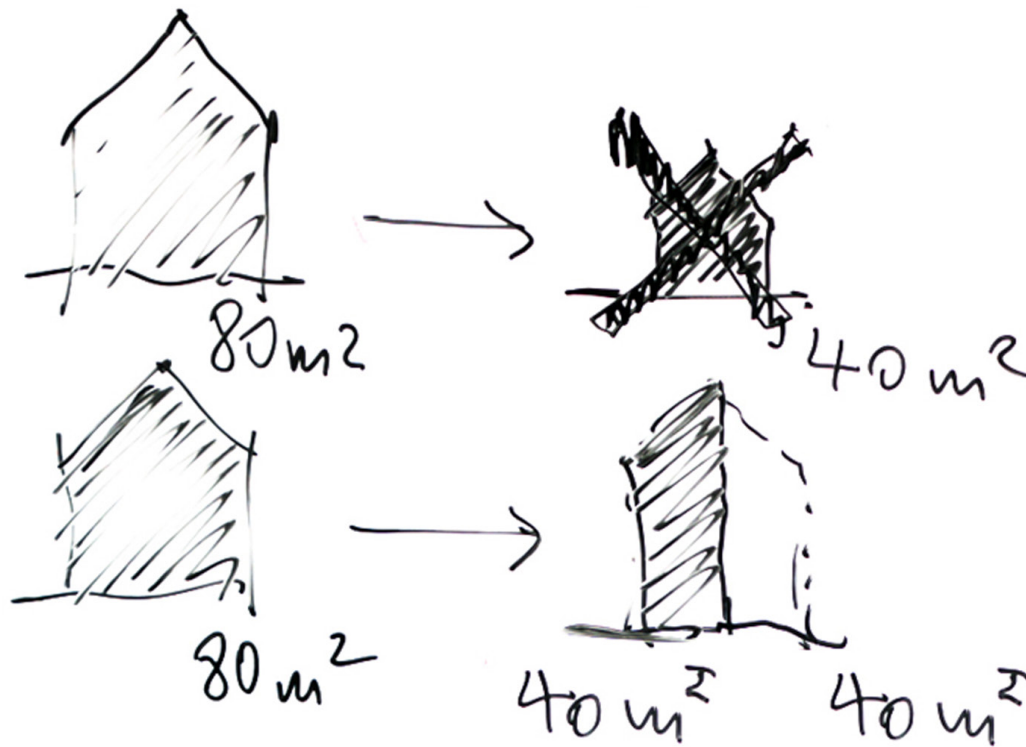


$$X = \frac{1 \text{ city} \times 1 \text{ million people} \times 1 \text{ week}}{\text{US\$}10,000 \times 1 \text{ family} \times 20 \text{ years}}$$

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Half a good house is  
better than a small house;

it gains value over time

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# IQUIQUE SOCIAL HOUSING BRIEF

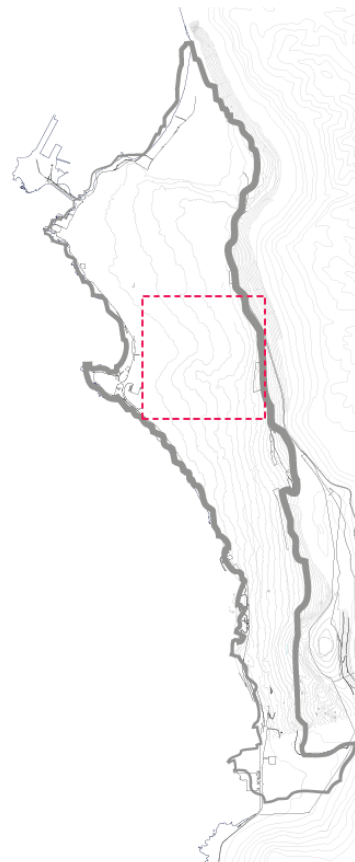
**OBJECTIVE:** To settle the **100 families** of the Quinta Monroy, in the same site that they have occupied for the last 30 years in the informal settlement.

**SITE:** The **5,000 sqm** site is located in the center of Iquique, North of Chile.

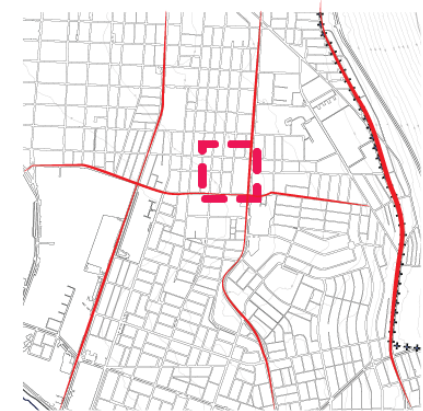
**BUGET:** Families are given **US\$ 7,500** subsidies per house. This subsidy is to be taken into consideration in the design. Design cost is inclusive of land price, the infrastructure and the architecture.

**CONSIDERATIONS:** The architect is to be consciousness of the existing **social structure** that comprises the current locality.

**MATERIALS:** Use material to sustain **structure longterm** to withstand flooding and Earthquakes.



Iquique



Quinta Monroy

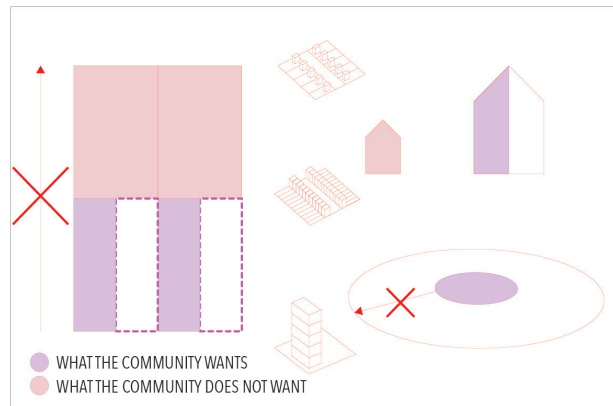


## Half Housing

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# PARTICIPATORY PROCESS

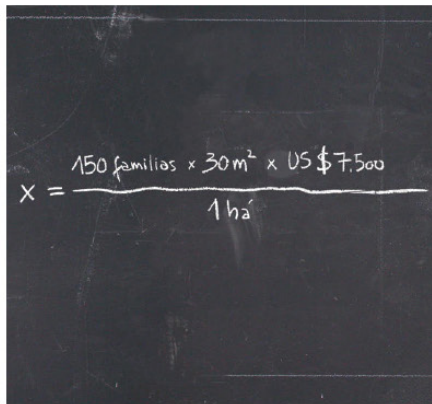


## DESIGN DECISIONS

### Half Housing

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$$X = \frac{150 \text{ familias} \times 30 \text{ m}^2 \times \text{US\$ } 7.500}{1 \text{ ha}}$$

### Formula

OBJECTIVE: A framework is created that enables 150 families

BUGET: US\$ 7,500 per house. The cost includes land price, the infrastructure and the architecture.

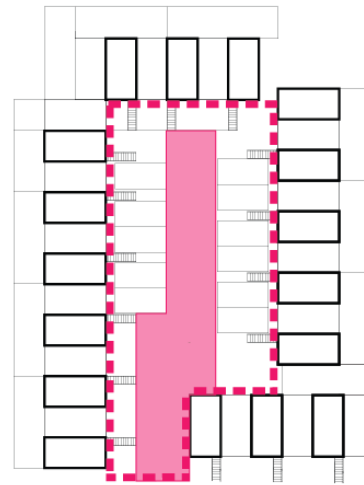
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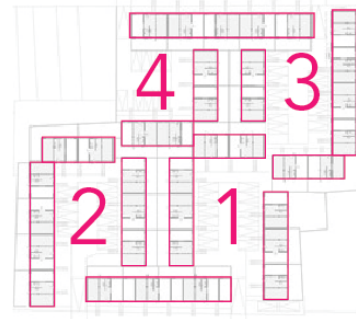


# IQUIQUE SOCIAL HOUSING BRIEF



Neighbourhood

**SITE:** The site is designed with a focus on neighborhood, synergies optimized by using row houses as urban typology.



Site

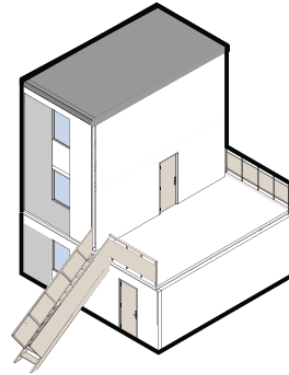
**CONSIDERATIONS:** A 'collective space' is provided between the houses to include 20 families. "The collective space (a common property with restricted access) is an intermediate level of association that allows surviving fragile social conditions"

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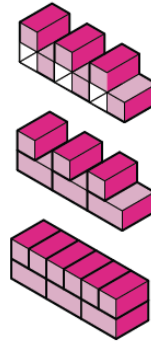
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# IQUIQUE SOCIAL HOUSING BRIEF



House

MATERIALS: A solid structural core that allows for future extensions.



Incremental growth

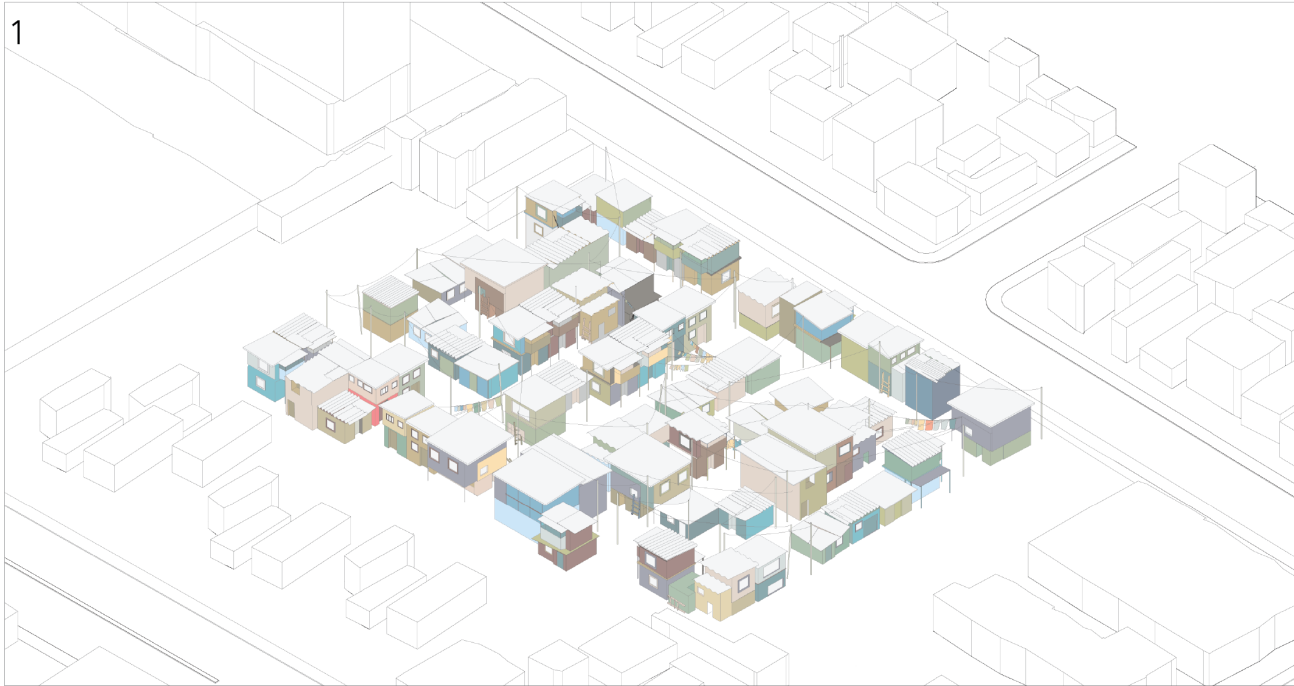
FRAMEWORK: The project learns from the past settlement and adopts the logic of a house that is to grow with time.

## Half Housing

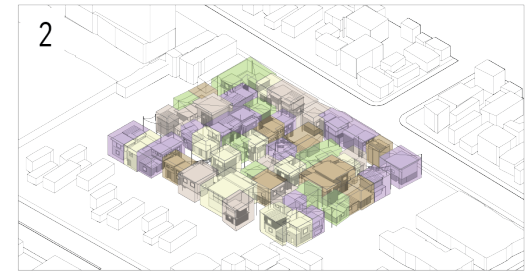
Elemental | Iquique, Chile | (2005)

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# RESETTLEMENT + DEMOLITION



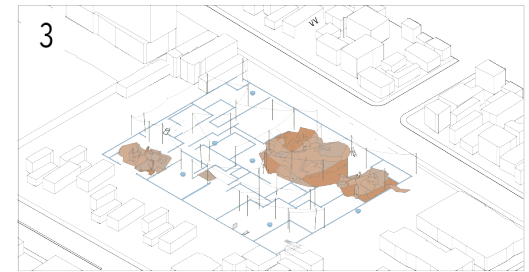
Alto Hospicio Informal Settlement



Phases of Site Evacuation Dependent on Resident Participation

Jan-Feb 2004	Mar-May 2004	June-Sep 2004	Oct 2004	Nov 2004
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Willful    Reluctant    Forcible



Site Demolition



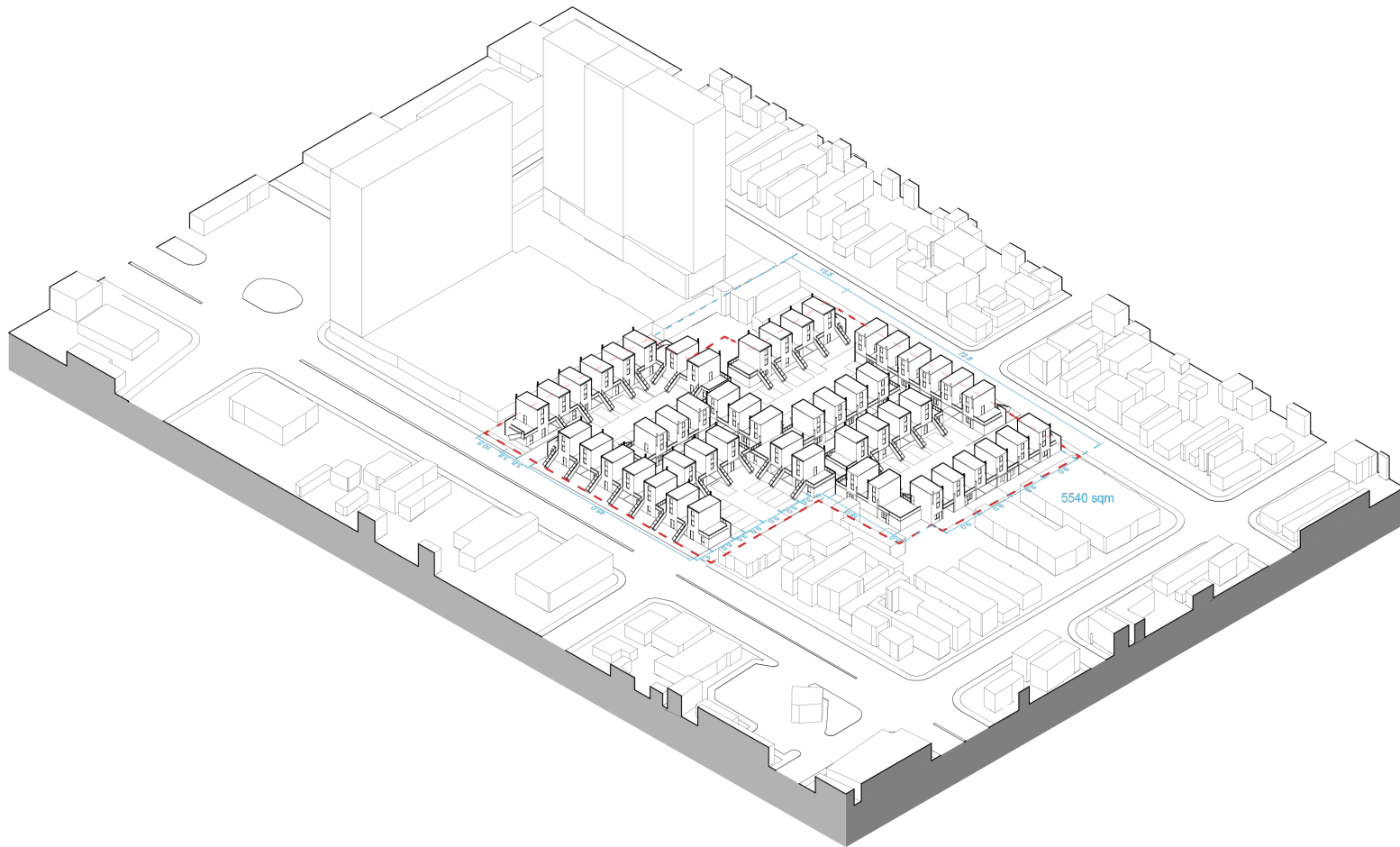
Half Housing Site Plan

## Half Housing

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# QUINTA MONROY SITE



## Half Housing

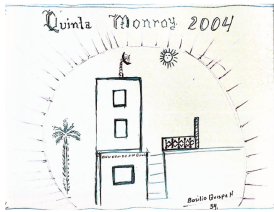
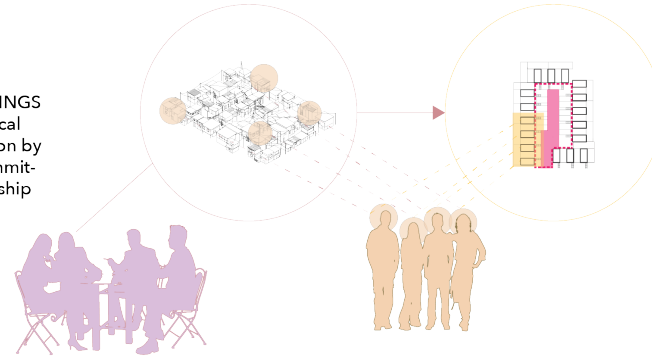
Elemental | Iquique, Chile | (2005)

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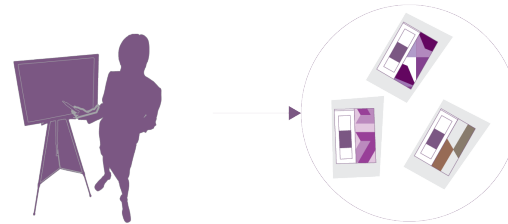
# ONGOING PARTICIPATORY PROCESS



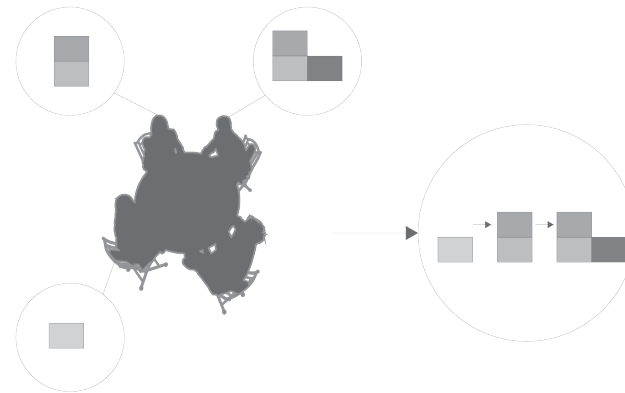
**PARTICIPATORY WORK MEETINGS**  
Initial meetings to establish local leadership and site organization by grouping families into subcommittees and building local leadership capacity.



**FAÇADE WORKSHOP**  
With this incremental model, 50% of the façade was uncertain, and demanded special attention. In the workshops, discuss how the building was a diversity organizer and therefore should not incorporate the characteristics of the individual additions, but maintain some homogeneity.



**EXPANSION WORKSHOP**  
Elemental sought to work with future owners regarding their responsibility in the value appreciation of the complex, working with beneficiaries to plan their extensions.



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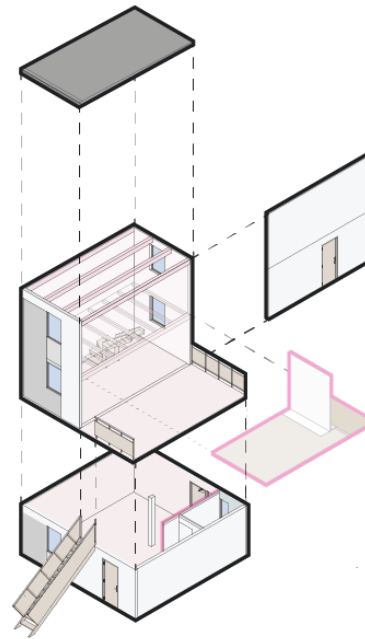
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# GUIDELINE TO MODIFICATIONS + EXTENSIONS

USE **LIGHT WEIGHT** CONSTRUCTION MATERIAL DUE TO STRUCTURAL LIMITATIONS

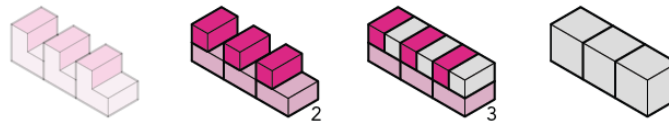
USE **STANDARD SIZE** BUILDING MATERIALS EASILY ACQUIRED IN THE MARKET

**DETAILS** FOR ADDITIONS IS PROVIDED TO TENANTS UPON MOVING IN



CORE

INITIAL PARTITIONS



FRAME WORK OF OWNERSHIP and GROWTH

## Half Housing

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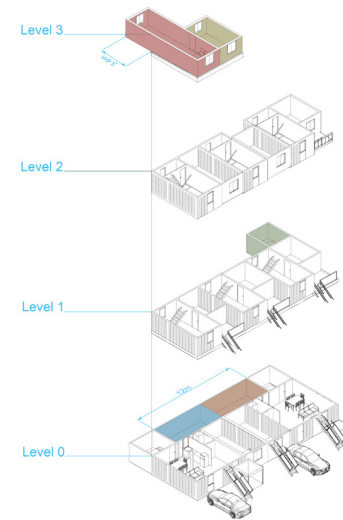
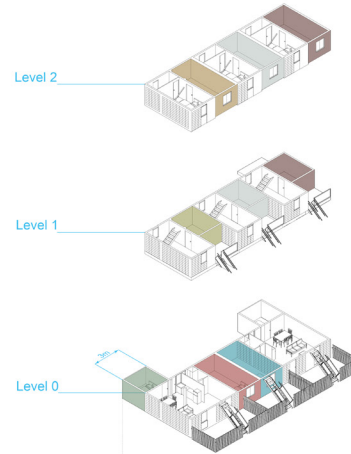
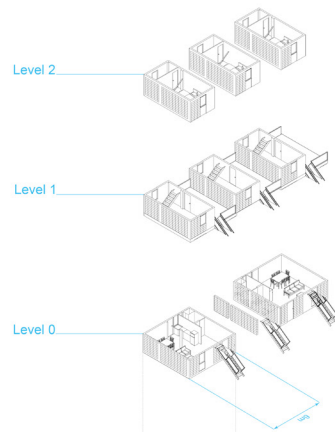
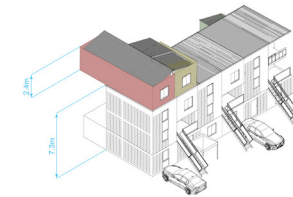
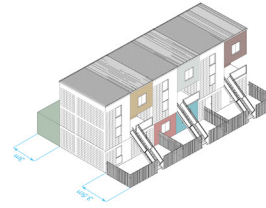
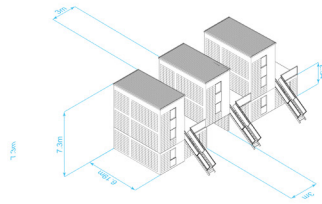
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INITIAL DESIGN

PLANNED DESIGN

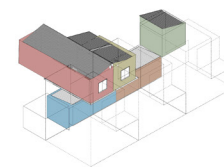
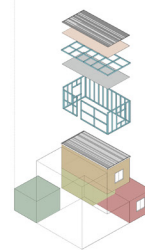
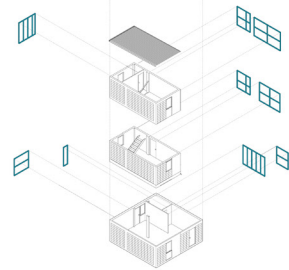
UNPLANNED DESIGN

STRUCTURE

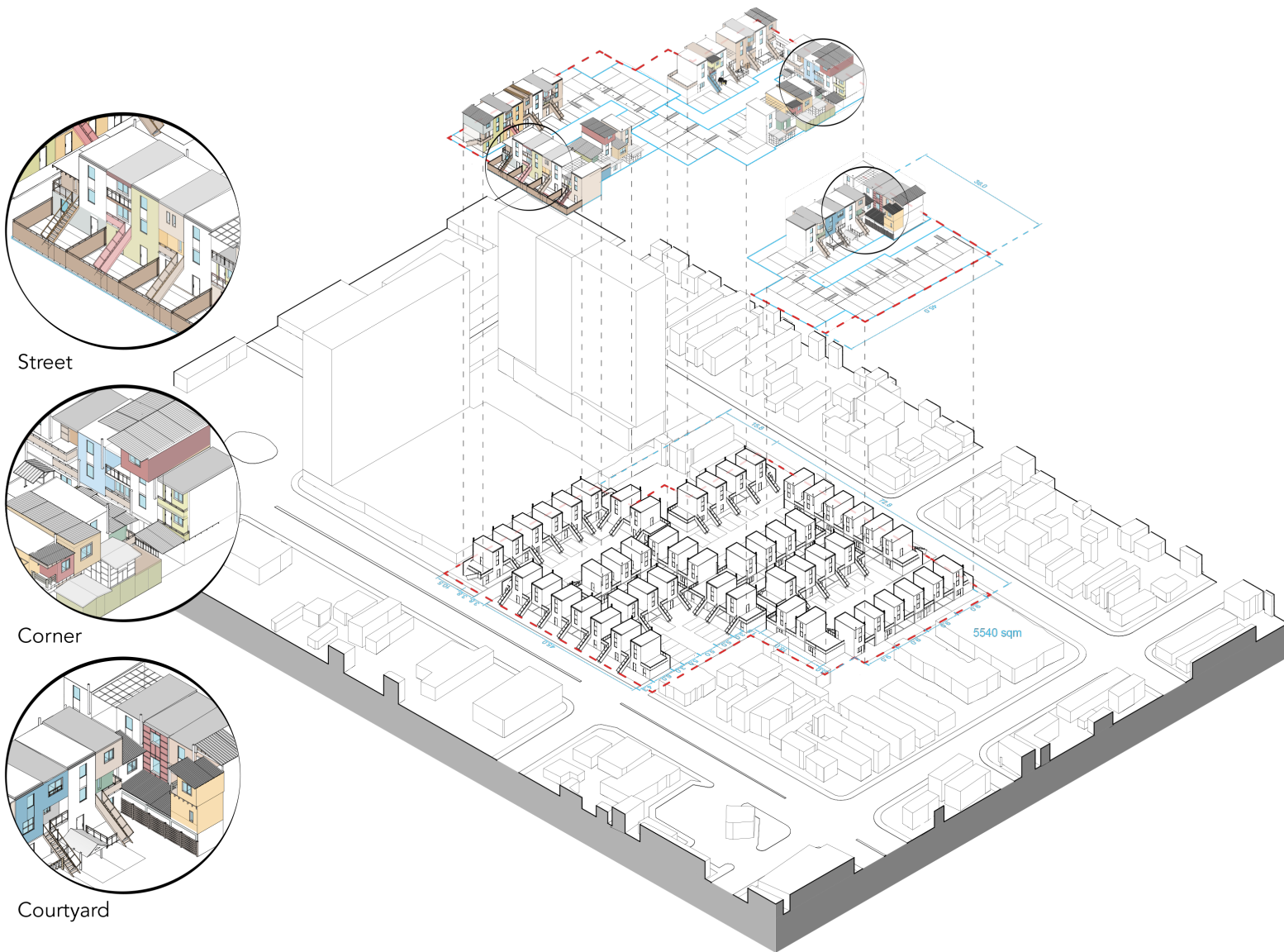


INTERIOR

DETAIL



**Half Housing**  
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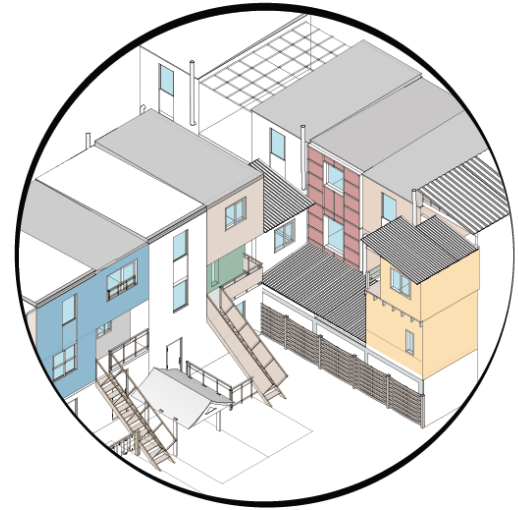
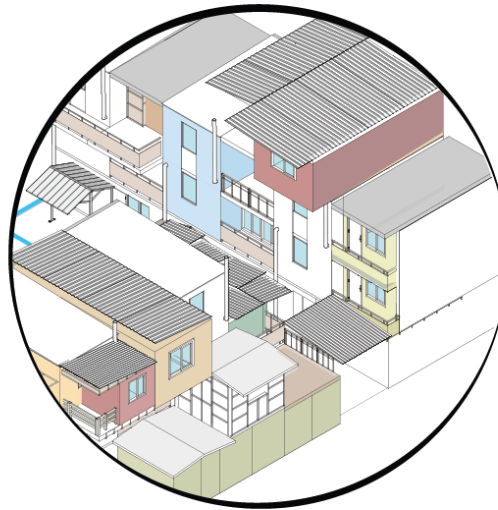
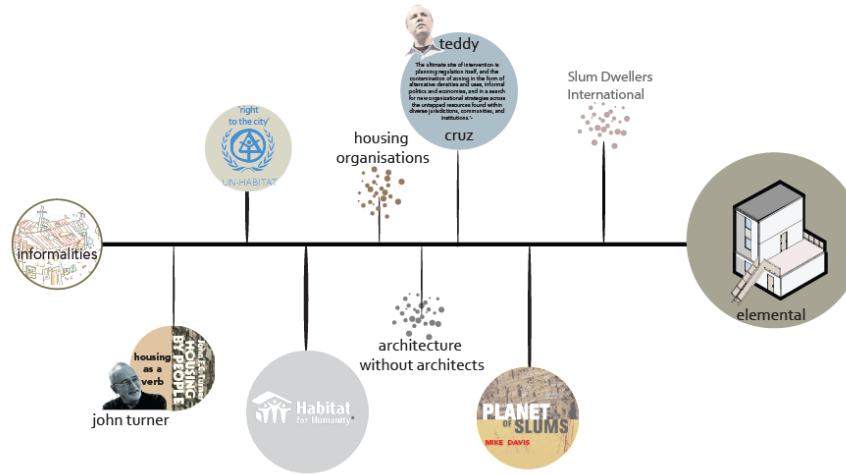
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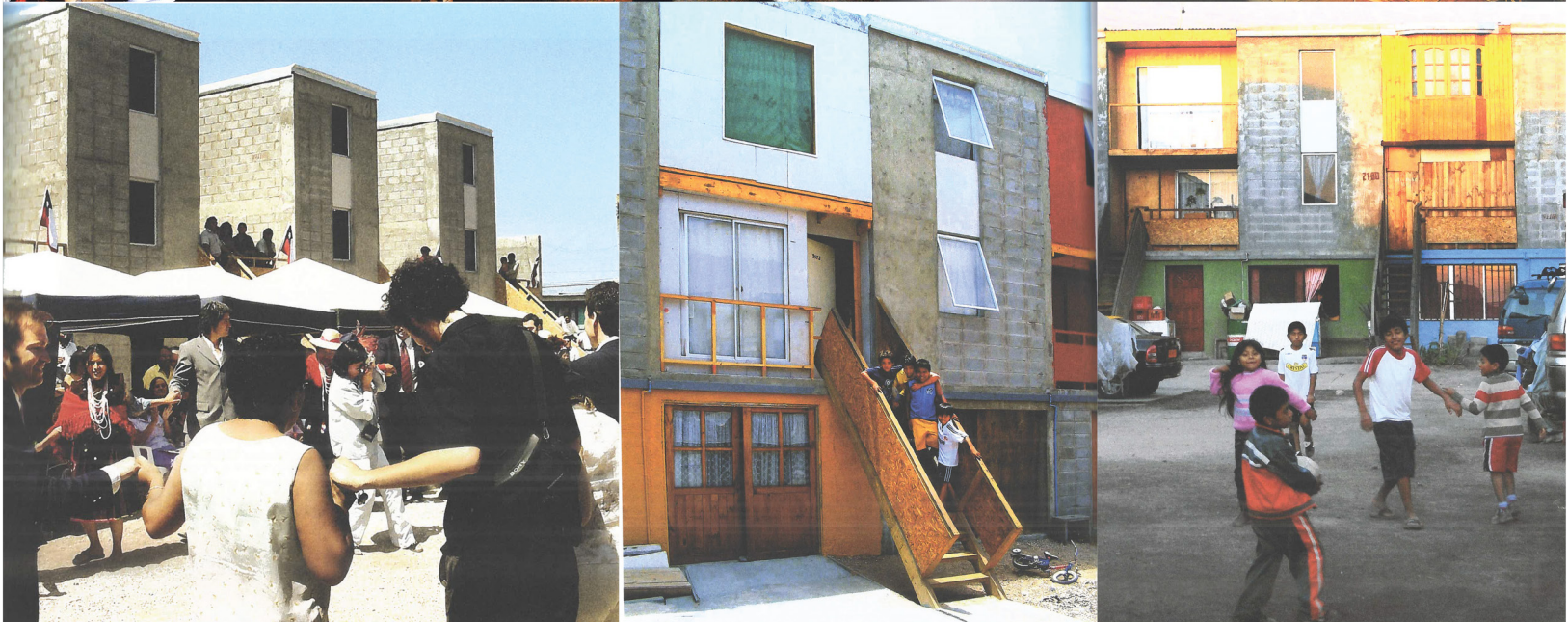
# INCREMENTAL HOUSING



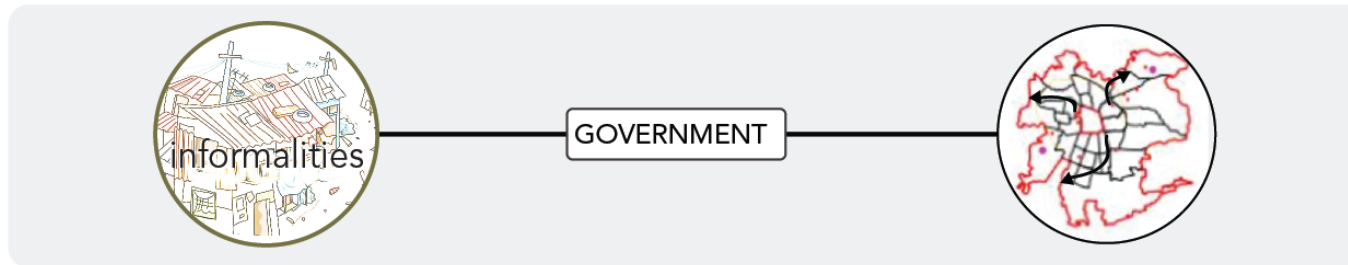
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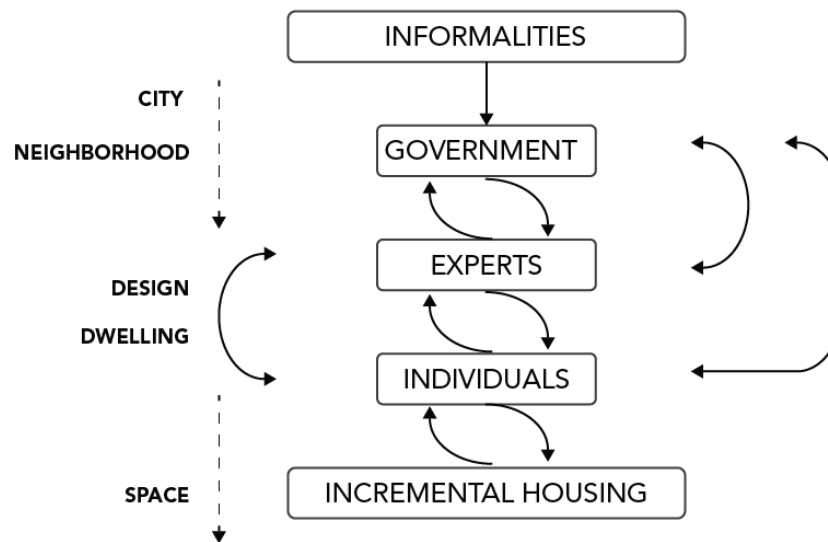
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# INCREMENTAL HOUSING: INFORMALITIES



**VS**



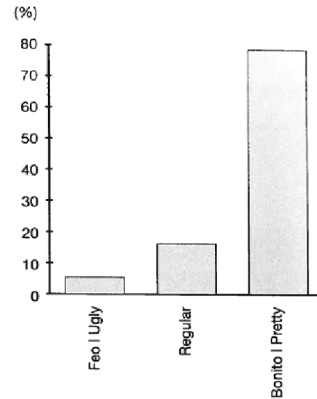
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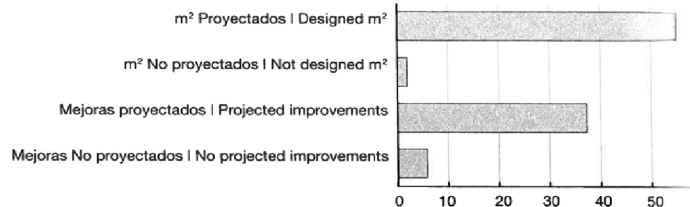
Bria Cole - Jr. Osei Wireko - Raghd Zaqout

# PROJECT OUTCOMES

Evaluación estética vivienda  
House aesthetic evaluation



Tipo de obra  
Type of renovation



## REALITY AFTER COMPLETION

Residents began adding their own modifications and extension. Lightweight materials used as advised, due to structural limitations

Houses located on the main roads extended and fenced at the front

[Some] residents have started to build additional floors above the planned heights

Courtyards transformed into parking lots and as opposed to their intended function as community spaces

Only two of the houses remain in their original condition

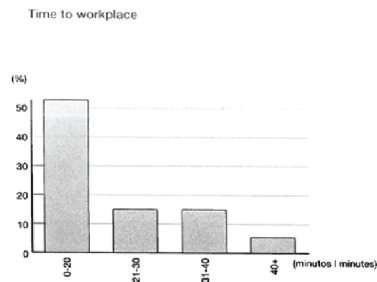
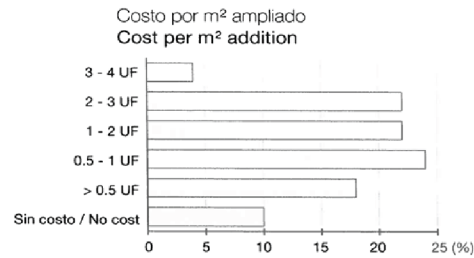
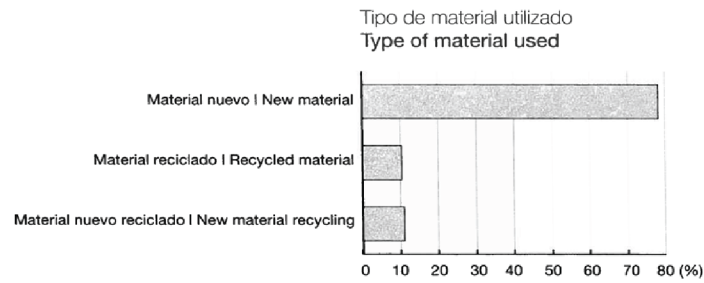
*From "Elemental: Incremental Housing and Participatory Design Manual"*

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# PROJECT OUTCOMES



## VALUE APPRECIATION

The Chile Barrio program subsidized the construction at a cost of US 7,500 per family

Families, on average, spent US 750 on extensions and modification

The resultant valuation of the home appraised the homes at US 20,000 on the market

Key was "strategic design for the first half of construction that enabled easy, cheap and safe expansion"

"We were most interested in maximizing the use of public resources to create a value much greater than the sum of its parts"

*From "Elemental: Incremental Housing and Participatory Design Manual"*

## Half Housing

Elemental | Iquique, Chile | (2005)

Bria Cole - Jr. Osei Wireko - Raghd Zaqout

# EXAMPLES

## CHINAGUDALI, VISAKHAPATNUM, INDIA



1988



1989



2009

## NAVAGAMPURA, COLOMBO, SRI LANKA



1986



1988



2009

## GUACAMAYAS, BOGOTA, COLOMBIA



1976



1977



2009

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# OPEN SOURCE MATERIAL

## Alejandro Aravena's Downloadable Housing Plans and the Real Meaning of "Open-Source Urbanism"



According to the ELEMENTAL's website, the designs were released to present an "open source that we will be able to rule out one more excuse for why markets and governments don't move in this direction to tackle the challenge of massive rapid urbanization." (*ArchDaily*)

Open Source broadly combines principles from multiple disciplines including software development (source codes), copyleft (modify and distribute the original), hacktivism (anti-censorship), creative licensing (Creative Commons), and academia (OER).

Fundamentally, to publish material as Open Source is to communicate that knowledge ought to be freely and openly shared, in perpetuity (with varying attributions).

Given the increasing barriers to education, to present information as Open Source is to celebrate the free flow of information and consider knowledge as vital to democratic exchange.

It may be argued that the pobladores practiced a system in which an open source mandate may not be necessary.

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