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Chiara Pellegrinelli
Maria Sole Teberino

Supervisor
Arch. Stefano Boeri

Assistant supervisors
Arch. Azzurra Muzzonigro
Arch. Livia Shamir
Arch. Marco Trisciuglio

FROM VILLA TO BARRIO

Urban upgrade of an informal settlement in Buenos Aires



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ABSTRACT

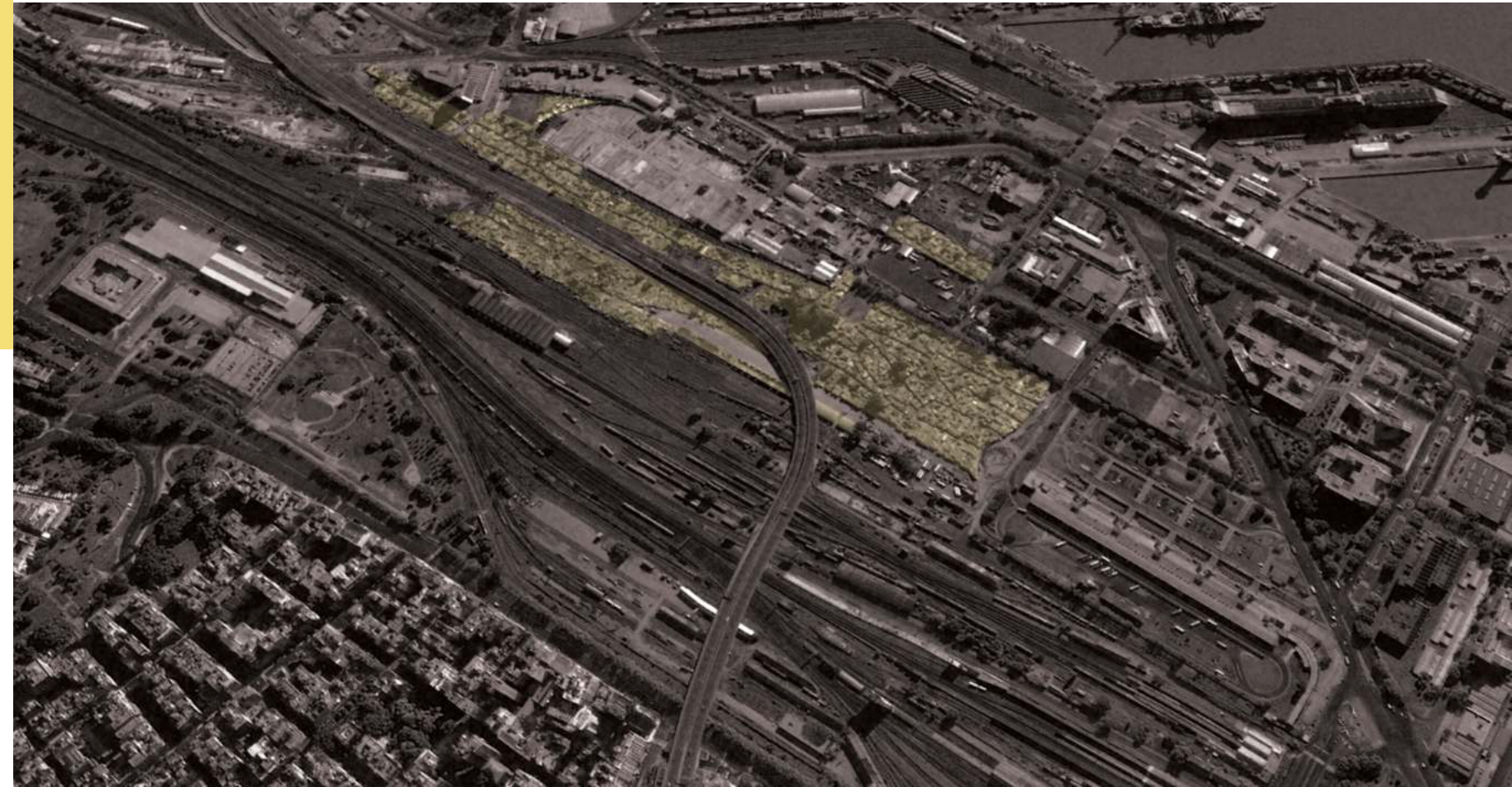
The aim of the thesis is to carry out an architectural experience and research of the informal settlement of the Villa in the autonomous city of Buenos Aires, characterized by the paradoxically coexistence of both richness and extreme poverty in the heart of the city. The theme of analysis concerns the particular urban and social situation of *La Villa 31 y 31 bis* and its possible future vision.

The interest stems from an exchange program in the Argentinean Capital, which made us aware of the political and social dimension of the Villa, full of contradictions and conflicts. Thanks to the help of no profit associations and architects working there, there was the opportunity to personally interact with the inhabitants of the informal settlement, understanding

the interrelationship, problems and needs in order to derive a framework to upgrade the Villa.

Therefore, the research moves from a deep social and urban analysis of the context to the design of three specific architectural focuses: the new housing prototype, the linear park under the Illia highway crossing the Villa and the Urban Market close to the Retiro Bus Terminal.

The results revealed that physical intervention is ineffective when it does not accompany social strategies. A combined approach to intervention, which involves characteristics of physical infrastructure provision, community action planning, and social transformation through a new urban plan, would have the best results if applied to *Villa 31 y 31 bis*.



aerial photo, 2000

ABSTRACT

L'obiettivo della tesi è condurre un'esperienza e una ricerca architettonica all'interno del contesto argentino della città autonoma di Buenos Aires, caratterizzato dalla paradossale convivenza di ricchezza e povertà estrema nel cuore della città stessa.

In tutto il mondo le grandi città moderne producono senza sosta quartieri definiti eufemisticamente precari e las Villas rappresentano una delle più fragili marginalità del paese. Il tema affrontato riguarda la particolare situazione urbana e sociale de La Villa 31 e la sua possibile configurazione e visione futura. Numerosi progetti, per lo più a scala urbana, sono stati presentati per risollevare la fragile situazione derivante principalmente da fattori politico-economico dagli anni '30 fino ad oggi, ma le forti contraddizioni sociali sono ancora ampiamente emergenti nella città dove la metà della popolazione vive il disagio urbano. Partendo

da un'analisi ad ampia scala e da una ricerca storica e sociologica dello sviluppo della città formale e contemporaneamente di quella informale, si giunge all'elaborazione di una proposta progettuale che mira a fornire, anche in un frangente di ristrettezze economiche e di risorse limitate, un rifugio urbano a chi abita la città, rifuggendo i grandiosi progetti di rinnovamento urbano in favore di un approccio a livello locale in grado di sollecitare una reazione da parte della città. In questa prospettiva, la tesi si propone di riflettere sulle possibilità di introdurre approcci e metodi che potrebbero includere ed integrare le dinamiche che sono generalmente esclusi dal discorso del progetto urbano. La ricerca assume un approccio aperto e costruttivo agli aspetti informali e fenomeni in contesti urbani, e si propone di esplorare se e come alcuni processi possano diventare catalizzatori in grado di arricchire la concettualizzazione, prospezione e la pianificazione dello spazio urbano.



aerial photo, 2016

INTRODUCTION

Throughout the world, the great modern cities produce neighbourhoods euphemistically defined precarious and “las Villas” are one of the most fragile margin of the country.

The specific case of Villa 31 is particularly interesting because of its strategic location, close the most famous neighbourhoods, and not far from the most important centre for the transfer of passengers from the Capital.

Numerous projects¹, mostly on an urban scale, were presented to revive this critic situation resulting mainly by political and economic factors from the 1930s until today. Unfortunately, strong social contradictions are still widely emerging in the city, where more than half of the population lives in a condition of urban deprivation.

Both Villa 31 and 31bis, the most recent development, represent an informal sector, where it is common to find political and cultural issues as well as immigration, health and property speculation. Starting with broad-scale analysis with a historical and sociological background, also considering the simultaneous development of formal and informal cities, the research aims at developing a specific project proposal.

The architectural intervention aims at providing, even in a difficult situation of economic constraints and limited resources, an urban refuge for those who live the city, eschewing the grandiose urban renewal projects in favour of a local level approach, able to solicit a response from the city.

The emphasis is on local resources rather than the citywide programs which require the use of large amounts of capital, promoting the idea that the citizens themselves will initiate interventions. These changes in the urban context have the purpose to give more and more benefits to the people, by promoting a revitalization of the area.

Objects and subjects of thesis work are the *villeros*. The urban interventions aim at remedying the degradation, in order to stimulate urban renewal and to improve the urban landscape of the Villa. The re-designed areas will become fertile ground for the grafting of activities, the purpose of which is to create greater authenticity, to give better living conditions and a sense of well-being to the whole body of the city.

These strategically localized transformations can be rapidly carried out, so as to become an input capable of creating a positive ripple effect that invests larger areas. Therefore, the social dimension of the project and the active role of the commu-

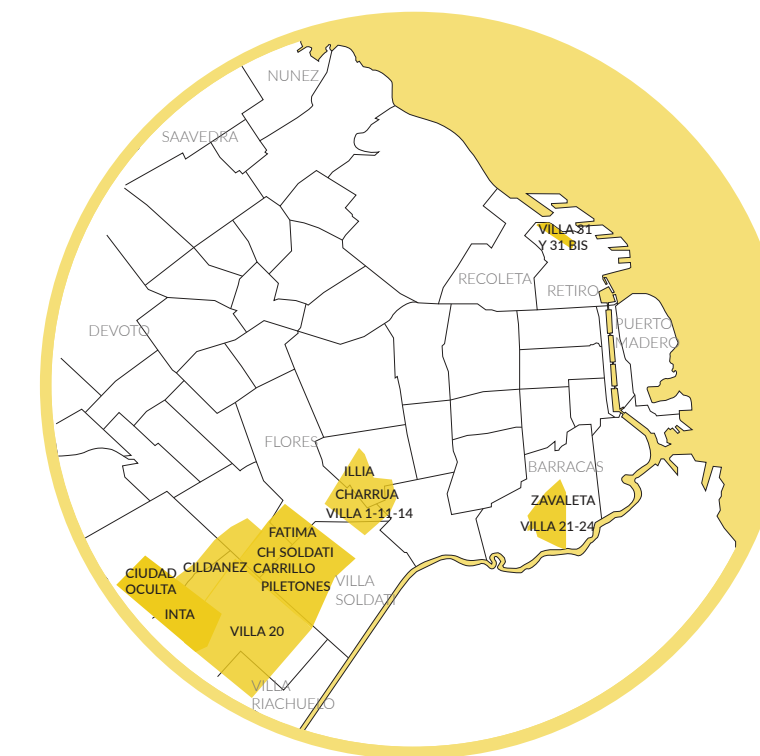
nity become a crucial point: every citizen has the opportunity to participate in the re-design process, feel free to use urban spaces for multiple purposes and transform the environment around him or her to suit the common needs. Giving dignity to people and trying to create a possible form of integration between the inhabitants participating actively in the process is a useful stimulus possibly to be applied also in other countries where segregation situations, with marginal and discriminated neighbourhoods, are forming.

An essential characteristic of the interventions is the flexibility in order to make the architecture capable of functioning in different ways. The interaction between artistic expression, social needs and the public space is one of the distinctive traits of the research. Essential instruments needed to carry out this urban challenge are the observation and documentation *in situ* of the delicate and fragile reality of the Villa, through testimonies, interviews, films and photographic material. Therefore, all the information on the case study was collected from relevant academic literature review, news media, and meetings with architects working there. Following this perspective, the thesis also attempts to reflect on the possibility of introducing approaches and methods that could include and integrate the dynamics that are generally excluded from the urban design discourse. The research takes an open and constructive approach to the informal aspects and to phenomena in urban areas, and it aims at exploring whether and how certain processes can become catalysts enriching and stimulating the vision of the urban space.

“There’s no way around the conclusion: the 21st century squatter

cities are positively medieval. And there’s no way around another conclusion as well: the history of cities teaches that squatters have always been around, that squatting was always the way the poor built their homes, that it is a form of urban development.”

(Neuwirth, 2006, p.179)



¹ Numerous worldwide schools of architecture had organized an on-going studio-to-studio collaborative relationship with the University of Buenos Aires' School of Architecture and Urbanism (UBA-FADU) almost every year since 2009.

PART 1

ANALYSIS AND INVESTIGATION

The reality of the Slums: las Villas

Slum interventions have been attempted and executed across the world with no single solution. These approaches range from basic infrastructural improvements to significant modifications to the built environment. From art installations to high-rise public housing and mass transportation systems, each intervention attempted to improve the quality of life for citizens of these settlements (UN-Habitat, 2003).

Latin America has seen some of the world's highest rates of urbanization. However, "slum growth is slowing in many parts, settlements are consolidating, and many countries are beginning to provide residents with access to land tenure and services" (Beardsley & Werthmann, 2008, p. 39). South America has been in the spotlight in recent years for the way in which some Latin American countries have attempted to alleviate omnipresent slum conditions in many of its largest urbanized areas. Venezuela, Colombia, and Brazil have been particularly proactive in their efforts to upgrade informal settlements. Meanwhile, the nearby country of Argentina has been forced to deal with similar housing issues for decades, and only recently developed any official policy to alleviate the pressures resulting from slum growth. The early 20th century was kind to this formerly wealthy nation, as the country was

ranked seventh worldwide for per capita income in the 1920s (Sanders, 1989).

The *Villa miseria*, or just villa, is a type of shanty town or slum found in Argentina, mostly around the largest urban settlements. The term is a noun phrase made up of the Spanish words villa (village, small town) and miseria (misery, dejection), and was adopted from Bernardo Verbitsky's 1957 novel *Villa Miseria también es América* ("Villa Miseria is also Americas").

In the city of Buenos Aires, more than 30% of its inhabitants live in precarious urban conditions, a significant amount of the population. These families are living in precarious areas known as villas, or irregular subdivisions. They are human detachments called "informal city" an unequivocal example of inequality in the urban space.

These settlements consist of small houses or shacks made of tin, wood and other scrap material. Generally, the streets are not paved and narrow internal passages connect the different parts. The *villas miseria* have no sanitation system, though there may be water pipes passing through the settlement. Electric power is sometimes taken directly from the grid using

historical photos
'60, '70, '80

illegal connections, which are perforce accepted by suppliers (Abbott, 2002).

The villas range from small groups of precarious houses to larger, more organized communities with thousands of residents. In rural areas, the houses in the villas miserias might be made of mud and wood. *Villas miseria* are found around and inside the large cities of Buenos Aires, Rosario, Córdoba and Mendoza, among others. The villas generally draw people from several backgrounds, some of them are local citizens who have fallen from an already precarious economic position. In most cases, a *villa miseria* is populated by the children and grandchildren of the original settlers, who have been unable to improve their economical status.

Villas miseria are known to house criminals, from minor thieves to drug dealers, because the houses are typically safe from police and they are really cheap and easy to acquire. These shantytowns² are euphemistically called *asentamientos* (settlements) or *villas de emergencia* (emergency villages). In most parts of Argentina, the non-modified word villa usually refers to a *villa miseria* (Beardsley, 2008).

² A shanty town or squatter area is a settlement of improvised housing, called shanties or shacks, made of plywood, corrugated metal, sheets of plastic, and cardboard boxes. Such settlements are usually found on the periphery of cities, in public parks, or near railroad tracks, rivers, lagoons or city trash dump sites.



1.1 The origin of the phenomenon

Since the dawn of its history, Buenos Aires has discussed how to lessen its immense social inequality.

The origin of the process of conformation of the villas is strongly linked to the major migratory flows that were destined for big cities such as Buenos Aires. The phenomenon is mostly connected with the beginning of the industrialization process of import substitution in the 1930s (Bastia, 2010).

Although the internal migration (and subsequently those of countries border) made the fundamental for the birth of the villas, in the case of Retiro area, the foreign immigration (mainly from Italy) was the first to give an informal residential use to the area.

With industrial development, immigrants from the northern part of Argentina began to arrive. By 1976, the year of the military coup, 213,000 people lived in the shantytowns of the city of Buenos Aires, almost 10% of the city's population. The dictatorship violently displaced more than 150,000 residents, but since 1983 the villas have begun to be repopulated. By 2001, they had more than 100,000 inhabitants, and according to the 2010 census 163,000 (García, 2009).

aerial photo, 1940

1.2 History and development

“The villas are the only part of the city where a significant demographic increase has been registered,” researcher Pablo Vitale³ says. Today, they are inhabited almost entirely by Argentines from the north, Paraguayans, Bolivians, and Peruvians.

There are 21 villas in Buenos Aires and this number is increasing because of the permanent expulsion of people in rural areas. A map of the city shows that most of the villas are located in the southern zone. But Villa 31 is placed right in the middle of the city, in the principal area of real estate speculation (Puerto Madero), and next to the bus and train stations of Retiro.

The villas exemplify the concept of “urban fringe.” Though they may be in the centre of large cities like the Argentine capital, they are on the periphery with respect to access to services, jobs, and infrastructure. But they are symbolically peripheral. Their residents are people marginalized by the extractive model of capitalism—the poorest people – even though the villas have proven to be spaces that continuously resist that capitalistic model: living in extreme poverty surrounded by wealth has led the residents to be acutely aware of inequality (Bastia, 2010).

The long history explains the existence of third and even fourth-generation families now living in the neighbourhood. Through them, the memories of resistance live on. Villa 31 was seen by previous city administrators as a space that had been usurped and would be converted back when the State recuperated their land. Attempts to evict the shantytown

were frequent. In the best cases, subsidies were offered for evacuation of the land; in the worst, bulldozers were called in to demolish anything in their path.

However, the 21st century has brought new continental winds which have changed the shape of the city: at the end of 2009, the Buenos Aires city legislature unanimously approved Ley 3343⁴ which ordered the urbanization of Villa 31 instead of demolition (García, 2009).

³ Pablo Vitale has a degree in Political Science (UBA), where he teaches public policy and administration. In 1999 he coordinated workshops by non-formal education, photography and mapping for teenagers in Villa 31 of Retiro and in other informal districts of the city.

⁴ Ley 3343 imposes the urbanization of the polygon corresponding to the villas 31 and 31 bis, included between 4th Street, San Martín General Railroad tracks, extension Virtual of the Av. Pueyrredón, Calle 9, Av. Pte. Ramón S. Castillo and virtual prolongation of the Av. Gendarmería Nacional, according to plan that as Annex I forms part of this Law with criteria of permanent establishment.



1932

Birth of the Villa 31 with the name of “Villa Desocupación”

Occupation causes: worldwide crisis, unemployment, proximity to the port

1935

April 1935

Demolition of all the informal houses of the Villa by the general Justo

1948

Formation of the “Barrio Inmigrantes”, most of the people coming from Italy

Development of the northern part linked to the railways work

1956

Abril 1956

First representation of 21 villas by the executive power of the “Comisión Nacional de la Vivienda”



1958

First organization of people living in the villa, "Federación de Barrios y Villas de Emergencia"

1962

Exponential growth
Birth of the first Barrios

1968

6th of August
First representative of the villa in the govern

1968/69

Start of volutareer work in the Villa by J. Sobeles, R. Guevara and Padre Murgica to help the poorest famielies

1971

Realization of the lighting system in some parts of the Villa thanks to the no profit organiza-tions

1974/75

Plan of erradication of the villa
Mooving of the people in other Barrios of the City

1976

Beginning of the military dictatorship
Disappearance of 30.000 prisoners

1977/79

Eviction of most of the families inside the Villa
Constitution of the "com-mission of applicants"
48 families resist the evictment



1983

End of the dictatorship period

Start of the process of resettlement of the Villa

1984

New governative laws to prevent the settlements

1989

Act 10001

Transaction of public national lands to the occupants by the govern

1990

Great improvement of the public services of the Villa

1993/95

Construction of the Illia Highway

Development of most of the Barrios of the Villa

Birth of the Villa 31 Bis "Villa naciente" linked to the highway construction

1998

Law 148

Entabishment of the urbanization of the Villa starting with the basic services

2001/02

19th - 20th of December

Social outbreak and brutal repression during the government of De La Rua

2005

Creation of the body of delegates for the Villa 31 Bis



2006

Demonstration at the Casa Rosada and Plaza de Mayo to defend the rights of the Villeros.

Expansion close to the new railway system

2007

Political struggle to obtain phone network inside the Villa

Start of the urbanization, sewage system and streets in some parts of the Villa

2008

Presentation of the Urbanization project to the government driven by the architect De Filippo

2009

December 2009
Sanction of the urbanization law creation of the "table of management" of the Villa

2012

Exponential growth and increase of illegality and occupation of public lands

2014

Devotion of 5 million of pesos by the government leader Maurizio Macri to urbanize of the Villa; hospitals, schools and public services

2015

Construction of 8 km of new streets to connect the Villa 31 with the Villa 31 bis

2016

New public services: street, sewage system and connections

Numerous competitions and university workshop: creation of a project of Villa upgrading and development



Villa 31 y 31 Bis: an emerging case in the city

The actual situation of the Villas 31 and 31 bis presents pretty different features from the other informal settlements of the city, and its strategic position was the main reason for disputes, conflicts and eradication projects throughout its history. In fact, it went from being the villa of the most populous city in the sixties to its almost complete eradication during the last military dictatorship, repopulated steadily since the mid-eighties to the present (Epstein, 2009).

at that time, about 65% of the population and more than 67% households were located in Villa 31, which means that most of the growth occurred in the last eight years took place in the Villa 31bis.

2.1 Social dimension of the Villa

The demographic statistics carried out in March 2009 recorded a total of 7,950 households and 26,403 residents in the Villas 31 distributed between both of them (about 53% of households and residents is located in the Villa 31 bis). The population is distributed in the 0.32 km², occupying the total surface and resulting in a density of 85,171 inhabitants km², a figure much higher than the 14,973 that account the City . According to 2001 Census data, the population residing in the Villas 31 and 31 bis was 12,204 people, representing 11.3% of all people living in Buenos Aires. The table X indicates that,





JULIAN BOXE

Corriente Villera Independiente

The *Corriente Villera Independiente* is an organization formed two years ago, which articulates the 23 villas in the territory of the Argentine capital and whose primary mandate is the urbanization of these fragile metropolitan cores. Every day the volunteers of *Corriente* devote their efforts to the paving of roads, build toilets, lighting and strive for a sustainable urban habitat. This battle is the spinal column of the movement, but has more holistic aspirations and in just two years has created a complex system of committees to improve the living conditions of thousands of *villeros*.

2.1.1 Testimonies of the *villeros* | INTERVIEW

“Me llamo Julian Boxe, tengo 35 años, soy argentino y graduado en psicología, actualmente trabajo en la Universidad de Buenos Aires, donde imparto clases en la facultad. Soy militante desde que tengo 13 años.

Soy parte de esta organización desde hace 5/6 años y en toda mi vida, por lo menos desde cuando tengo uso de conciencia política, que soy militante y participo en distintas organizaciones. Fui también militante autónomo, sin formar parte de ninguna, pero siempre interesado por las cuestiones políticas y después de un proceso en el cual elegí la organización en la que militaba antes, buscando opciones y teniendo unas reuniones y unos encuentros, decidí entrar en la Dignidad. Es una organización anticapitalista, que forma parte del campo popular de nuestro país. Siempre intentamos generar lo que nosotros llamamos instancia del poder popular, que son instancias de auto-organización de vecinos y vecinas para conseguir aquello que creen necesario. [...] Nosotros, entendemos que allí donde hay una

“My name is Julian Boxe, I am a 35 years old man from Argentina graduated in psychology. I currently work as a teacher at the UBA, University of Buenos Aires. Since I am 13, I am an activist in political associations and I am a member of this organization since five-six years. In all my life, at least since when I use political conscience, I am a militant and I use to participate and collaborate with different organizations. I was also autonomous militant without being part of any, but always interested in political issues and after a process, in which I was looking for options having meetings and discussions with organization that was active before, I decided to enter into La Dignidad. It is an anti-capitalist organization, part of the popular field of our country. We always try to generate what we call “instancia del poder popular”, which are instances of self-organizing neighbours to get what they think is necessary. [...] We understand that where there is a need, there is a right

necesidad, hay un derecho que no se está cumpliendo y en función de esto nos organizamos. [...] La organización es una herramienta del pueblo, con la diferencia de que nosotros no usamos el pueblo para nuestro beneficio. [...] Todos nuestros espacios se manejan con unas asambleas donde cualquiera puede participar, traer sus problemas, perspectivas y conflictos, e intentamos en el modo más democrático y participativo posible ir avanzando en la resolución de estos conflictos. [...] No es una organización cerrada, ni mucho menos, si no que por el contrario la voluntad, es que cada uno pueda encontrar su lugar dentro del propio movimiento.

No estoy seguro si era el 2010 o el 2011, tuvo en la ciudad de Buenos Aires, una toma del Indoamericano que terminó de la peor manera, con muertes, represión, y que en una fuerma también expresó lo peor del imaginario social acerca de la villa y de los villeros. Entonces en ese momento, nos vimos la tarea de construir un frente villero, que era también uno de los lugares donde nosotros teníamos mejor desarrollo y una mayor presencia como movimiento. Pero decidimos crear una herramienta que fuera de los villeros y para los villeros. Y con este objetivo es que nasce la corriente villera. [...] Cuyo objetivo principal es la lucha para la “urbanización con radicación”. [...] La idea es que funcione como una suerta de sindicato de villeros, donde sean ellos los que toman las decisiones, aquellos que lleven adelante las discusiones y las conexiones con el estado. [...] Nosotros, de la Dignidad, lo que hacemos en la villa es un trabajo de asistencia, de apoyo, de acompañamiento a las distintas cuestiones que los compañeros van planteando, debido a las distintas necesidades que van teniendo, y sobre todo, pensar cuál es la mejor forma de organizarnos para salir a luchar y poder resolver. [...] La urbanización de la villa, o mejor dicho la no urbanización de la villa, no se trata

that is not being met and we organize this function. [...] The organization is a tool of the people, with the difference that we do not use the people for our benefit. [...] All our spaces are handled with some assemblies where anyone can participate, bringing their problems, perspectives and conflicts, and tried in the most democratic and participatory way possible to move forward in resolving these conflicts. [...] It is not a closed organization, on the contrary, everyone can find their place within the movement itself.

I'm not sure if it was on the year 2010 or 2011, I was in the city of Buenos Aires and a shot of the American Indian ended in the worst way, with deaths, repression. It was considered the worst episode of the social imaginary about village and slum dwellers. In that moment, we felt the need of building a “villero front” which was also one of the places where we had better development and a greater presence as a movement. The objective of the movement is to be a tool made with the the slum dwellers and for the slum dwellers. With this goal was born the “corriente villera”, still active and always more developing in the slum. [...] A central important point is the fight for the “urbanización con radicación”. [...] The idea is to work as a sort of union of people living in the slums, where they are the decision makers, those who carry forward the discussions and connections to the state. [...] What the movement basically does in the villa is a work of assistance, support, accompanying the various issues that peers are arising due to the different needs that are having, and especially, think about the best way to organize ourselves to fight and solve the critical situation. [...] The development of the Villa, or rather the non-

de un problema económico, no es que no haya plata para hacerlo, sino de un problema de falta de voluntad política e ideológica de los gobernantes, que siguen creyendo que hay gente que es merecedora de vivir en las condiciones en las que se vive en las villas: sin cloacas, sin transporte público, sin recolección de basura, con un tendido eléctrico deficiente e irregular, sin gas. Digamos, en una serie de condiciones que hoy en el siglo XXI, parece mentira que haya gente que sigue viviendo de esta forma. Cuando llueve sus casas se inundan, la mierda de los pozos ciegos aparece flotando, los chicos enferman, además de estar expuestos a condiciones de salud y de higiene muy deficientes. Nosotros estamos seguros de que el problema no es que no haya dinero para construir las casas, simplemente se prefiere usar para otras cosas; evidentemente para enriquecer el bolsillo de pocos a costo del esfuerzo y del mal vivir de muchos.

En los momentos en los que hay crecimiento y desarrollo económico, aquellos en los que empieza a haber más trabajo en las ciudades, se produce un fenómeno migratorio, sobre todo en países en los que cada vez más las empresas extra nacionales expulsan a las comunidades, pagando a las economías regionales, a las economías locales, a los campesinos; los pueblos originarios se ven obligados a abandonar sus tierras para venir a trabajar a las grandes ciudades. Las grandes ciudades no tienen contemplado planes de viviendas sociales, sino todo lo contrario, frecuentemente hay procesos de regulación inmobiliaria. Entonces se ven obligados a vivir en las condiciones en las que pueden. Nadie elige vivir en una villa. El surgimiento de la villa 31, que, si no me equivoco la data de principio del siglo pasado, esta legado al trabajo portuario. Esta allí porque está ubicada cerca del puerto. La gente que llegaba conseguía trabajo en estos lugares, y al no tener donde vivir, tomaba algunas tierras en desuso o la ubicaba

development of the Villa, is not an economic problem, not that there is no money to do it, but a problem of lack of political and ideological will of rulers, whom still believe that there are people who are worthy of living in the conditions in which they actually live in the villages: no sewer, no public transport, no garbage collection, with poor and irregular power lines, no gas. In a series of conditions today in the XXI century, it seems incredible that there are thousands of families who still live in this way. When it rains their homes flood, shit is floating as well, children become sick being exposed to not human health conditions and very poor hygiene.

We are confident that the problem is not that there is no money to build houses, they simply prefer to use for other things; obviously to enrich their pocket and meet their own needs.

The economical development caused an huge migratory phenomenon, especially in countries where is the government itself that expel entire communities, indigenous peoples are forced to abandon their lands to come to work in the big cities as Buenos Aires in Latin America. Large cities have laid plans for social housing, but on the contrary, there is often real estate regulation processes. Immigrants are forced to live in the conditions in which they can and of course nobody chooses to live in a villa. The rising of the Villa 31, which, if I'm not mistaking is from the beginning of last century, is mostly linked to the dock work because it is located near the port. People arriving in the Capital tried to get a job there and, being without any place to live, took some disused land or stood in places where they could. And this is the origin of the Villa 31. Then is has grown through different migratory waves from

en los lugares donde podía. Y esto es el origen de la Villa 31. Luego han crecido a través de distintas olas migratorias desde el interior de nuestro país, de las provincias, o de países extranjeros. La villa tiene un componente muy fuerte de población paraguaya, peruana, boliviana, chilena, uruguaya; llegan sin dinero y sin una condición necesaria para alquilar una vivienda y terminan entonces viviendo en una situación irregular como puede ser la de la villa. Hay leyes votadas por la legislatura porteña para las villas que obligan a la urbanización; entonces el gobierno no está cumpliendo la propia ley que el gobierno votó. Esta ley fue un producto de las luchas. Todo lo que se consigue, todas las cosas que nosotros podemos gestionar, como puede ser las ambulancias, el camión que reparte agua a precio bajo, los jardines que tenemos, los bachilleratos, todo lo que forma parte de la estructura de la corriente villera y de la dignidad, nosotros lo conseguimos con la lucha, [...] en una relación siempre tensa, conflictiva y contradictoria vamos consiguiendo algunas victorias que nos permiten ir consiguiendo esas cosas. Las leyes también fueron producto de la lucha, entonces hay leyes que obligan el gobierno a urbanizar, que obviamente el gobierno no las cumple por esa falta de voluntad política y por esa decisión. [...] Nosotros luchamos por la "urbanización con radicación", entendiendo que la urbanización no son solo cuatro paredes, si no lugares donde se puede desarrollar una vida digna en un modo integral: con espacios verdes, hospitales, escuelas, con todo lo que hace falta. Lo mismo que hay fuera la villa tenerlo dentro también, como una igualdad de condiciones de vida que hoy no se cumple. La "urbanización con radicación" implica que los compañeros que viven allí se queden donde están viviendo. La relación de los villeros y de las villeras con la ciudad también es una relación de negación, de segregación, de estigmatización,

inside our country, provinces or foreign countries. The villa has a very strong component of Paraguayan, Peruvian, Bolivian, Chilean, Uruguayan population; they arrive without money with the necessary condition for renting a home but then they end up living in an irregular situation as can be the Villa.

There are laws passed by the City Legislature requiring the urbanization of the villas but the government was not fulfilling the law that the government itself has voted. The association corriente villera has managed to provide ambulances, the truck to deliver water at lower prices, some green spaces, high schools (even if out of the Villa [...] in an ever tense, conflicting and contradictory relationship we are getting some victories that allow us to achieve these objectives. Moreover the legislation was also a product of the struggle and the social claims, obviously the government does not comply, mostly because of a lack of political will. [...] We fight for the architectural-social-economical development of the Villa, where urbanization does not mean construct just four functional walls, but develop a dignified life in an integral way: with a public space, hospitals, schools and all the services needed. Just give an equal living conditions to the people who are living in the city. The relationship between the slum dwellers (known as villeros) and the city is a relationship of denial, segregation, stigmatization, especially for the media, which usually associate villas to places with crime, drug trafficking, and more questions.

Is always possible to read about these issues appeared in the villas but never about the incredible solidarity between neighbours or about the vast quantity of colleagues whose

sobre todo por lo que hacen los medios de comunicación, que habitualmente asocian las villas a lugares con delito, al narcotráfico, y a más cuestiones. Siempre aparece en las villas las noticias sobre estas cuestiones, y nunca la solidaridad entre vecinos y vecinas, o a la inmensa cantidad de compañeros y compañeras que con su trabajo sostienen la ciudad de Buenos Aires. [...] Uno de nuestros objetivos es hacer un día “sin villeros” para demostrar quien son los que [...] hacen los peores trabajos de nuestra sociedad, los trabajos peor pagados, menos reconocidos, viniendo muchos de ellos de la Villa. Lo que pasa es que lo niegan con el objetivo de conseguir un trabajo, diciendo una dirección falsa. Otra cuestión es la que se conoce como “los cordones de seguridad azul”, que fue destinar algunas fuerzas policiales [...] a hacer un cordón de seguridad en la entrada de todas las villas. Entonces ya hay una segregación simbólica y material: la gendarmería está vigilando y controlando que los villeros no alteren el orden social. [...] Alguien que vive en la villa lo hace porque es obligado. Y además hay un sentido de pertinencia, de identidad, de cultura, o incluso un orgullo de poder vivir en una villa. Lo cierto es que nadie puede vivir en estas condiciones, nadie quiere hacer vivir sus hijos en estas condiciones. [...] La Villa 31 es una de las más grandes y numerosas de la Capital; lo que pasa es que por el lugar donde está ubicada la Villa 31 es la que tiene más visibilidad: está ubicada en el centro de la ciudad cerca de las terminales de ómnibus de Retiro, donde llegan y se van cada día miles y miles personas; eso hace que sea una de las más vistas y sin duda estas tierras son más cara que otras, su valor económico da posibilidad de hacer negocios inmobiliarios, y sin duda para muchos resultaría atractiva. “

work holding Buenos Aires. [...] One of our goals is to organize one day “without villeros” to show how the city can survive without these people doing the worst paid and the less recognized jobs of our society. A common behaviour of a villero is to deny their proper identity and social state in order to get a job, saying in this way a false address. Another issue is what is known as “los cordones de seguridad azul”, which aim was to allocate some police forces to make a security cordon at the entrance of all the villas. [...] So there is already a symbolic segregation: the police is always monitoring and controlling the villeros to avoid to let them alter the social order. [...] Often the people who lives in the villa is forced also because there is a sense of belonging, identity, culture, or even a pride to live in a villa. The truth is that no one can live in these conditions, no one wants their children to live in these conditions. [...] Villa 31 is one of the largest and most numerous of the Capital; what happens is that where Villa 31 is located is the one that has more visibility: it is located in the city center near the Retiro bus terminal, where are passing every day thousands people. That makes it one of the most seen and certainly these lands are more expensive than others.”

April, 14th 2016

2.2 Demographic characteristics of the population

Historically, the urbanization in Latin America took place mainly through large cities, which experienced population growth rates considerably higher than those of the total national and the total urban population. The population structure of the Villa 31 is markedly different from the one shown in Buenos Aires. Both the distribution by sex and age composition and birthplace of its inhabitants have characteristics that distinguish them and indicate particular demographic behaviour.

The figures 1 and 2 show that the age composition of the population of the Villas 31 and 31 bis is much younger than the rest of the city.

The average age of residents is 23.3 years old, almost 16 years younger than in the city; this difference is accentuated in women where it reaches 17.8 years. Also in the Villa 31 bis the average age is lower (22.4 years). In the Villas 31 and 31 bis those under 30 account for almost 68% of the population, while in the City this group represents less than 40%. They highlight especially the first decade (0 to 9) and third (20 to 29) as proportionally more numerous: 23.8% and 24.6%, respectively. Moreover, the over 60 group represent only 2.1% of total population and this same group throughout the City has a ten times larger percentage weight. As for the gender composition, women account for 50.5%, showing a significantly lower percentage of the total of the City which they account for 53.9%.

Also remarkable is that the two villas have similar characteristics in the population structure but with some differences worth

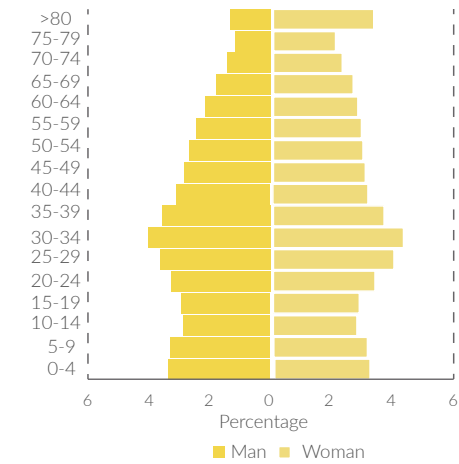


Fig.1

Population structure by sex and age, City of Buenos Aires, 2009

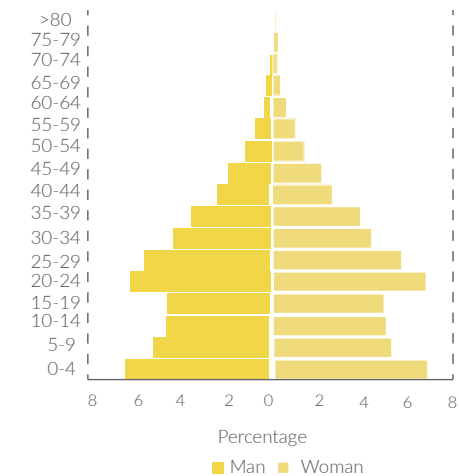
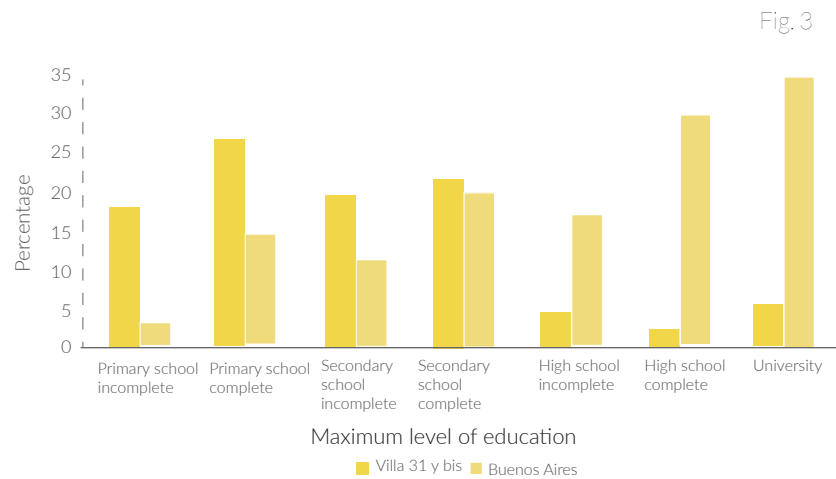


Fig.2

Population structure by sex and age, Villa 31 and 31 Bis, 2009

mentioning. In villa 31 bis the highest proportion of young population is observed. Particularly large is the group of 20 to 29 representing 26% of the population of this neighbourhood. It also shows greater balance between the number of men and women residents, almost distributed equally, while in the Villa 31 sex ratio reaches 96.5 men per hundred women (Gobierno de la Ciudad Autónoma de Buenos Aires, 2009).



Distribution of the 25 years old population by level of education, 2009

2.3 Educational Features

To compare the level of educational assistance between populations is necessary to observe the attendance rates by age groups, which neutralises the effect of the age structure of the population. The indicators relate to attendance at an establishment recognized by the formal education system and the highest level of education attained can characterize the educational situation of residents in the surveyed informal settlements and facilitate comparison with the population of the whole City.

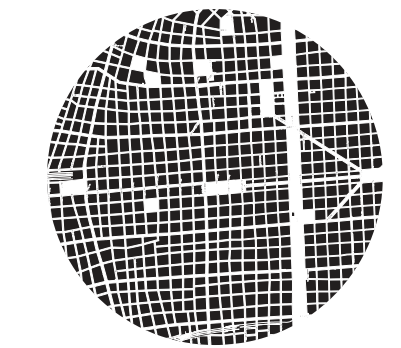
Particularly, the Villa 31 bis shows a very low attendance in all groups. Regarding children from 5 to 9 years, the Fig. 3 exhibits 5.4 percentage points less than the total of the city and 3.9 less than in the Villa 31. In the group of 10 to 19 years the difference is stretched to 19.6 and 11.1 percentage points, respectively. It is also striking the low attendance of residents from 20 to 29 years for those in the City as a whole and particularly low participation of this group of assistants Villa 31 bis (6,5%). The data gathered in the census of the Villas 31 and 31 bis show that the highest level of educational attainment for the population aged 25 years and older who attend or attended any educational institution, assumes substantially different from those of all the City values.

The inefficiency of the educational system is reflected also in the working sphere. According to numerous statistics made in the last years with the government of Buenos Aires, most of the villeros work inside the villa in commercial activities or just outside (in Puerto Madero neighbourhood) mostly as

bricklayers or anything linked to the construction sector.

Using some of the data collected along with employment one, a strong economic sector is quite apparent within the settlement. While this particular data set showed a high 43.5% unemployment rate, 16.7% were in fact employed within Villa 31. The employment data however is partially biased by the predominance of female responders; 76.8% of those who participated in the surveys were female. Regardless, this data illustrates the strong economic activity and potential of the informal settlement (Gobierno de la Ciudad Autónoma de Buenos Aires, 2009).





INNER CITY BLOCKS

Public space: 3,9 m² / person

Not ocupied block: 4,2 m² / person



VILLA SETTLEMENT

Public space: 0, 27 m² / person

Not ocupied block: 0,24 m² / person



Fig.4

Urban framework: City VS Villa

The urban fabric and the building typology of the City is quite different from the one found in the Villa. It is quite easy to distinguish them both from a macro and a micro scale of investigation. Being an informal settlement, the Villa organization of the land use is not following any particular urban plan and normative since the moment all the minimum standard are not reached. On the other side, the urban one is clearly organized in a perpendicular grid where all the necessary services are already implemented. Even if at first glance the two situations seem to be totally different, the Villa presents some peculiar aspects typical of the city of Buenos Aires such as the longitudinal development of the *viviendas* and the subdivision of the spaces in kind of *manzanas*. To better understand the characteristics and the contrapositions of the two settlements, a deeper exploration is necessary (Borthagaray, 2009).

3.1 Urban city blocks: *manzanas y cuadras*

The urban settlement of the city of Buenos Aires is composed by *calles* (streets) and *manzanas* (blocks). Historically it grew up around the Plaza Mayor and initially was organized in a sixteen squared blocks located in front of the river. To the original subdivision, provided by the laws of the colonial period, were added successive divisions, until reaching a minimum lot of 8.66 meters wide. This lot (better known as *Casa Chorizo*) is the typical house which today is still present in the city. It also represents the base module in which most of the properties are distributed (Borthagaray, 2009). Typically in a *manzana* with interlaced partitions, is it possible to notice that, towards the centre of the block (the side of the block), the plots are much deeper, being almost square in the corners. By maintaining all its width of 8.66 m, the corner plots are reduced in surface. This fact impacts on the morphology of the city block that tends to acquire the fabric: the current Planning Code allows the construction of the total footage proportional to the available land of the lot, which results with higher buildings towards the centre of block and lower in the corners.

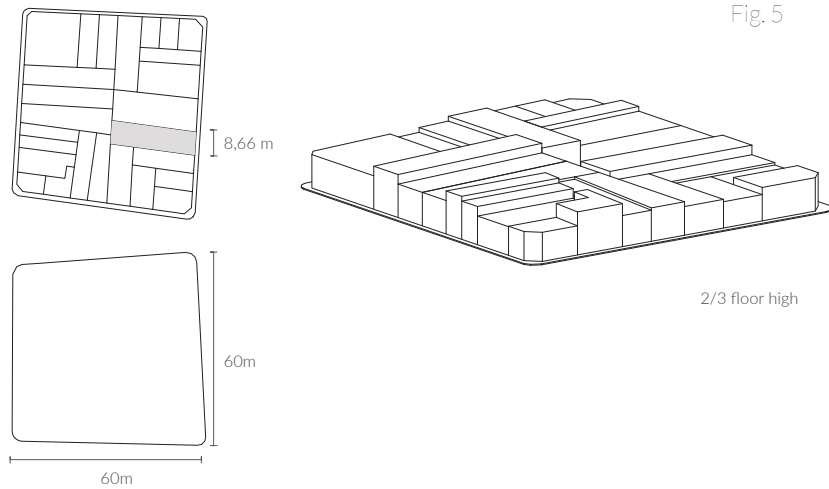


Fig. 5

The colonial house of courtyards meant wide areas of terrain, that is the *manzana* which would imply dimensions of about 60m x 60m. When the territory was parcelled out and the construction of new houses were carried out by a population with low resources, the *Casa Chorizo* was the best solution, that copied the imaginary of the houses of courtyards but was adapting it to the situation. The colonial houses of courtyards were far heirs of the Roman *domus*, where between both courtyards was the public space of the house, destined to foods or activities of social nature (Borthagaray, 2009).

The *Casas Chorizo* then gave birth to ways of living in which more than one family shares the same lot, whether they own the same or not, and a great number of other types of houses arose, such as row houses. In the *manzana*, the situation of houses aligned along the depth of the lot is repeated, for example a lot of half a block, and the coexistence of several functional units without reaching a big high in the building.

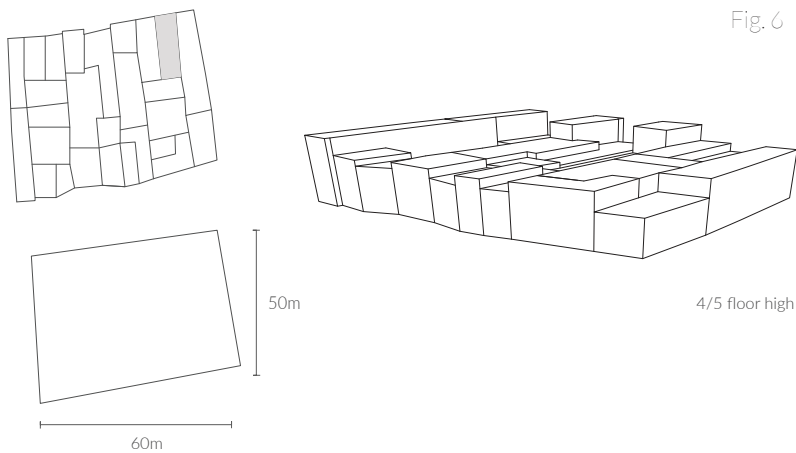


Fig. 6

3.1.1 Housing typology: *la Casa Chorizo*

The *Casa Chorizo* is the typical housing of Buenos Aires and Rosario in Argentina, which also spread to other cities of Latin America.

It is an architectural design mainly for residential use, built along a narrow lot with side yard, rooms facing the internal patio, with a gallery and through a clearance of land in the background that could also be ahead as garden. Because of this arrangement it is called chorizo, since the environments are

linked one after another, like sausages in a string.

The origin of this design is in the Pompeian house and Italian immigrants took it and adapted to the measures available in the subdivisions of Buenos Aires to build their homes, based on narrow grounds of 8.66 m, and lengths of 30 to 45 m. They were basically consistent homes in a more or less square courtyard, in whose centre was the water tank and where the interior rooms face. A gallery or porch roof provided shade and shelter from the rain at the entrance to the rooms.

There is another explanation of these homes and denies the idea of the average Pompeian house to fit the width of the lot. Poor immigrants used to lived in tenements, collective homes, and along the trams and trains railway lines and started to sell plots of land in instalments and bricks feasted on which construction begins. So immigrants became owners of their lot and were able to build their houses, and that was the chorizo, more or less the same for all at first. No architects needed, they were made with bricklayers builders craft.

In Buenos Aires, a severe yellow fever epidemic in 1870 caused the exodus of wealthy *porteñas* families in the north of the city. The houses that those families left behind were divided with an axis perpendicular to the street, to be inhabited by European immigrants, who came mainly from Spain and Italy.

At present the rehabilitation of this type of construction is an important real estate business, mainly in the neighbourhoods of the city of San Telmo and Palermo.

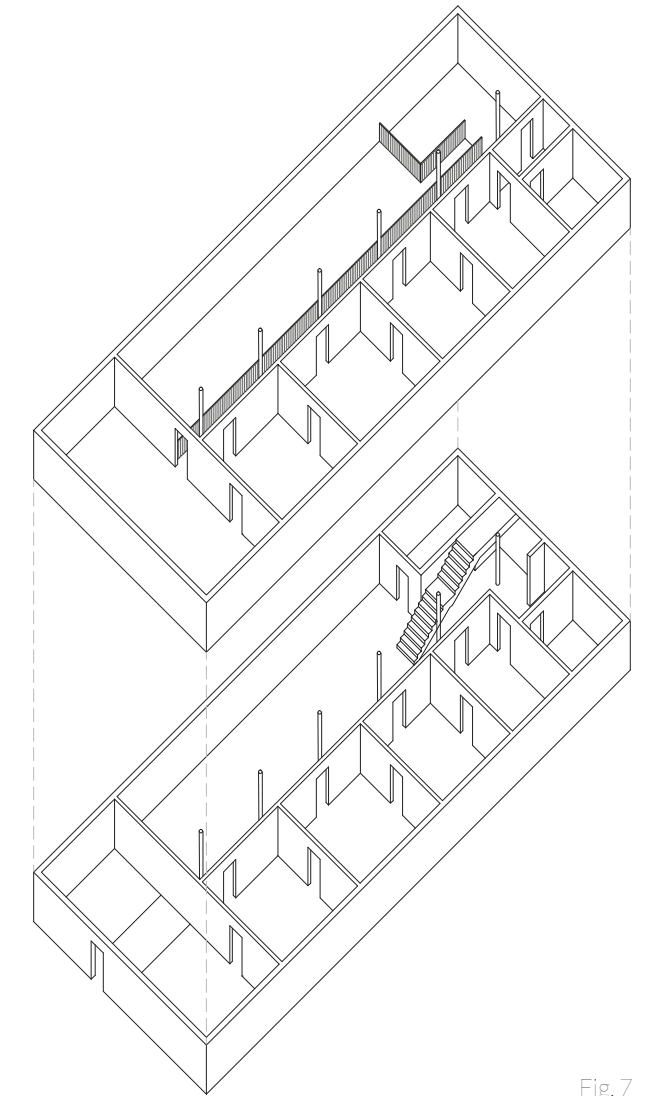


Fig. 7

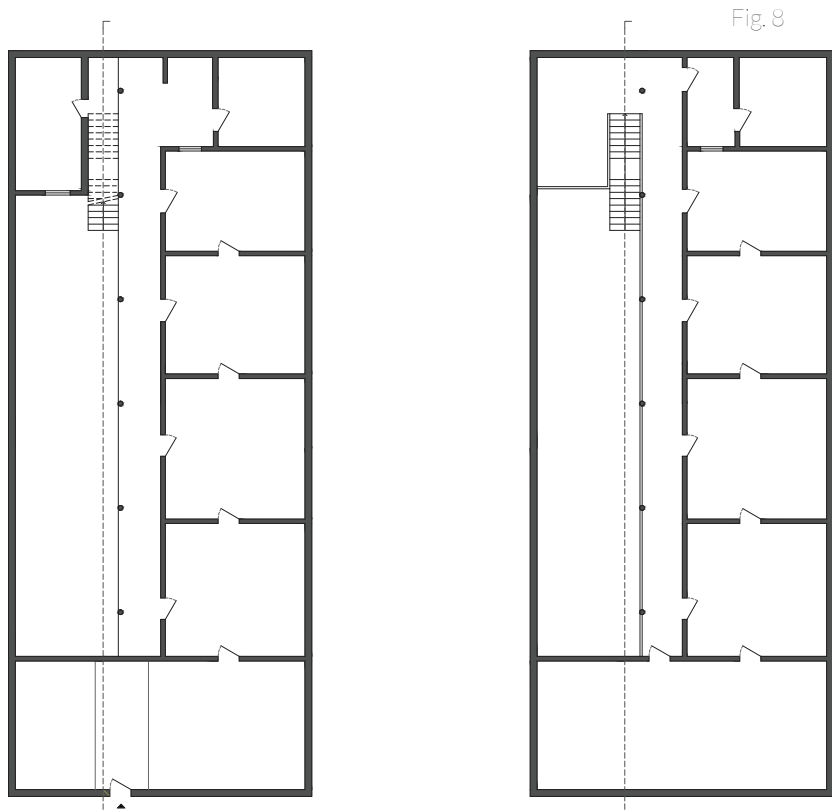


Fig. 8

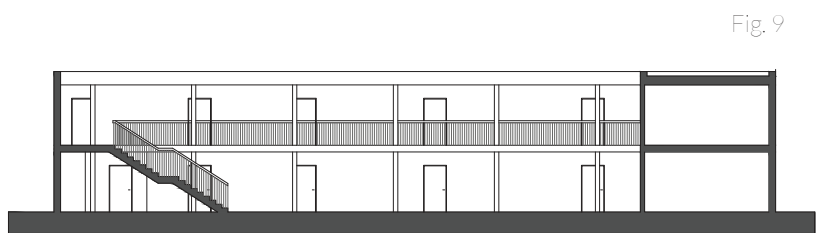


Fig. 9

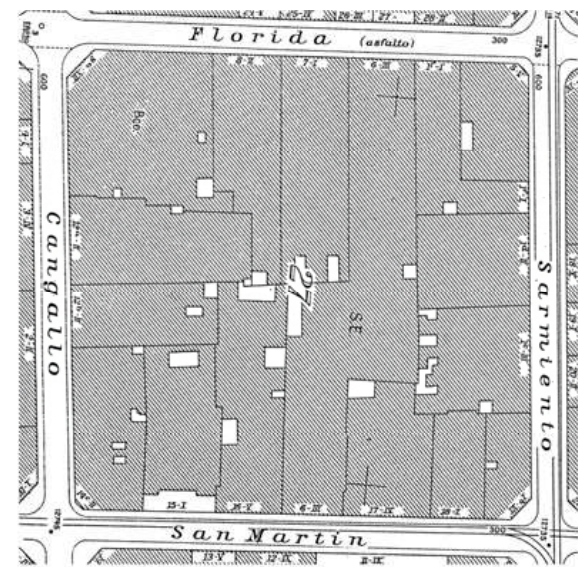


Fig. 10

3.2 2016: the actual Villa situation

The settlement of the Villa 31 is physically constricted to a narrow strip of land located between the railroad tracks and the shipping port. The land is primarily owned by the national government, while a small portion is owned by the railroad company and Yacimientos Petroliferos Fiscales (YPF), the Argentinean oil company. Villa 31 is bisected by a freeway, which runs overhead for some portion and then transitions to ground level for the western portion, delineating Villa 31 and Villa 31 Bis. Villa 31 bis was built after the raised freeway was constructed and has seen the greatest amount of growth in recent years (Blaustein, 2001).

The location is ideally situated near the urban centre of the region, with regional connections on the subway system, locally called the *Subte*, and areas further to the northwest by train. Jobs, healthcare, and education are all relatively accessible from Villa 31 when compared to other villas and *asentamientos* located throughout Buenos Aires and the greater metropolitan area.

According to the City of Buenos Aires data, the population of Villa 31 increased between 2001 and 2009 (City of Buenos Aires, 2009), however, some entities claim there are currently more than 120,000 (La Cooperativa de Mujeres Artesanas da la 31, 2010). The figure 11 illustrates the seven designated neighbourhoods, or *barrios*, which comprise Villa 31, including *Inmigrantes*, *Guemes*, *YPF*, *Comunicaciones*, *Autopista*, *31 II*, and *Barrio Chino* which are still pretty active in the Villa (Administración General de Puertos, 2012).

Nowadays the situation of the Villa is still critical and difficult even if there are many initiatives and announced plans to urbanize Villas 31 and 31 bis and officially integrate them into the City of Buenos Aires. Despite the villa presents a higher visibility on the political and social sphere and despite some essential services randomly started to be placed in the last year, it still faces the same urgent sanitary and housing needs as usual.

The changes going on in Villa 31 today could set a precedent for the urbanisation of other villas of Buenos Aires. The case demonstrates that democratising the management of their transformation allows the institutions involved to make more participatory decisions, chosen in light of stipulated criteria. Thanks to a series of extraordinary circumstances that Argentina, and all of South America, is experiencing, the poor, who live on the most expensive land in the city of Buenos Aires, no longer have to fear eviction. Nor do they feel that they will forever live with their backs to a city that builds 'walls' around them.

These poor, for so many years seen as squatters, will be owners. They will be able to transfer their houses, a tangible asset with a market value, to their children. These poor have given shape to a unique system of representation in the country. These poor, for so many years exploited by political manoeuvring, will now be seen at the working tables which address subjects that will improve their own surroundings.

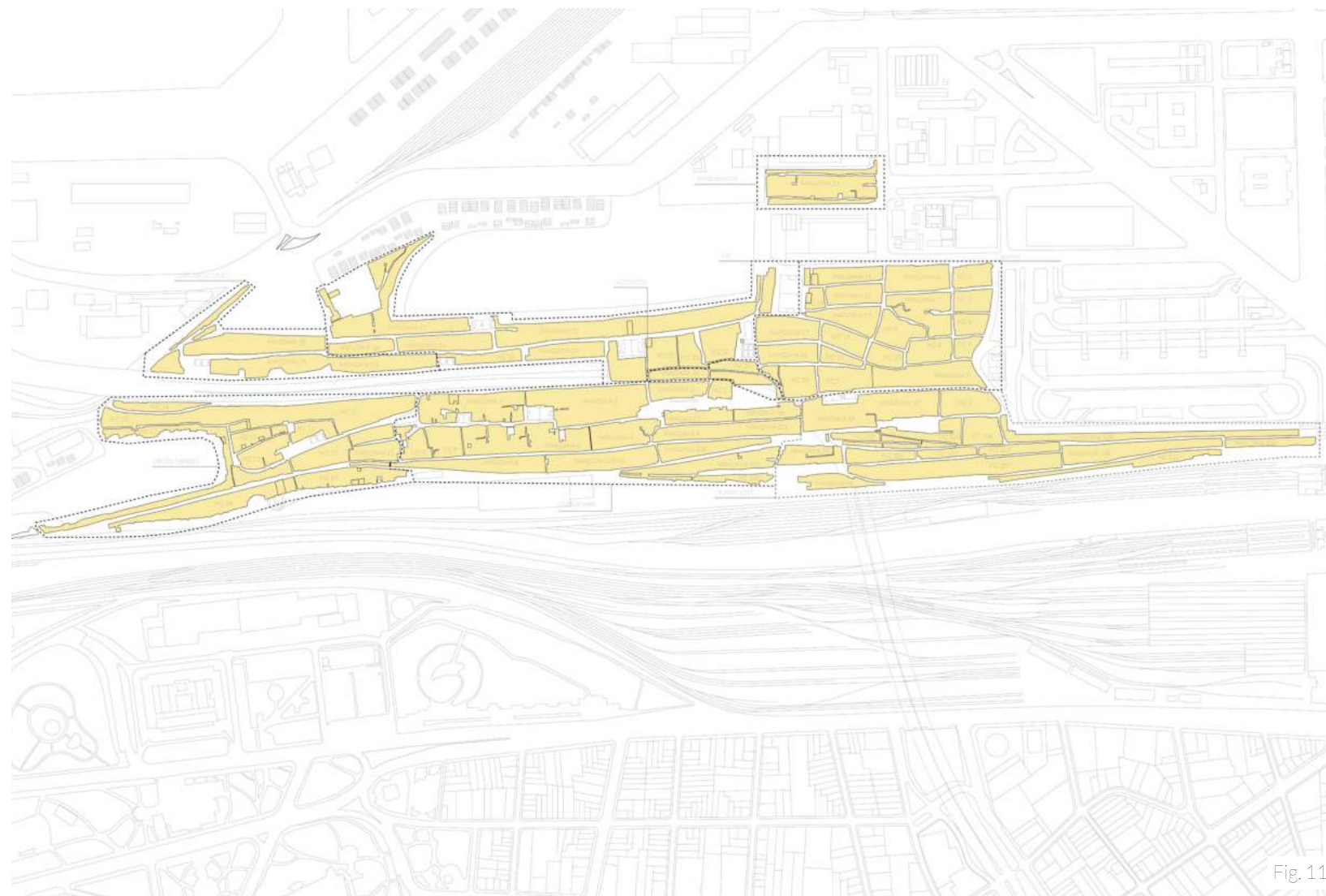


Fig. 11

3.3 Morphology and urban density

“ Nowadays the Villa has already spread throughout the available lands. There is no ground left for it to be extended in the horizontal direction. Surely, it will continue to grow vertically.”

Fernandez Castro, 2010

The data of the City of Buenos Aires show that more than the 85% of the land use is fully occupied. The overcrowded situation is the core of the urban discomfort and the term is also used to indicate an unhappy situation in different public services, quite inexistent in the Villa.

Comparing the amount of green space per inhabitant, taking into consideration the other capitals in Latin America, it is possible to notice that Buenos Aires loses by a landslide: in a ranking of 10 cities compiled by UN Habitat, which are included Mexico City, Sao Paulo and Santiago, Chile, was in last place, with 6.2 sqm per capita. Only Lima is back, with 2 square meters. For experts, this is not a minor issue: the quality of life

in a metropolis is directly related to the amount of green and communities with which its inhabitants have spaces. According to the World Health Organization (WHO), there should be between 10 and 15 square meters of green space per person. Since 80% of the population of Latin America lives in cities, the deficit becomes much more worrisome. While it is true that the green area has increased since 1995, when Buenos Aires was barely 2.5 m² per inhabitant, the annual growth is slow to reach the desirable 10 m² per inhabitant. The distribution of green spaces also appears uneven within the city itself. The neighbourhoods that have more surface per capita are the Comuna 1 (Puerto Madero, San Nicolas, Retiro, Monserrat, San Telmo and Constitution) and sector 8 (Villa Lugano, Villa Soldati and Villa Riachuelo), with 23 square meters. In the first case, it was influenced by the Costanera and Puerto Madero parks; in the second, the American Indian park; while the worst part is represented by communes 3 (Balvanera and San Cristobal) and 5 (Almagro and Boedo), where there are only about 0.4 m² per inhabitant.

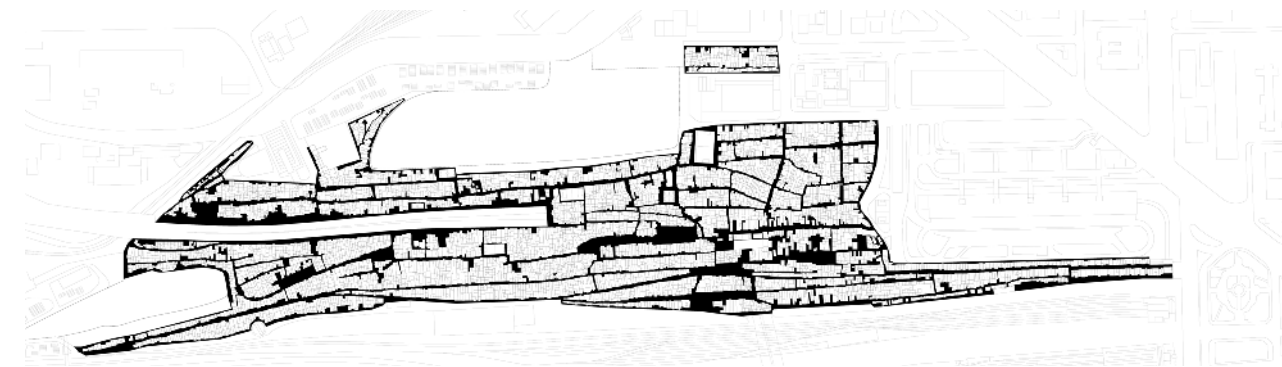


Fig. 12

3.4 The viviendas in the Villa

The approximately 96-acre settlement is composed of structures that vary from one to six levels in height, with various construction materials that range from concrete and brick to plywood and tin. Argentinean anthropologist, Cristina Cravino, conducted research on Villa 31 and obtained significant data with regard to the physical and social structure within the settlement. Over 96% of the houses contain masonry walls, greater than 90% contain either paving stone or sheet iron roofs, and 91.8% have concrete floors. Less than 4% of housing units are built out of cardboard, timber, or sheet iron walls and soil floors. Houses within Villa 31 bis are more likely to contain fewer levels, and are often built more precariously than Villa 31 (Cravino, 2006).

Villa 31 bis is more likely to contain less infrastructure than Villa 31. Fewer roads are paved and the area is generally more prone to flooding in Villa 31 bis. Additionally, a significant 57.4% of residents do not have sewer services (Cravino, 2006). However, on a positive note, a vast majority of residents said their homes contained electricity, water, and telephone services. Cable television services were divided in half between those that had cable and those that did not (Cravino, 2006). The same study found strong economic activity within the informal settlement; 94% of the respondents claimed they can meet their daily needs by purchasing goods within their neighbourhood. For larger purchases, such as clothing and household items, 64.3% claimed they could purchase

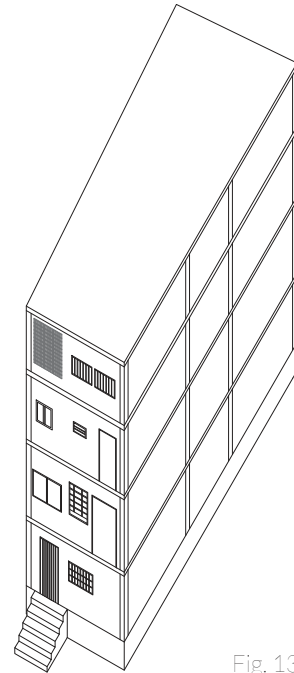


Fig. 13

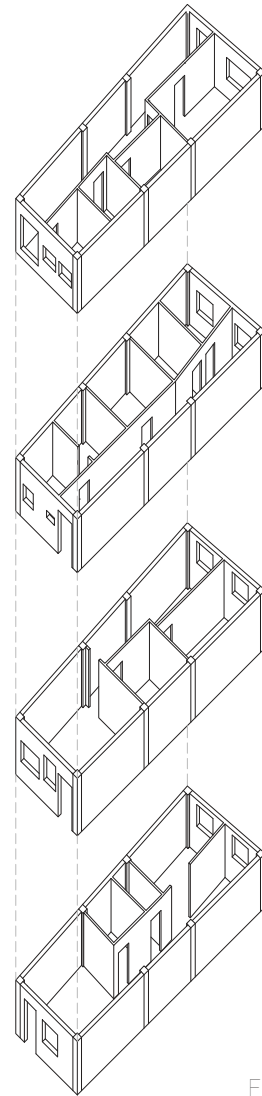


Fig. 14

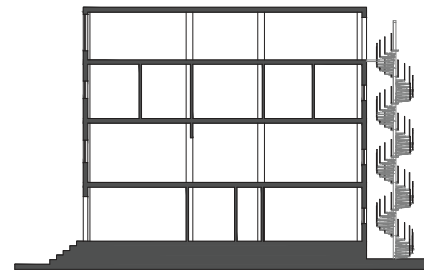


Fig. 15

such items from within the settlement or nearby. Regarding this aspect, it is important to consider that each *manzana* of the Villa works as an autonomous micro-system with its own micro-economy. The *viviendas* are an essential part of the internal process and do not work only as a residential spaces, but they often contain informal commercial and educational activities.

In contrast to the other informal housing in the world, the one of Buenos Aires presents a housing typology typical of the City which could be clearly identified in the historical part of the villa, even though they present evident limits and inefficiencies (Fig. 13, 14, 15). A core point of the political strategy of the actual government was to invest on the re-design of the Villa informal housing to give dignity to the spaces and to ensure sanitary and urban minimum standard to the whole settlement. This year, the amount of money allocated from the city budget for urbanisation is the lowest in recent history. Money for *vivienda*, or housing, has steadily declined over the past ten years, with only a slight uptick in 2010. In 2015, housing will receive 2.4% of public funds, making it the lowest amount in a decade. This money is reserved for anything from urbanising villas to helping the estimated 600,000 Buenos Aires residents living in emergency housing situations (Fig. 16). The city has a deep history of under-executing on social housing spending, and over-executing on works in tourist-dwelling areas like Palermo and Puerto Madero. In 2013, only 31% of allocated housing funds were actually spent. In 2014, only 28%. Meanwhile, last year, the city government was 78% over budget for government advertising, according to the 2015

ACIJ housing report.

Julian Bokse, psychology professor at University of Buenos Aires and member of *Corriente Villera Independiente*, or CVI, works on improving villas without government aid. His organisation fights for urbanisation and social equality through an anti-capitalist, leftist social movement.

Bokse is well aware of the city's under-spending, and is clear about why it happens.

"They spend less than they have budgeted for, and that is a political decision, it's not an anomaly or that something went wrong. If they wanted to do it, they would have done it already."

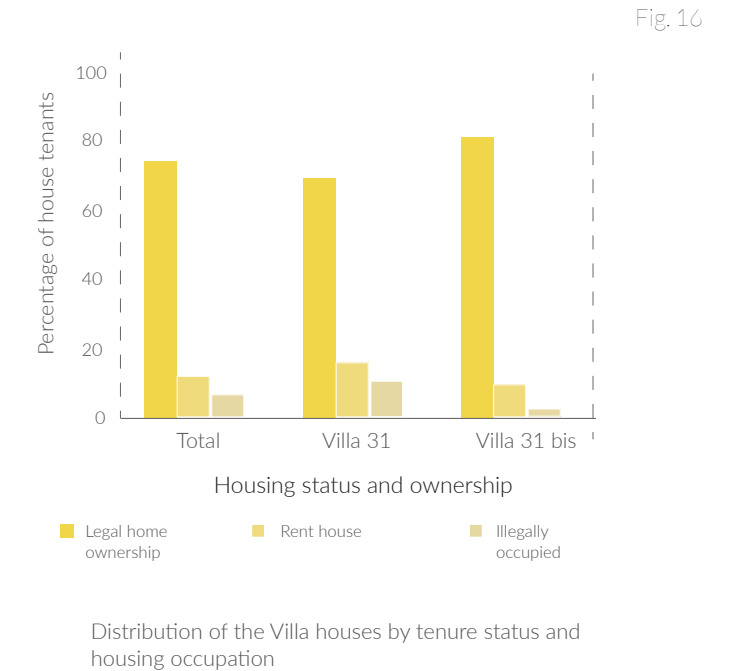


Fig. 16

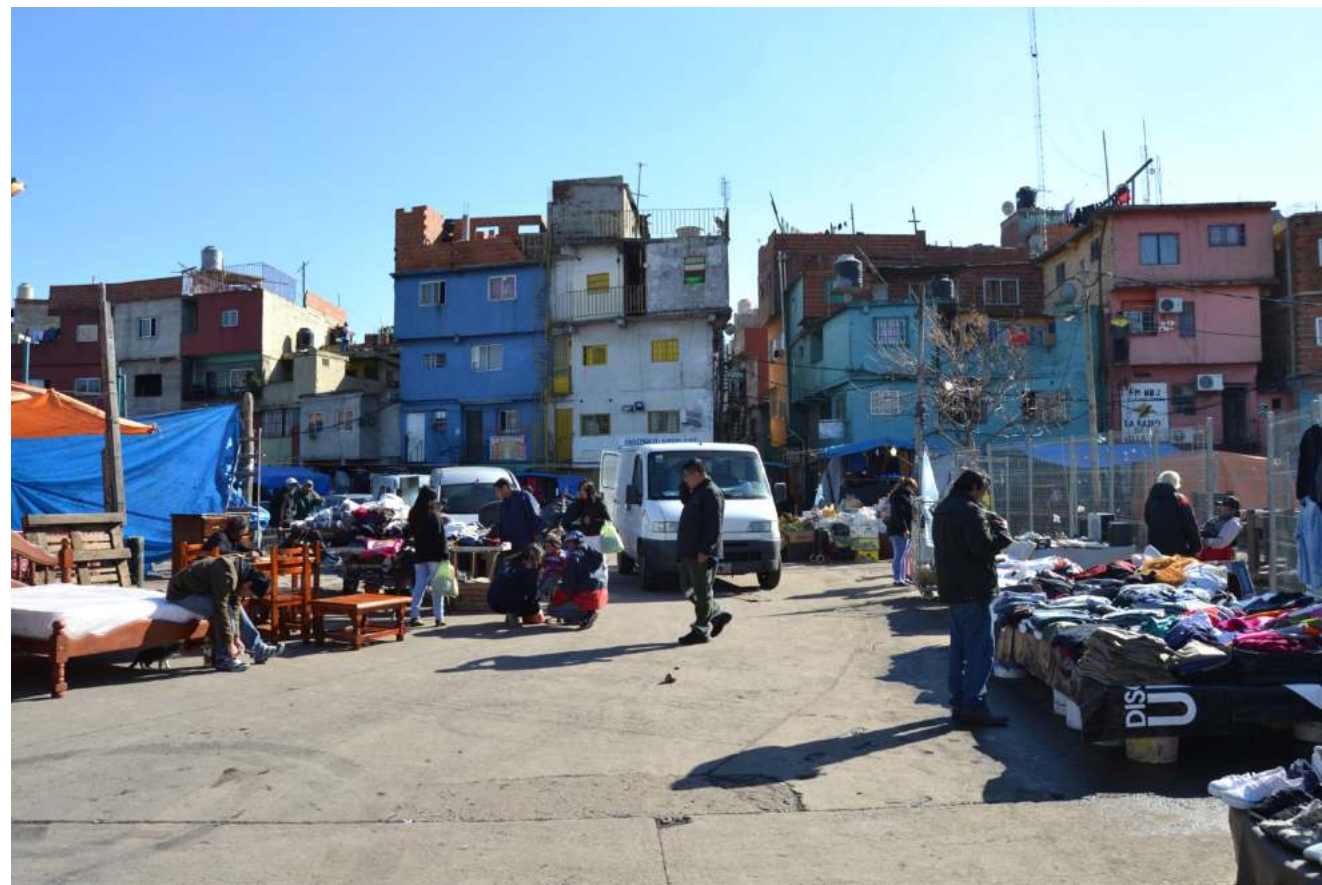
PHOTOGRAPHIC SECTION



street living



flood



informal markets



canchas



multifuncionalidad



informal business



oposiciones



separation



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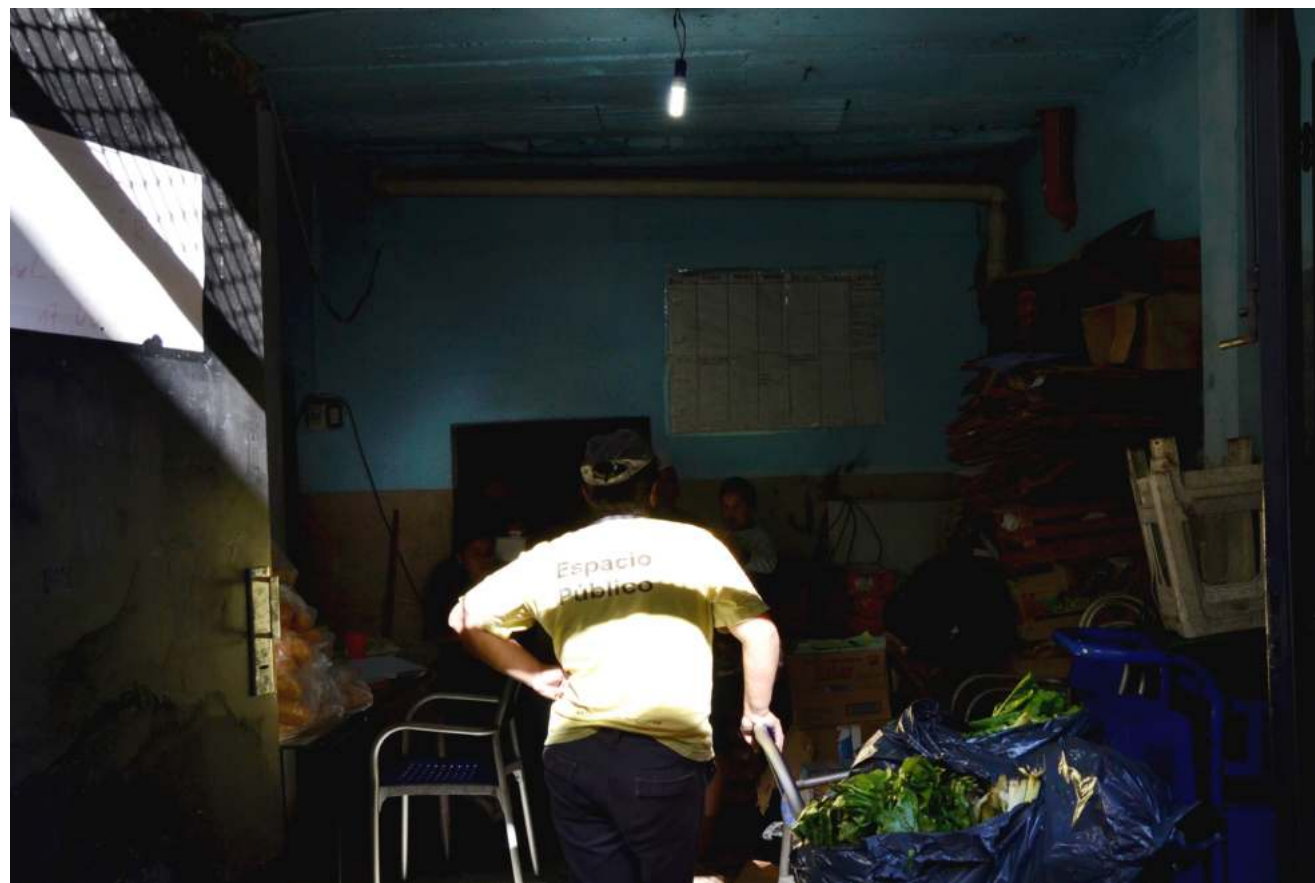
street market



business



cancha lugan



voluntary



courtyard



playground



football



trees



glimpse

PART 2

URBAN UPGRADE:
BETWEEN INFORMAL TO FORMAL SETTLEMENT

Case studies: projects and interventions



The informal settlements represent an essential part of the city and the first access to urban life. They are the physical embodiment of an unstoppable flow of urbanization that moves millions of the planet's inhabitants per year from the countryside to the city (Domus 963, 2012).

The worldwide favelas are under constant transformation, evolving steadily. They change and grow, satisfying the mutating needs of the individuals and families who inhabit them. The development is incremental, configured as it is by the life story of every migrant (Domus 963, 2012).

The breadth of literature utilized facilitated an understanding of the case of the Villa 31 and the precedent cases. Each design aimed to develop a foundational comprehension of the social, political, and economic context. For each of the 10 case studies there is a summary description of the fieldwork in depth in an effort to contribute additional context that will help to frame the social conditions affecting Villa 31 and plans for intervention. Next, intervention approaches for the previous projects were examined to deduce the goals and strategies. They were analyzed historically, providing insight to spatial and process approaches. Finally, the outcome of each intervention case is reviewed so as to interpret and evaluate

its effectiveness.

The following case studies are reported from a larger to a smaller analysis scale. The understanding of similar cases and the evaluation of the different proposals was essential for the thesis research. By contrast or by conformity, all the presented projects helped in the design phase, as regards the dynamics, the priorities and experiencing other points of view.

4.1 Cantinho do Ceo complex urbanization, Boldarini Architettura e Urbanismo

Data

LANDSCAPE ARCHITECTS Boldarini Architettura e Urbanismo

LOCATION Cantinho do Cèo, Sao Paulo, Brazil

PROJECT YEAR 2011

PARK AREA 30 hectares

Project description

The project intervention seeks to highlight the importance of public and collective space both to the city and to society, from the perspective of effectively transforming the social and spatial conditions that reinforce the right to the city and to social inclusion.

The Cantinho do Ceu project consists in a linear park system (with an extension of 7 Km) that interferes between a series of informal settlements and the Billings Reservoir, located in the extreme southern zone of the City of São Paulo. It was designed in partnership between the municipal Secretaries of Housing and the Environment and has been nationally and internationally recognized as a project that exemplifies best practices in reforming favelas (Domus 963, 2012).

Likewise other informal settlements, the self-built structures of Cantinho do Ceu occupied kilometers of the delicate riparian zone, the basic source of drinking water for the entire city. The main design strategy, was basically to remove



only the houses within a 20 meter zone, using the cleared area as a leisure and park space for residents of the informal settlement, and implement water and wastewater removal infrastructures within the existing community, and combining maintenance and re-growth of native plant species. The result is a hybrid urban nature, whereby the park is actively used by the inhabitants and at the same time ensures improved quality of the city's drinking water, improving the life quality.

The work on the access and mobility aspect, was based on an understanding of the existing roads in order to develop them. A set of proposals were made to integrate and connect the three hubs among themselves and with the surrounding road system. To do so, new roads, alleys and stairways were proposed to assure connection to the most diverse points of interest in Cantinho do Céu and to integrate the settlement with its surroundings. The urban fabric determined the final configuration of the streets organized by their importance in and by the type of traffic (Soares, 2005).

The project is not only distinguished for its formal interventions, but perhaps more significantly because of its involvement in the community. While there are many architect-designed redevelopment projects being undertaken in São Paulo, Boldarini's intentionally spent many months with the community and "just observed how people use space and listened to what they want. It was fairly straightforward, but a necessary process in order to design a relevant project."

Interesting Aspects

- involvement of the architect in the community
- strategic demolitions
- new infrastructural system and services
- qualification and integration of the settlement into the city
- importance of public space for the improvement of the neighborhood

4.2 Caracas Metro cable, Urban Think Tank

Data

ARCHITECTS Urban Think Tank

LOCATION metro cable Mariche, Carr Petare - Sta Lucía, Caracas, Venezuela

LANDSCAPE Topotek 1: Martin Rein-Cano, Christian Bohne

PROJECT YEAR 2010

MATERIALS corrugated steel sheets, fiberglass cladding

Project description

Caracas Metro Cable apparently inverts the concept of the infrastructure and instead of moving whole neighborhoods, the stations are positioned flexibly, and its configuration results in minimally invasive footprints.

An important aspect is that the Cable directly benefits the people of San Agustín instead of speeding trips for the vehicle owners of Caracas. Specifically, large pedestrian paths, hemmed in by boundaries of multiple kinds, and located at a 45-minute, 600-step from the Parque Central. Therefore, the new transportation system is integrated with the City Metro. It has a length of 2.1 km and uses a funicular system with a capacity of 8 passengers each, while the total system is estimated at about 1,200 people per hour in each direction (Urban Think Tank, 2012).

All the 5 stations have a number of common basic components, which are: level platform, access ramps, well defined circulation



patterns, materials and structural elements. However, each station differs in its configuration and additional functions and includes cultural and social spaces as well as administrative space.

Among the five, two of them are located in the valley itself and serve as connections with the public transports of the city. The other additional 3 stations will be placed on the mountain, along the route in plots that concentrate fundamental community needs such as: accessibility, adequate pedestrian circulation patterns and constructive sustainability. Technicians are beginning to install wind turbines that will power the stations together with the photovoltaic plants which will eventually supply energy to all the settlement.

Without the active participation of its residents, this kind of project cannot be realized.

The goal was to implement the means for change in relation to the fundamental needs of the informal Barrio. The inhabitants complain a safe access to public transport for residents of the neighborhood, as well as the development of employment opportunities for the economy of the neighborhood and a sustainable infrastructure to give permanence and stability to the community.

Another aspect is the improvements in health, education, employment opportunities and quality of life, together with the safety and crime reduction.

Interesting Aspects

- importance of the connectivity and the infrastructural system
- criteria of minimum expropriation and demolition of existing houses
- housing replacing with the inclusion of cultural and social spaces
- ability to change according to the transformation of the informal city
- provision of the framework for future adaptation

4.3 Fabrica de musica, Urban Think Tank

Data

ARCHITECTS Urban Think Tank

LOCATION Paraisópolis, São Paulo, Brazil

PROJECT YEAR 2009

MATERIALS concrete and bricks

Project description

The project is located in Grotão in the heart of the Paraisópolis favela of São Paulo and consists in a multifunctional public building well known as “Fábrica de Música” (music factory).

The settlement is one of the largest informal communities worldwide and presents more than 100,000 inhabitants. The area, despite its unusually central location, is effectively separated from the formal city and its social and cultural infrastructure and like many favelas, the site is characterized by increased erosion and dangerous mudslides due to area’s topographic and geological conditions (Urban Think Tank, 2012).

Therefore the project embrace both of these key challenges, constructing with an intense community participation.

The challenging topography is kept together and soothed to prevent supplementary erosions, creating a natural field in a terraced public space and including a sector for urban agriculture. For this reason, different low-tech features are planned. A water management system is set up in order to



use rainwater on site and recycle grey-water. The building and the amphitheater construction can act as an additional ventilation, cooling and air conditioning system, both active and passive. The building itself, in its vertical structure, provides numerous spaces for music activities, including a small concert hall, and also sports facilities, public spaces, and transport infrastructure. In the proximity, residential buildings enhance housing reserves and frame the ground.

Moreover, the government has brought, on the other side of the settlement, a school designed as a modular assembly. The arts center is part of this development and it starts as an environmental-refurbishment project which consists in stabilizing slopes, making terraces, and creating pathways for housing. This aims to prevent mudslides, making a productive use of open space, connecting the levels of the steep terrain with a bridge and stairs. It also provides shade, and even makes use of natural springs. Even if the building seems to be a simple grid of concrete columns and beams, it is conceived as a frame, designed to be flexible and open to the climate. This will make it open to all possibilities much more than most civic buildings and it will be part of the vernacular (Urban Think Tank, 2012).

Interesting Aspects

- multifunctionality of the spaces
- urban agriculture
- community participation



4.4 Parque Biblioteca España, Giancarlo Mazzanti

Data

ARCHITECT Giancarlo Mazzanti

LOCATION Medellín, Colombia

PROJECT YEAR 2005

MATERIALS steel and concrete

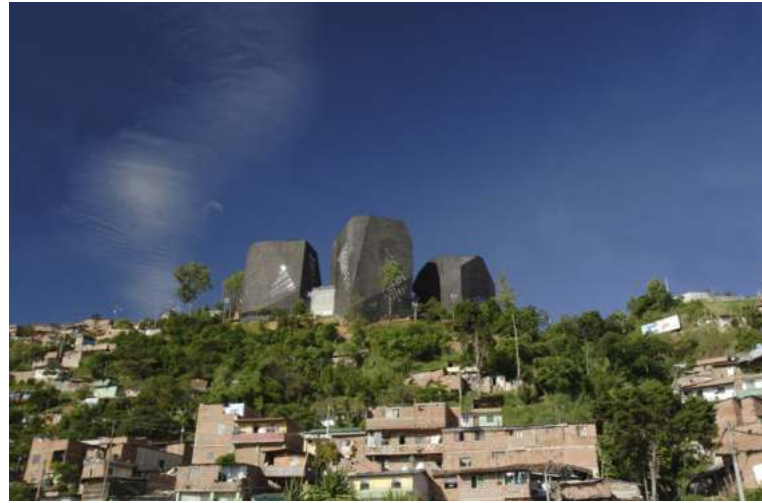
Project description

The project is located in the city of Medellín on one of the hillsides. Since the 80's violence has been part of this place diffusely because of the network drug dealers that operate in the area. The aim of government's social master plan program is to give equivalent economic and social opportunities to all the inhabitants.

The design proposal consisted in a building with library, training room, administration room and auditorium on a unique volume. Basically the program was divided in three groups: the library, the rooms, and the auditorium. A bottom platform was created to join the systems and it allows flexibility and independence also fostering people's contribution, considering each volume as a separate entity.

The mountainous topography of Medellín defines the identity and the image of the city. Exploiting this geographical context is one of the main project aims, integrating the settlement into the landscape and becoming an interpretation of it.

The design proposes the creation of an operative system that



seems right to the valley. More than a building, it performs like an apparatus of organization of the form of the zone, showing the unknown directions of the irregular mountain contours. The building nullifying the idea of the landscape like a background and encouraging the ambiguity building-landscape also redefining the mountain structure (Mazzanti, 2010).

The project is mainly composed by two sectors: the first one is the building itself - landscape (rocks) while the second one is a platform that combines and transforms the envelop into a square that appears into the valley; this way, the building is empowered as a meeting place, improving the connections and letting it work as a reference point.

The architectonic complex is constructed by small brick houses, through an auto construction process and the project also includes green areas as a result of the impossibility of construction on it. This organization produces a homogeneous texture of the city like an edifice - landscape, like an icon, not deleting the equilibrium that already exists.

The building becomes like a totem and it is easy to be identified from different points of the city, allowing it to be the symbol of Medellín, as a way of making people feel recognized and receiving the project as their own.

Nowadays, the building is one of the touristic points in the city and one of the most visited.

Beyond making an icon building, the first principle was to build up a construction that, through its interior design, could de-contextualize the human being from the poverty. This sensation is only experienced in the outside while the internal

atmosphere creates a warm environment based on natural light and allowing a positive ambient of study and lecture. This is the reason why the building takes a timorous look into the city trough the small windows that show the relation with the valley (Mazzanti, 2010).

Interesting Aspects

- Creation of a sense of belonging by building symbolically significant public spaces of high quality in the informal city
- Identification and recognition process
- Inhabitants participation and auto-construction

4.5 Quinta Monroy housing, Elemental

Data

ARCHITECTS Elemental - Alejandro Aravena, Alfonso Montero, Tomás Cortese, Emilio de la Cerda

LOCATION Sold Pedro Prado, Iquique, Tarapacá, Chile

CONSTRUCTION YEAR 2004

MATERIALS reinforced concrete and cement bricks

Project description

If there wasn't the money to build everyone a good house, why not build everyone half a good house and let them finish the rest themselves?

Alejandro Aravena

Elemental Team focuses its efforts on improving the urban conditions of the poorest segment of the population, in a perspective of "sustainable urban economy", in the belief that the new objective of sustainable city should definitely not be separated from the struggle for greater equity, a the fight carried out since the twentieth century through development of social housing.

The innovation of Elemental is in the open construction system design methodology at the base of which there is the will to respond to the housing crisis by preventing the expansion of slums that surround all the city and by creating a close relationship between ecological issues and social themes.



The open construction is a proven method for the first time in Iquique, in a district created in 2004 to absorb the slums in the city center. The project is able to realize a residential building called vivienda for 100 families using the public funding program social dinamica sin deuda (Social housing dynamic debt-free). Since this funds were not enough to construct all the needed houses and to buy the land, it was developed the idea of an open type of dwelling, which allows to deliver semi-constructed homes to the inhabitants, the completion of which will be up to them.

Elemental realizes the essential, everything that the people are not able to make on their own with high quality standards, namely the supporting structure, the housing, the coverage, facilities and service rooms with running water. What remains is the emptiness of a non-built space, likely to be "filled" then according to the possibilities and the taste of each one .

This economic strategic solution has a high ecological content. The flexibility of the housing structure and its reversibility are the keys to ensure sustainability, but also to oppose the gentrification phenomenon, the new soil and consumption of social exclusion.

The value of the architecture of Elemental is not to be found in the language or its figurative quality, but in the ability to decline the architecture as a service to society and not as a vehicle of the architect's vanity, renouncing any formal ambition.

Since its opening in December 2004, "Quinta Monroy" of Iquique has paid successfully gradual expansion and adaptation of its original volume, at a cost of only US \$ 7,500 per unit,

corresponding to the government subsidy for purchased area, the urbanization and the construction cost burdens.

Interesting Aspects

- Low budget project
- Flexibility of internal spaces and project process and timing
- Possibility of expansion for the citizens in relation to their financial possibility

4.6 The tool house, Urbz

Data

DESIGN FIRM Urbz

LOCATION Dharavi, Mumbai, India

PROJECT YEAR 2012

MATERIALS concrete, cement-asbestos sheets

Project description

The slum of Dharavi and the favela of Paraisopolis are fertile grounds for the kind of micro-entrepreneur and innovation that use informal researches to respond to essential needs.

URBZ developed a project, through different workshops, known as the tool-house which was born as the habitat of the artisan where they can work and live at the same time amicably. Specifically, the ground floor represents the residential space while first and second floor are where tenants mainly work as artcrafts. This is the prevalent architectural typology of homegrown neighborhoods such as Dharavi, and hundreds of thousands more in India and in the world.

The tool-house is a symbol of self-government and free enterprise. It seems unbelievable but across the east and west different professional figures such as fashion designers, writers and doctors live and work in tool-houses.

Urbz strongly accepts as true that this housing prototype is the most permanent artifact of pre-industrial society in modern times being also a central feature of the post-industrial world.



In fact, when the industrial mills shut down in Mumbai, many workers twisted to home production. In this way, Dharavi became the central hub for embroidery and garments, while other active connections centers became sites for weaving and looms. Nowadays this manufacturing trade is not planned in big industries and assembly lines, but in hundreds of small tool-houses which work as tiny workshops that are connected to each other as by swarms of agents, contractors and transporters.

An essential feature of the tool-house is the way it is incorporated in its environment. It is not often a lonely structure, but it is designed more by its relationship with the neighborhood and the city, than by any internal force. Flexibility and network, tool-houses tend to collect around each other to accomplish an effect of scale.

URBZ believes that residents are experts in their neighborhoods. Their everyday experience of the places where they live and work constitutes an essential knowledge for planning and urban development.

For policy-makers, urban planners, architects and real-estate developers, accessing this knowledge is the best possible way to enhance the quality and impact of their work. Understanding a locality from the point of view of those who inhabit it improves the chances of success of a project.

Interesting Aspects

- Citizens participation
- Housing structure that combines living and working spaces
- Flexibility and micro-entrepreneur system

4.7 Why Not Junior Academy vegetable patch, Liveinslums with Luca Astorri

Data

ARCHITECT Luca Astorri

LOCATION Mathare, Nairobi, Kenya

PROJECT YEAR 2011

Project description

Mathare is an area 1,5 km² wide, near Nairobi, Kenya and despite its modest size, over 500000 people currently live there. This is the starting point of the project WhyNot Academy (the result of a tight collaboration with the NGO Liveinslums,³), an example of how school, and more in general education, can be the main tool that will foster the rehabilitation of this neighborhood.

Given the complexity of this system of relationships, it is not an easy task to understand it, but it must be done in order to act in the proper direction. In particular, it could not be done by architects and urban planners alone. For this very reason, this intrinsically multidisciplinary project involved agronomists, sociologists and photographers, too. This way, the school has been identified as the starting point to understand the real issues and needs of this community.

The main difference between the usual scheme and this project is that the architectural design comes directly from a broader vision made of cooperation and assistance and not vice versa.



The aim is to cover many diverse areas at once like food, education, urban agriculture, waste recycling, as well as social regeneration. Architecture alone can't achieve this much.

Reaching a conspicuous number of enrollments is crucial when building a new school and it is the key to its success. Services are one of the main drivers that can make this possible. The analysis performed during this project identified the cafeteria to be one of the most important one and for this very reason the first improvement was building a kitchen. As said above, in this multidisciplinary project, different competence are exploited, and as a result the kitchen was designed to be a delivery point for agricultural production, too.

The existing green area has been tripled and all the available spaces (including the ones used for illicit operations like illegal dumps) were turned into vegetable cultures. All this work included the community to create the awareness and the cooperation that will help to overcome the precarious situation these people live in. Moreover, by letting inhabitants of Mathare manage their land, it is possible to generate proper nourishment and give them work.

Interesting Aspects

- Experimentation of micro-farming projects that correspond to the requirements of food, environment and education
- Fostering farming (vegetable patches) in informal settlements
- Adoption of production models that can be self-organized
- Experimental and sustainable activities

4.8 Gracioso Elementary School vegetable patch, Liveinslums with Luca Astorri

Data

ARCHITECT Luca Astorri

LOCATION Bamburral, Sao Paulo, Brazil

PROJECT YEAR 2012

Project description

This project begins with the unraveling of the main historical reasons behind the favelas – the Brazilian name for city slums. In fact, while at the beginning the attention was mainly pointed at Brasilia and the quick growth of informal settlements in other big cities was almost ignored, in more recent times this phenomenon has become so important that it could not be ignored any longer. This awareness converged in diverse public initiatives in the early 1990s, varying from legalizing the settlements to demolishing part of it – and build new homes for people affected. Still, one of the negative outcomes of this kind of radical interventions was to create inequalities among inhabitants and disturbing the social fabric of the slum itself. Moreover, this approach did not take into account the difference among different favelas.

More than 1500 favelas hosting more than 3 million people clearly make São Paulo the most representing city concerning slums. In recent years this city has been trying to solve this



socio-economic problem by taking into account the people living there – the families, their needs - tailoring the project as much as possible.

The educational garden for Bamburral (one of the favelas) is a small intervention that aims at creating a garden with useful plants – aromatic and medicinal – with the help of children. It was carried on in the Bramburral's primary school. This included the decoration of vases, building a vertical garden and clean the area needed, removing the decadence around the school. Making the people living in slums more responsible is a crucial aspect of most of the projects regarding slums improvement.

Small interventions like Gracioso Elementary School are the result of the idea that just mere statistical and economical analysis – while necessary – are not enough to understand this complex micro-system called “favelas”.

Interesting Aspects

- educational use of the garden
- community participation
- social and educational purposed of the intervettion



PART 3

URBAN PROJECT:
AN OPEN AND INDETERMINATED PROCESS



Villa 31 is dynamic, in a continuous and rapid transformation. A complex reality, based on social and economic activities networks. Currently it is isolated from the rest of the city, in a sort of parallel dimension. From Villa to Barrio is an open and undetermined process. The objective is to solve this urban amnesia, through spatial and social inclusion inside the city, integrating the informality in the urban context through accessibility, primary infrastructure and advanced services. The slogan of the thesis is formulated in order to fully integrate Villa 31 as an official neighborhood, stop being a shantytown. The wide part of the analysis, described in the chapter 1, revealed several problems and observations regarding the inefficiency of the services and the “ghettoization status” of the informal settlement despite being in one of the most central districts of Buenos Aires.

One of the core strategy of the project is the intention to provide the villa’s residents with access to the same public services as the rest of the City especially health, labor and education.

This last item is perhaps the most ambitious one since the level of education is critical.

Focusing more on primary infrastructures, in order to pave roads, build sewers, install public lights and ensure safe housing, the strategy includes the demolition of the strategically located houses or in some cases almost entire blocks. It is not taken into account the space under the Illia highway which will be totally demolished, since the life conditions are even worse than the ones in the Villa. According to this statement, the project proposes a new linear park, an huge equipped public space for the whole settlement.

Urbanizing the informal settlement would implicate relocating a significant part of its population, almost 6000 people. It is necessary to underline that the process itself gives not only a better life quality to the people of the new expansion areas, it also provides services and improves life standards to the whole Villa inhabitants.

The new neighborhoods strive to be seen as a problem but as a part of the city.

(Sao Paolo calling, Domus 963)

The plan follows the logic by directing interventions towards the macro and micro levels. The urban level concerns the interrelationships between the settlement and the City of Buenos Aires, particularly those adjacent areas, such as the seaport, and the Retiro bus station. The urban focus also observes the space articulation, the community's relationship with the nearby infrastructures, public spaces, and accessibility. Finally, the architectural focuses regards the internal structure of the neighborhood, interpreting pre-existing conditions, incorporation of new programs, a new growth device and the extension of basic infrastructure services.

The plan contains a set of guiding objectives:

- encourage the connectivity of the urban structure,
- design new urban hubs,
- ensure accessibility,
- introduce green space and enhance existing public space,
- respect the history and pre-existing configuration,
- drastically improve the image of the Villa,
- seek community participation,
- produce cohesion,
- improve the life standards of the inhabitants

The procedure is complicated and the theme is pretty difficult to be well understood.

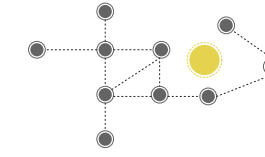
One of the main prerogatives of the research is not to give a definite and deterministic solution and especially not to stop the natural mechanism growth that characterizes the informal settlements. The technique used is to give the right tools and rules to the Villa which can ensure a better development that

complies with the Argentinean urban standards.

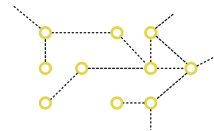
Another essential point which is going to be analyzed in chapter 7 regards the parts and the institutions involved in the project. The understanding of who is in charge to finance even the basic needs is quite difficult, since different administrations have been promising to urbanize the settlement for decades but the situation is still critical. Specifically, in December 2009, the City of Buenos Aires' legislature approved a bill to urbanize Villa 31 and Villa 31 bis. The plan hasn't been initiated and the works that have been carried out are extremely flawed: "Sewers explode. There are power outages all the time. There's no emergency room in the villa and the ambulance takes an hour to arrive every time something happens. The government doesn't have a presence here. They only come during political campaigns. There are many promises, but few become reality," the actual president said. (Fernandez Castro, 2010)

Main critical points

urban amnesia



inefficient infrastructural system



high urban density and land use



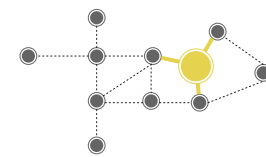
lowest percentage of green areas in the whole city



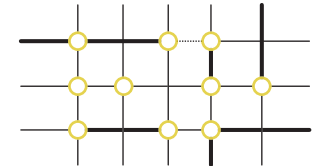
Fig. 17

Strategies

Inclusion of the Villa with the City



Design a new infrastructural system



Work on the urban density in order to free up the level 0



Implementation of green area according to the urban standard

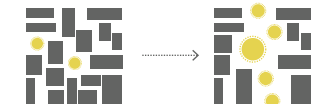


Fig. 18

Urban amnesia

Although the Villa is located in the vibrant heart of the city of Buenos Aires, it appears as a central marginality. It results limited on one side by the railway lines which are the major obstacle for the Villa accessibility, and on the other the port area.



Fig. 19

Inefficient infrastructural system

The infrastructure system of the Villa is clearly lacking. It presents mostly horizontal connections, while the vertical ones are almost nonexistent. The road network is in opposition to the regular and orthogonal grid of the city.

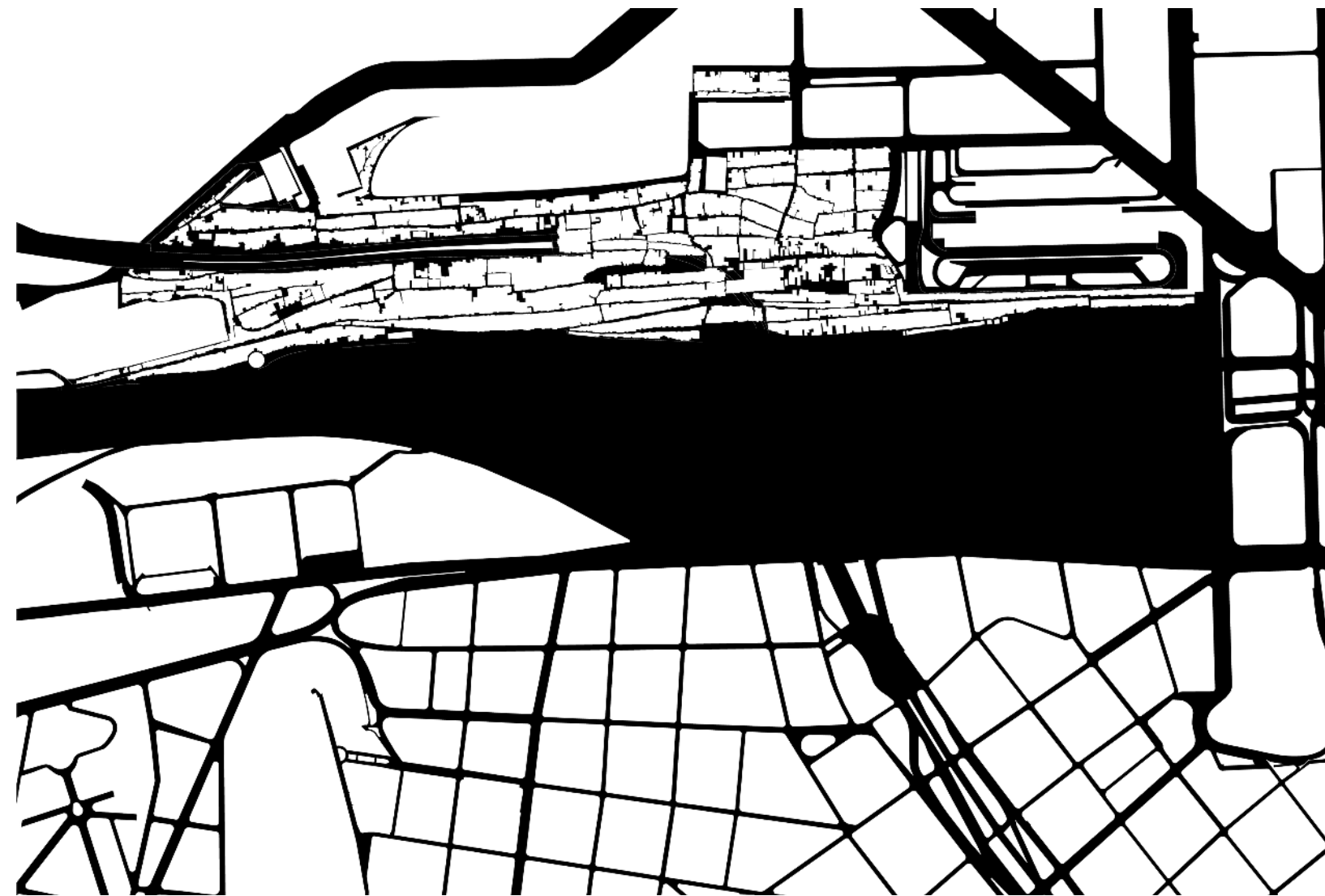


Fig.20

High urban density and land use

Villa 31 has expanded in all its available space and has already saturated the entire area. The natural development of this phenomenon would be a vertical growth. The villa urban density is much higher than the city, not allowing the formation of public spaces reserved to the community.

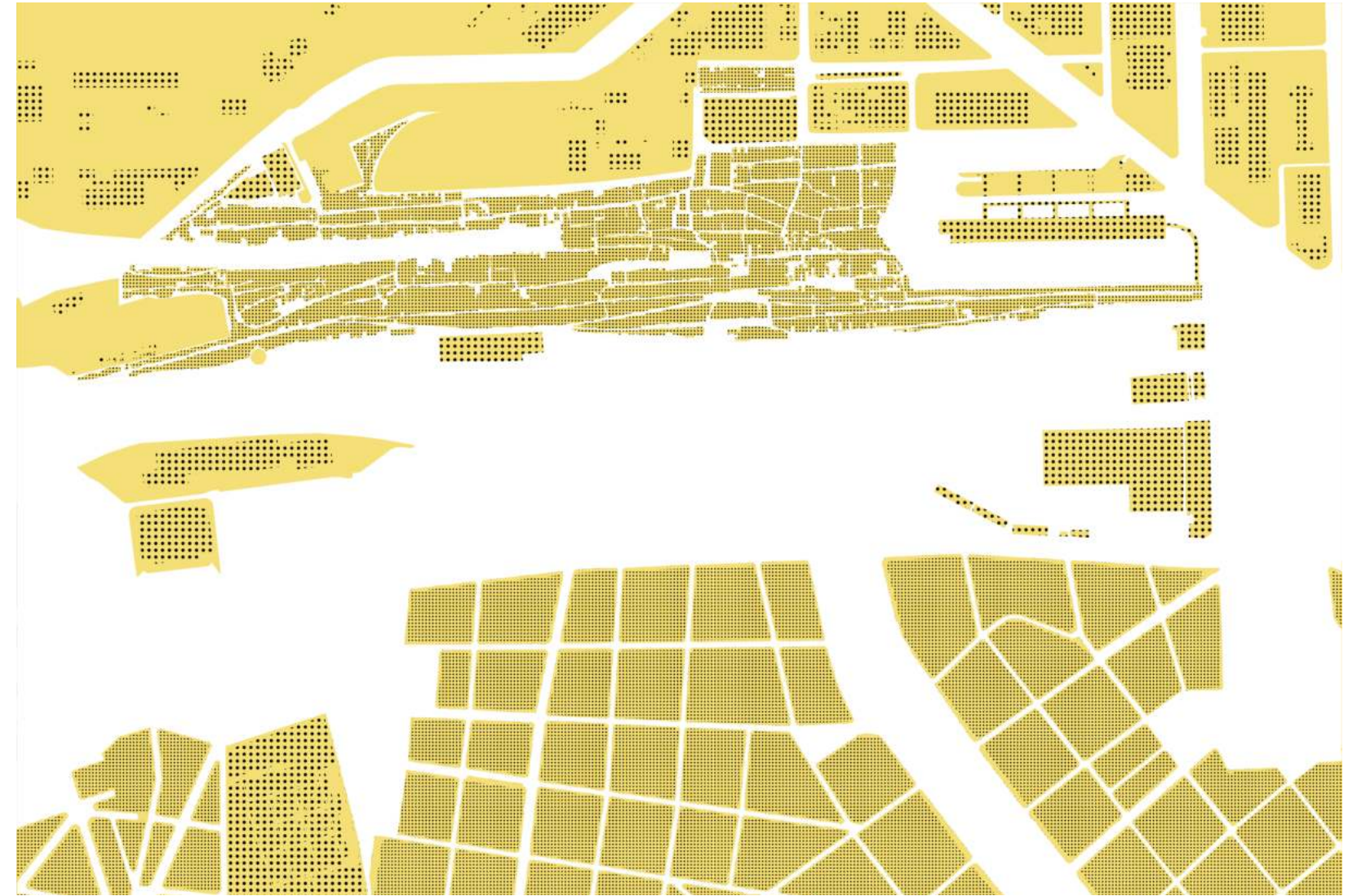


Fig. 21

Lowest percentage of green areas in the whole city

Comparing the amount of green space per inhabitant, taking into consideration the other capitals in Latin America, Buenos Aires loses by a landslide. Villa 31 shows an even lower percentage of 0,3 m² /p of green spaces and 0,01 m² /p of trees.



Fig. 22

Inclusion of the Villa with the City

Increase connectivity between the community of the Villa and the inhabitants of the city. Therefore, the slogan, “From Villa to Barrio”, is formulated in order to fully integrate the Villa as an official neighborhood, stop being a shantytown.

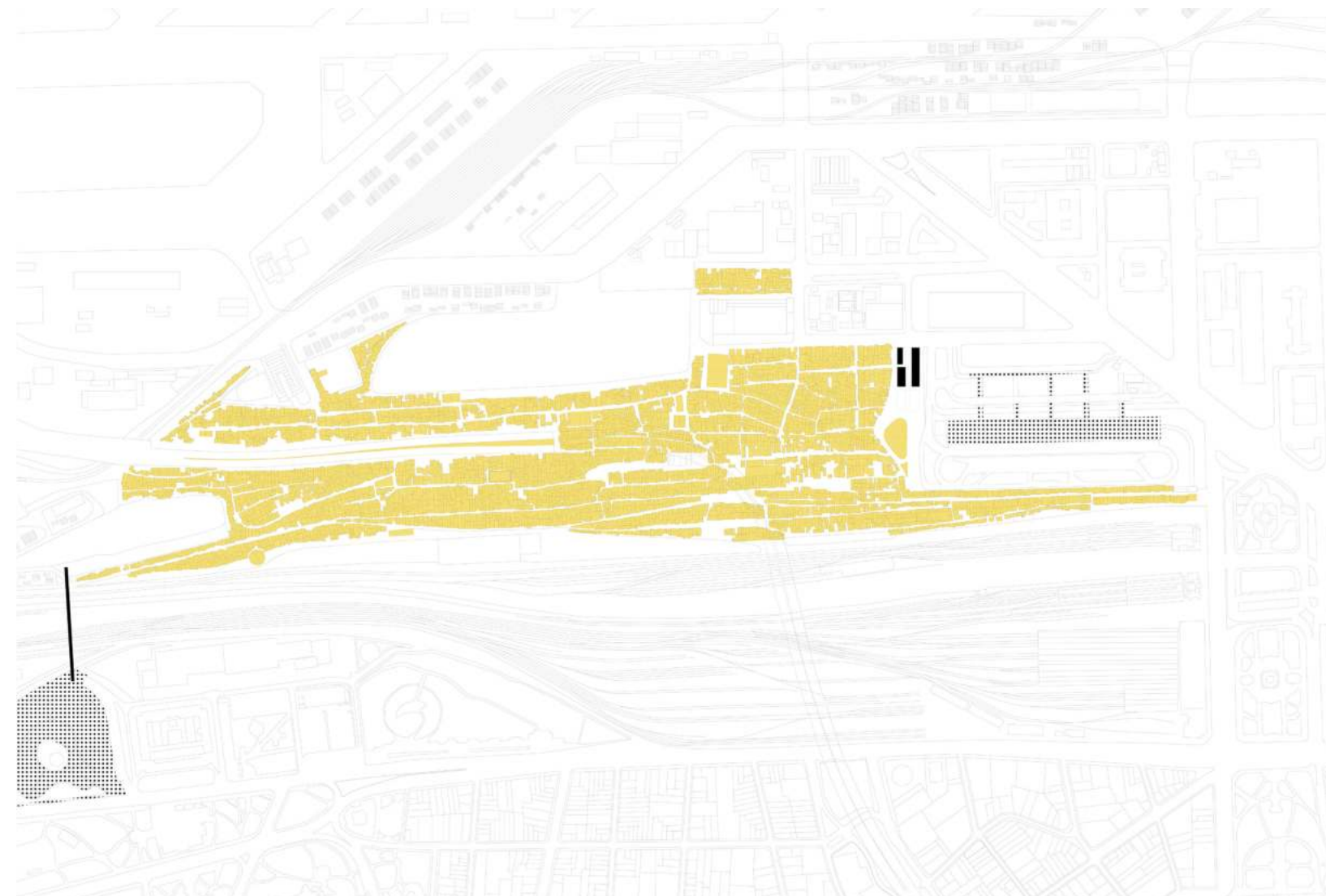


Fig. 23

Design a new infrastructural system

Interconnecting the informal settlement is the first step of the project prioritized by identifying the main and secondary routes and the city hubs. to achieve this goal, targeted demolitions have been made.

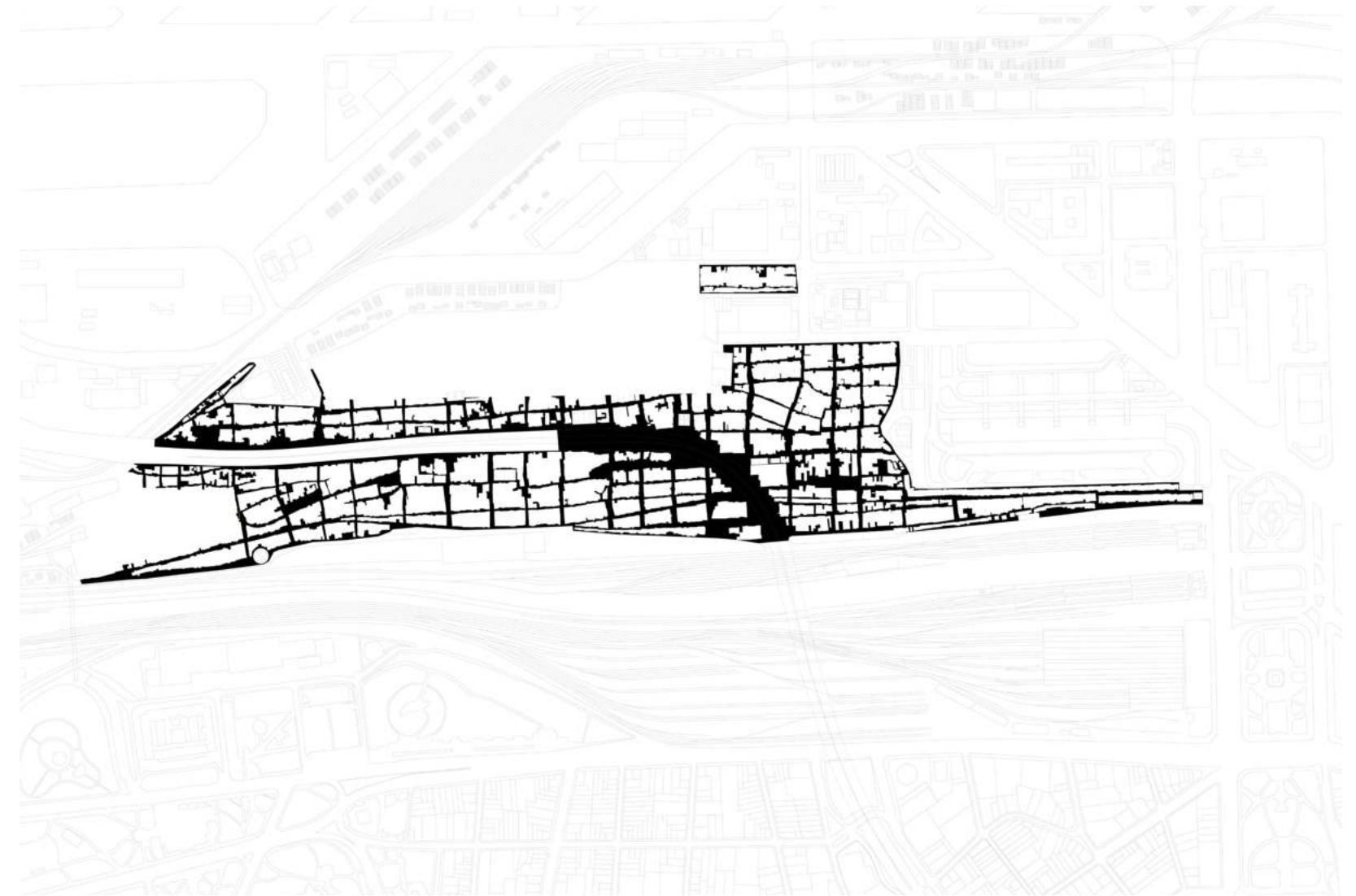


Fig.24

Work on the urban density in order to free up the level 0

The strategy of freeing living space on the ground floor is flanked by the desire to realize a connection and new public spaces completely reserved for the inhabitants of the Villa, giving services, opportunities and a better life quality.

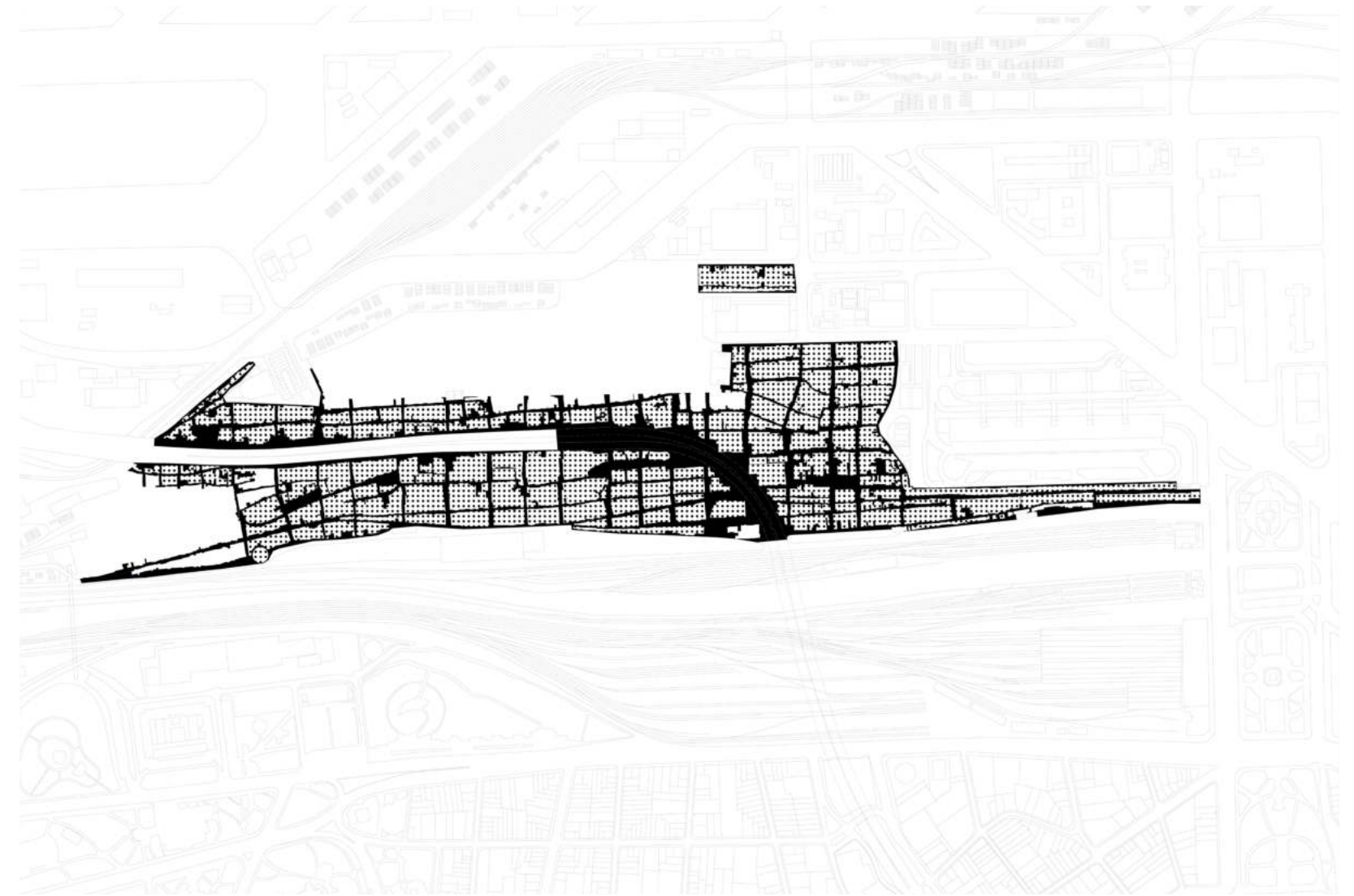


Fig. 25

Implementation of green area according to the urban standard

More than the 30% of the demolitions are carried out under the Autopista Illia, , diligently made to implement one of the top priorities of the whole project: the Park and recreation system. This intervention let the project achieve the standards of green spaces.



Fig.26

MANIFESTO

From Villa to Barrio

Villa 31 is dynamic, in a continuous and rapid transformation. A complex reality, based on social and economical activities networks. Currently it is isolated from the rest of the city, in a sort of parallel dimension. From Villa to Barrio is an open and undetermined process. The objective is to solve the urban amnesia, through spatial and social inclusion in the city. Integrating the informality into the urban context through accessibility, primary infrastructure and advanced services.

1

The Manzana

Manzana or *cuadra* characterizes the historical fabric of the city of Buenos Aires. Manzana is assumed as a fundamental rule for the inhabitants' relocation, according to the principle of the urbanization con radicacion as a result of the thinning of the units' housing. The goal is to let *villeros* remaining in their social networks built over years.

3

Public spaces and advanced services

Nowadays Villa 31 has already spread throughout the available lands. There is no ground left to be extended in the horizontal direction. This prevents the presence and the growth of open and public spaces. The informal settlement has the lowest percentage of green areas in the whole city. The design of public services is translated into the project as a series of vegetable gardens, commercial, social, educational and health activities, specifically located in each manzana.

2

Primary infrastructural network

The poor living and hygienic conditions and the inefficient infrastructural system represent negative and problematic aspects of this reality. The first step of the process is the construction of primary infrastructures and basic utilities (roads, drain system, electricity and sewage lines) within the new areas of expansion.

4

A growth device

Villa 31 is viral. The project cannot margin the spontaneous growth mechanism. It proposes a device that manages the natural development of the housing units. Each manzana is equipped with basic infrastructures and public spaces. It becomes a reactive surface, open to any use according people's needs. The flexible structure allows different possibilities of customization and change in the housing units, while remaining within the rules and zoning laws. The inhabitants are the protagonists of this process. The urban landscape reflects the users and creates the base for a symbiotic process of identification and recognition.

6

Villa development: from villa to barrio

The project stems from the desire to urbanize Villa 31 and 31 bis and provide the settlement with services and infrastructures in order to be recognized as a real Barrio of the city and not as an "urban amnesia".

Interconnecting the informal settlement is the first step of the project prioritized by identifying the main and secondary routes and the city hubs: such as the *floralis generica*, one of the most attractive points and a symbol of the City, and the Retiro bus station where every day thousands of people are passing by.

In order to achieve this goal, targeted demolitions have been made with the aim of freeing strategic spaces at the zero level in order to create internal connections, especially transversal, which are completely missing in the Villa today.

The demolition process was thoroughly well calculated, with the use of local regulations and normative, and following, if possible, an internal balance of social logics.

The strategy at the base of the intervention is always to move as less people as possible, knowing the lower houses are more privileged than the higher ones, preserving as much as it is convenient the most historical part of the Villa.

After identifying the demolitions, accurate statistical analyzes were performed to estimate how many people are to be relocate within the same Villa. The design strategy stems from the desire to intervene in two empty and disused areas (area1 -area2) of the city used as a harbor warehouse, and closely related with the Villa. Considering several other projects presented, the natural growth of the Villa would be realized in these two new areas if any urban intervention does not re-design the area with a radical and ambitious project, as proposed in this thesis (Rojas, 2010).

Last point of the thesis research is a new centre of attraction, the urban market that has been strategically positioned where today there is a small local informal market that does not have any type of service and is not even recognized by the government (Fernandez Castro, 2010).

The market's main objective is to give a dignified place to the various activities that are carried out every day in the Villa being a catalyst and a point of attraction, especially to allow a full interaction of the Villa as Barrio city.

6.1 The manzana

The *manzana* is developed as a fundamental rule for the inhabitants' relocation, according to the principle of the *urbanizacion con radicacion* as a result of the thinning of the units' housing. The goal is to let *villeros* remaining in their social networks, built over years.

The new expansion plots refer to the study of the fabric of the city and aim at finding a compromise with the authenticity and historicity of the Villa. Starting from the new introduced paths, new urban block are consequently delineated within the logic of having micro-systems and micro-economies inside the whole *manzana*.

In the following chapter, the growth device of the settlement blocks and their formal and functional characteristics, will be explained in detail.

Another important focus of the project, in accordance with the regulations in force, is the new linear park under the Illia highway which has the purpose to be a new attractive point of the city. The linear system consists of recreational areas, kindergarten, purely sporting areas and green areas that will significantly affect one of the most worrying data detected in the analysis of the density of urban green (see section 3.3).

6.1.1 Strategic demolitions

A key point of the project, which aims to meet the observations previously explicated, is the operation of demolition. This becomes the necessary basis to which all the remaining strategies refer. It is necessary to clarify that the aim is not to de-naturalize the essence of the slum nor to eradicate the inhabitants of the Villa from their original site.

The demolitions are a vital and necessary step to implement the process of recognition of the Villa as an integrated neighbourhood of the city. In particular, the demolitions (Fig X) are carefully calculated by the logic of preserving the most historical buildings and intervene more on the *Barrio "Autopista"* which presents the most uncomfortable situation inside the Villa, since the health conditions are even worse than in the rest of the slum.

A fundamental aspect of the process is the "zero budget", whereas the number of people does not vary within the operation. In this way, the people who are displaced are relocated in the two new settlement areas.

In order to simplify the calculation operation of the demolitions, three housing categories have been identified and divided depending on the buildings heights: from 2 to 6 floors.

The settlements with higher density are mainly located in the historic part nearby the Retiro bus Station while the new part, mostly expanded in *Cristo Obrero" Barrio* (see map *Barrios*), are composed by 2-3 floors.

Based on the belief that it is very difficult to precisely estimate such a complex operation, distributed over time and scale, the

method that supports the project bases on a direct experience in the Villa and on the data emerging from the process of analysis and interviews in situ.

To make the calculation, it was considered an average of 5 people per family and, considering the number of houses demolished in proportion to the number of floors, the project intends to shift about 6000 inhabitants.

Therefore, the main purpose is to ensure a better quality of life both for the inhabitants who are moved in the two new settlements and for those who remain in their homes. The development of the infrastructure system in fact allows the Villa to reach acceptable urban indexes and greater connection and integration with the city centre.

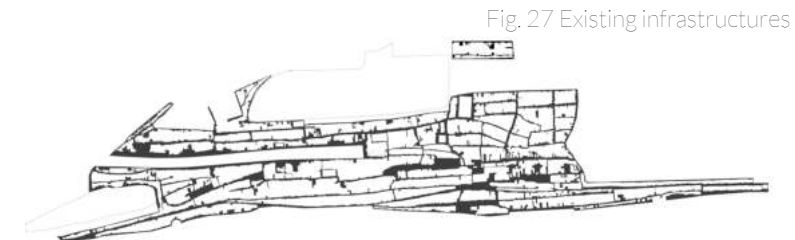


Fig. 27 Existing infrastructures

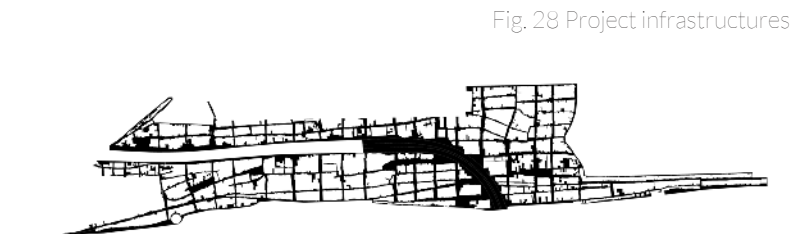


Fig. 28 Project infrastructures

Minimum Urban Standard_Argentina

- 18 mq per person of public space:
- 9 mq per person of residencial spaces
- Mim mq per person needed: 27 mq/p

👤 5775 → ~ 156000 mq tot

🏠 54 mq → 580 - 960 houses needed
→ 31320 - 51840 mq tot

Area 1 = 35984 mq
Area 2 = 85408 mq → 121392 mq tot

Public space left → 69552 - 90072 mq

👤 > 9 mq residencial space
12 - 15 mq of new public space

NB. This is a pessimistic estimation as public space is not plane and can be arranged in more than 1 floor. The minimum standard are achieved

Fig. 29

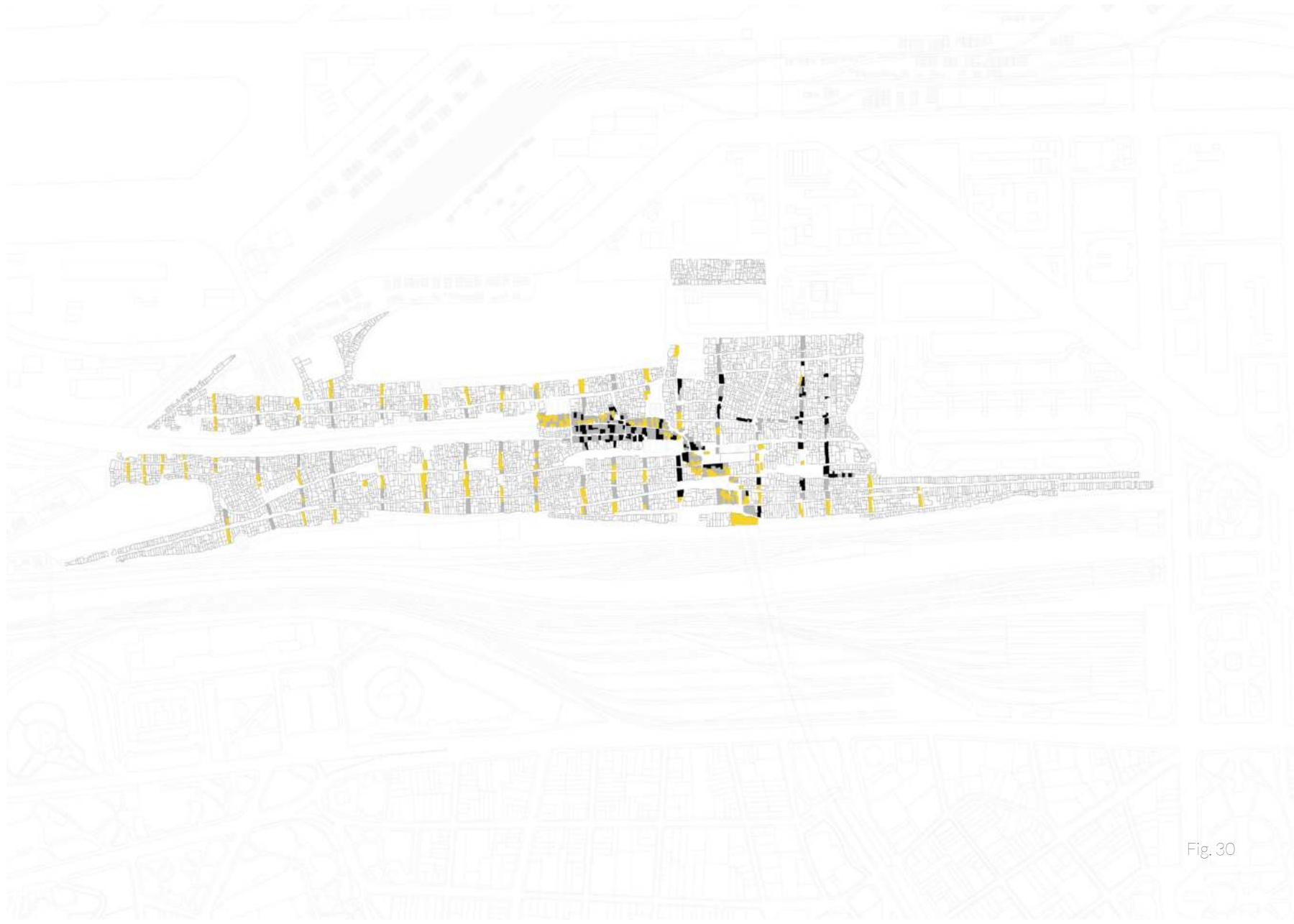


Fig. 30

6.2 Primary infrastructural network

Villa 31 is, despite being a central reality in the Capital, results to be pretty isolated and one of the most critical points of the research is based on the inefficiency of the infrastructural system together with the high urban density and land use. Basically this means that, since the moment there is no physical connection with the city, it becomes more and more a circumscribed, isolated and limited reality.

The difficulties of moving and reaching the different hotspots of the Villa even for the inhabitants themselves are evident, and the access points are clearly insufficient. The already described strategy is therefore to recreate the typical infrastructure with an orthogonal grid of the urban fabric of the city of Buenos Aires from a series of targeted and strategic demolitions.

The idea is to free as much as possible the ground floor, working also on the reduction of the urban density index that does not meet the urban regulations by submitting an obvious overcrowding. According to the previous chapter, the demolitions are mainly made to guarantee a new infrastructural

network and to work on the urban density.

Following the Law 148, the establishment of the Villa Urbanization providing all the basic services (including sewage system, infrastructure etc), had to start since 1998. Nowadays, the situation is still critical and the government does not seem to be able to be able to manage the exponential growth of the informal settlement (D'Cruz, Satterthwaite, 2005).

The infrastructure system means all the basic services such as sewerage, electricity, gas, which are totally inadequate and incomplete in the actual context. Regarding the sewage system, it has been carefully integrated with the existing grid, paying attention to the inclusion of the new areas (fig X).

Figure X (mappa percorsi attuali) refers to the actual situation of the main infrastructural system which presents mostly a longitudinal development having quite inexistent transversal connections.

Figure X (mappa percorsi progettuali) better explains the project intervention that aims to improve especially the cross connections. The new roads allow the Villa to have a greater permeability and a road fabric homogeneity.

The interventions are obviously extended also to the new areas of expansions.

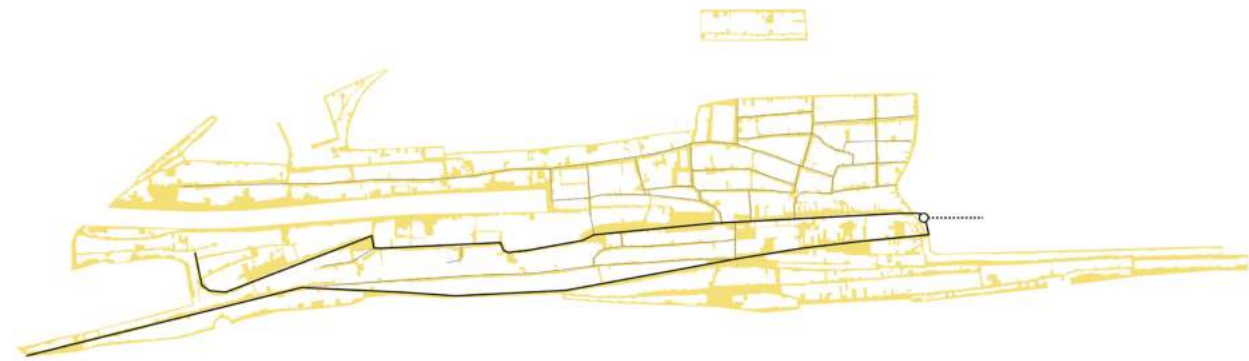


Fig. 31



Fig. 32

6.3 Public spaces and advanced services

A direct result of the high percentage of land use and the saturation of the villa is the lack of public spaces such as the squares, parks, public buildings and meeting places for the inhabitants. The villeros spend most of their time either at home or on the streets that becomes the only public spaces in this informal settlement. Specifically, the street is a place used for the passage of vehicles, the consumption of the meal, the celebration of events, to the games. The only spaces that actually work as a public space are the soccer fields as a result of a strong local passion for this sport.

As a support of this thesis there is the estimation of the presence of green spaces in the Villa, well below the city average. The research therefore aims to implement this fundamental aspect providing service areas: commercial, educational, health, sports etc. The project mainly focuses on the design of a linear park under the Illia highway and a urban market, a new public hub of the Villa.

6.3.1 Illia linear park

The research moved from the strategic settlement interventions to the design of a linear park placed under the Illia highway, diligently made to implement one of the top priorities of the whole project: the Park and recreation system. More than the 30% of the demolitions are carried out under the Autopista since the moment that the hygienic and health

conditions are below of any regulatory standards, the lighting system is insufficient as well as the air circulation inside the residential spaces is inadequate. The idea of freeing living space on the ground floor is flanked by the desire to realize a linear green space completely reserved for the inhabitants of the Villa.

The park is in line with the other project interventions and on the awareness of creating continuity with the new infrastructure that cuts, at given intervals, the path and directly connects the Villa 31 with the 31 bis (hitherto poorly connected). The present activities are closely linked to the context; from simple footpaths in the green, to sport installations such as basketball grounds, climbing walls and skate parks, as well as areas for relaxation and recreation.

Since the moment that between the two arms of the highway there is an empty space of about two meters, in the middle of the linear park under the corresponding area, the resulting space has been designed to be entirely dedicated for native trees species.

Plant and flower typologies are numerous and show many colours to make the atmosphere more pleasant and intriguing. Among the main species characteristic of Buenos Aires there are:

- Campanita
- Jazmin del Pais
- Jazmin amarillo
- Glycine
- Santa rita
- Cielaria

The natural path, of about 500 meters of length, is mainly for pedestrians, as protagonists of a new era of a greener and more habitable metropolis, which is in direct contrast with its artificial and grey surroundings. The initiative is a key to improve biodiversity and a stronger urban ecological role of the Villa which will perform an important position inside the City. The project also incorporates public programs, local services, community spaces and the natural environment into a green environment that will be visited and used by thousands of people each day, residents and tourists alike. The Illia park particularity highlights regeneration of dead space and multi-functionality design.



Fig.33



Fig. 34



6.3.2 Retiro Urban Market

The project of the Retiro Urban Market stems from the awareness that a Barrio, in order to be considered as an integral part of the city, must have a public appeal function that identifies it in the social context. The chosen strategic position is derived primarily from the desire to develop a building that aims at giving dignity to small informal activities which still take place in the same street. On the other hand, the location is designed to attract as many people as possible, and being near one of the largest bus Terminal in Buenos Aires, it allows a great visibility.

The Market is designed to be like an icon, an identity without deleting the equilibrium that already exists. Therefore, the building becomes a new hub of the Villa and it is easy to be identified as a way of making people feel recognized and receiving the project as their own.

The architectural complex presents three main entrances: the connection with the Villa from the south and west while the northern part (the largest one) connects the city, directly next to the bus station. Each gate is composed by multiple inputs and is easily distinguishable having an identifying inscription of the inner function. The info graphic technique is especially used in a number of public activities projects: from markets to universities and pharmacies. The connecting element of the project within the city is green space that identifies both the inside and outer areas, extending in a new green square in connection with the Villa. According to the emerged data of

the urban analysis (see paragraph 3.X?), the green space index is below the regulatory limits imposed by the government regulation, so the new building aims at complying the current building regulations in Buenos Aires and even updating its standards.

The complex is divided into three separate volumes albeit connected inside by green spaces and by a continuous light cover. Each building is designed to have a distinct function. The biggest one, is overall reserved to the sale and consumption of food. The second volume is mainly dedicated to the production (through taller workshop which identifies the villa work) and the sale of handicrafts while the third building is for the sale of objects in general which typically takes place in the same place of the project on a daily basis. The first volume is higher than the others due to the internal arrangement of the functions distributed on two levels; the ground floor mainly performs as a sale activity while the first floor is reserved exclusively for the consumption. The other two buildings are instead spread over one floor.

The structure of the complex has been designed with steel beams and pillars to be as light as possible and affordable economically speaking. The coated in U glass was chosen both for its daytime performance, ensuring brightness and transparency inside the space, and for the nocturnal one, making it particularly well recognizable from the highway. Another key aspect at night is that the building is illuminated and its aim is to improve the safety of the entire neighborhood. Numerous experiments have already been conducted and the final results were positive.

The U glass technology also is one of the most popular and versatile building materials used today. One reason is because of its constantly improving solar and thermal performance but it is also pretty easy to be installed and quite cheap in contrast to other materials.

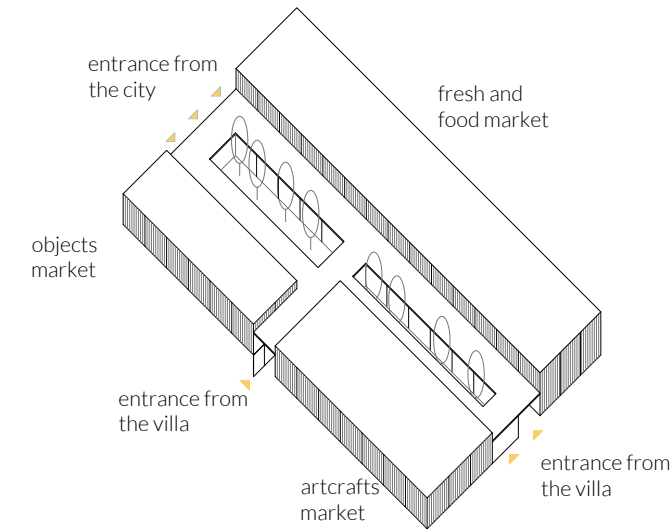


Fig.X

vista mercato sk

Fig.X

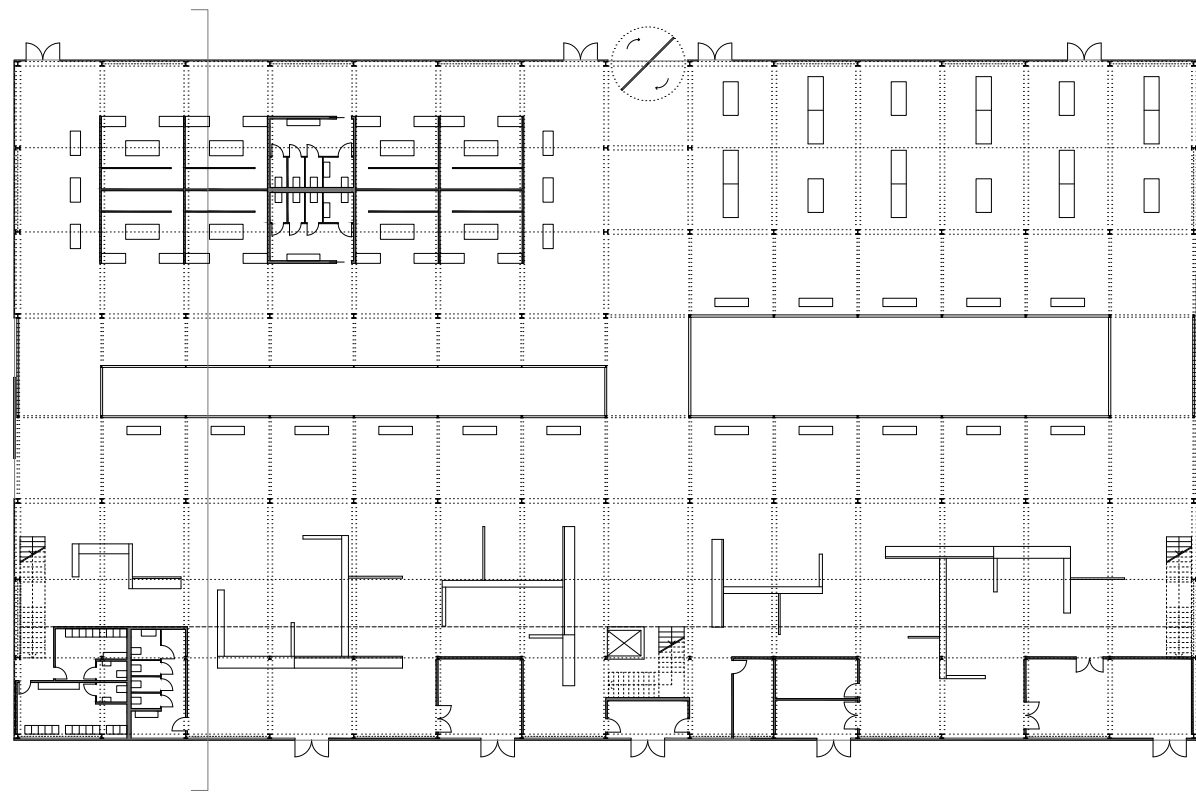
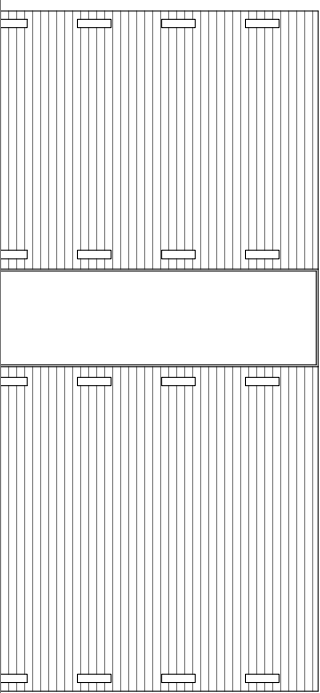
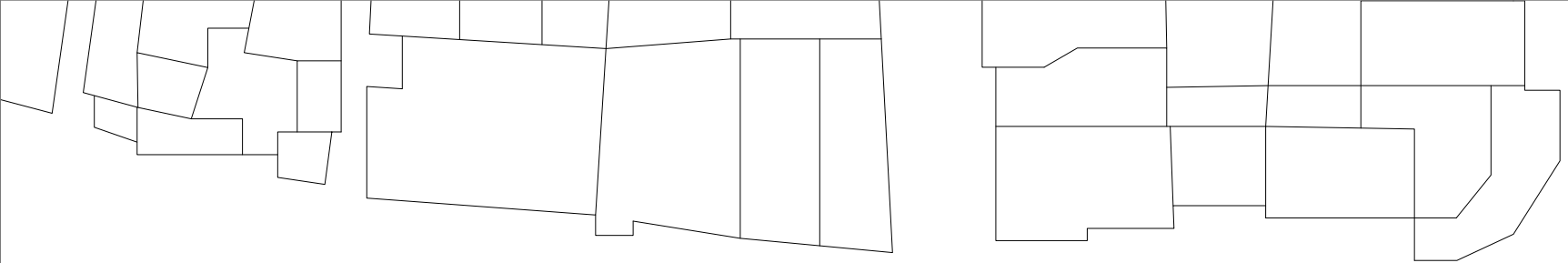


Fig.X

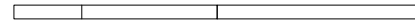
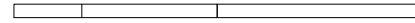


Fig.X



6.3.3 Multifunctional public spaces

The project of the expansions areas, together with the provision of basic infrastructural systems, includes dynamic public space whose mission is to catalyze, connect and support the developing areas.

The multifunctionality of the services can be described as a true integration of different functions in time and space. This is different from mixed-use development that compartmentalizes the various uses within a community or a landscape. For example, implementing multi-functionality within communities creates spaces that have multiple purposes. Due to their access to diverse uses in one area, these spaces can contribute to a community's vitality. As well, these multi-functional amenities often appeal to diverse community members, including

activists, artists, academics and social entrepreneurs, allowing them to, shared experience and experimentation.

The project concerns the inclusion of both public buildings and green areas used as vegetable gardens.

This will let possible the revitalization of an industrial port area, the development of a creative social hub and a local community economies of scale. The mix of the building includes health activities, commercial, cultural, social, educational and sportive area which have been located considering the number of square meters per person needed according to the local normative.

This public spaces represent one of the devices given to the inhabitants to naturally spur the development and the social and physical inclusion.



Fig. X

6.4 A growth device

The architectural part of the research focuses deeper into the housing aspect from the most technical data to the proposal of a possible growth device.

Villa 31 is viral. The project device does not oppose to the spontaneous growth mechanism but it gives restrictions to the natural development.

Starting from the new road system basically derived from demolitions, it is possible to define different types of manzane which are present both in areas 1 and 2. The new settlement blocks are easily traceable because of dimensions and shapes to the ones of the City and its orthogonal grid.

The *manzana* represents a compromise with the aim of being a right midterm between the formal and informal settlement. Each manzana is equipped with basic infrastructures and public spaces. It becomes a reactive surface, open to the use of each according to his needs. The flexible structure allows

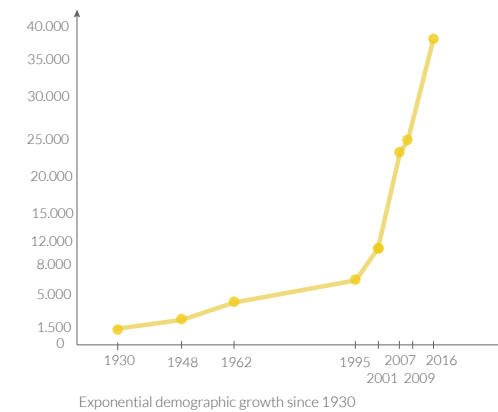


Fig. X

different possibilities of personalization and change in units' housing, while remaining within the rules and zoning laws. The inhabitants are the protagonists of this process. The urban landscape reflects the users and creates the context for a symbiotic process of identification and recognition.

Through the calculations already described, in order to ensure the relocation of all the people, it is necessary to provide sufficient space for about 700 housing units.

An essential and indispensable aspect of the settlements planning is the reference to the legislation in force in Argentina (see normative map X), according to which for each inhabitant it should be guaranteed a minimum of 9 square meters for residential space and at least 18 square meters of public space divided into:

- 2,5 m² for educational purposes;
- 1,5 m² for social and cultural activities;
- 2 m² for religious purposes;
- 1 m² for sanitary aims;
- 9 m² for public open spaces: sport and parks;
- 2 m² for commercial activities.

Therefore, the design proposal seeks to comply as much as possible with the planning restrictions to ensure even more recognition of the new district as Barrio and the integration of this within the city.

Each *manzana*, despite the purely residential use, contains a percentage of square meters reserved to the various commercial, medical, cultural activities thus respecting the ratio

60% for residential and 40% for public space. Architecturally speaking, the intervention project provides basic services and infrastructures, designing the public spaces, preserving the natural mechanism growth which governs the development of the informal settlement.

Focuses more on the residential modules, they are generated starting from the basic services provided and following the restriction regulated by the local urban law.

In this way the housing possibilities are numerous which also guarantees the natural development of a functional mix of activities as well as it works in the existing settlement.

The project process is mainly divided into two phases: the first step of intervention simply aims at moving all the inhabitants only considering design of the the ground floor of the urban block with no possibilities of vertical growth; while phase 2 is the expansion and transformation phase and also considers the growth of the level 1 albeit with some constructive constraints. According to some statistics made on the urban growth of the Villa (*fugura x*), without any doubt, the population is growing so fast. In fact the core idea is totally in line with this forecast and it would have been simple and limiting to take into account only the phase of relocation of the villeros. Moreover, phase 2 allows, in accordance with the times, the desire and the economic possibilities of the inhabitants, the expansion of each module. The rule applied to the base of the process and in respect of urban constraints is that the expansion should not be more than 50% of the square meters built on the ground flooe. The possible alternatives are consequently several.

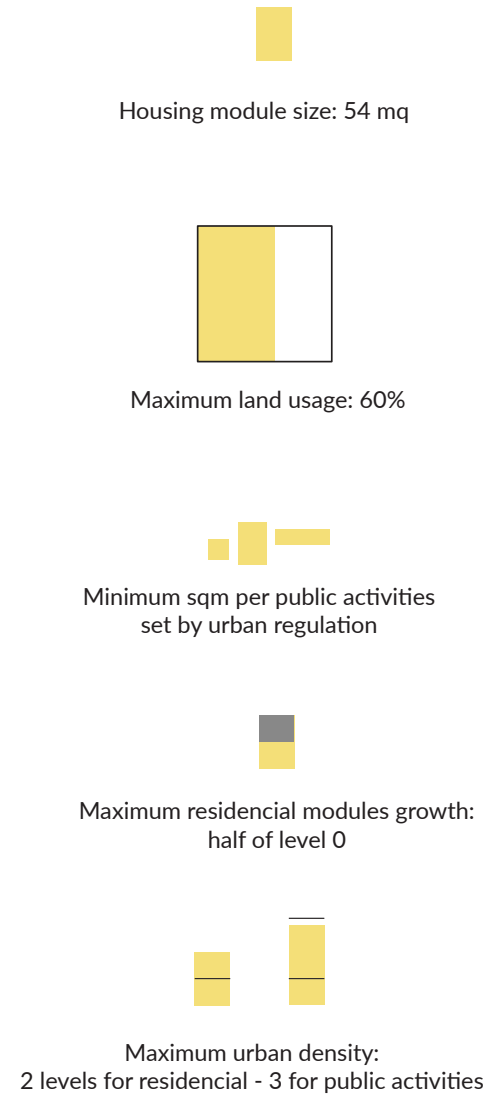


Fig.X

Considering more specifically the living module, the settlement regulations constrains to have an area of 54 square meters with a modular structure and an open-plan, fully flexible inside, in order to meet the minimum standards of 9 sqm of residential space.

The project also includes the design of specific agricultural fields both in area 1 and 2. The aim is to foster the theme of sustainability introducing productive area with vegetable gardens, fruit plants and basic services, etc, raising awareness and making the villeros an active part of a self-sustaining process. The scheme X better explains the composition of the orchard and services needed to satisfied inhabitants needs.

Going deeper in the architectural scale, the most interesting

aspect of the whole design process is the flexibility and the distribution of the project over time. The proposal derives from the careful study of the project of the Chilean architect Alejandro Aravena which has been explained in the chapter 4.5. Specifically, with the term flexibility the various possibilities both on the plan level and in terms of housing expansion and internal organization of each module are defined.

The popular participation is a key variable of the project without which it would have probably been impossible to think of any kind of urban transformation and development of the area (Perten, 2011).

It is also important to consider that a good percentage of the villeros are experts in the field of construction since the moment they are the same people who are involved in

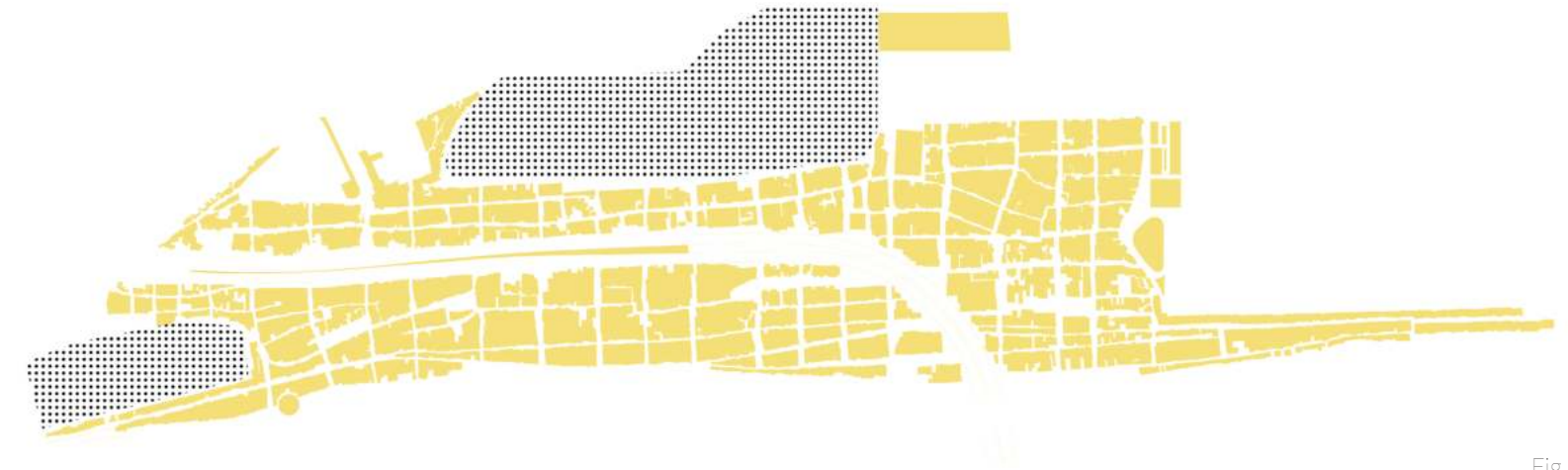
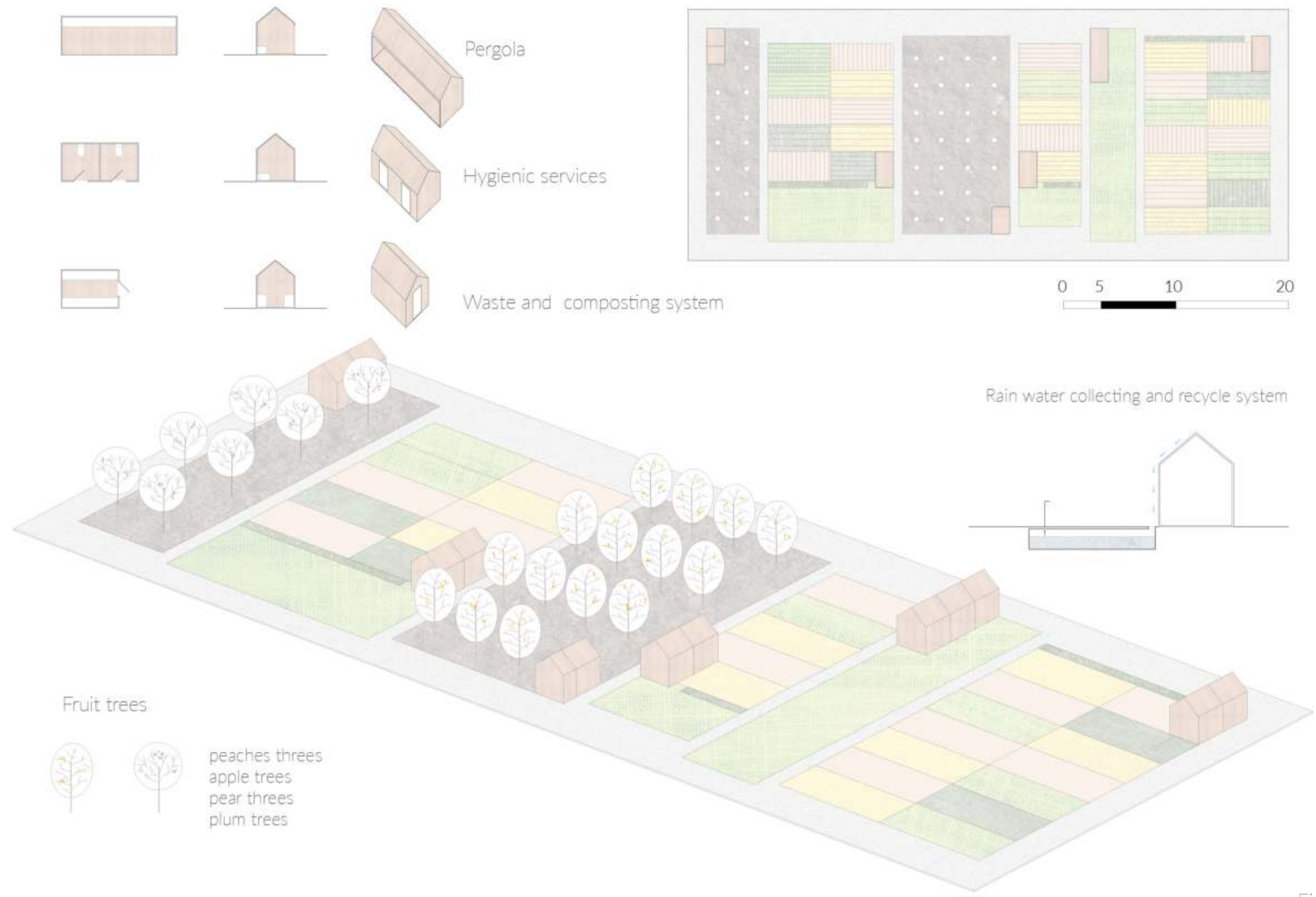


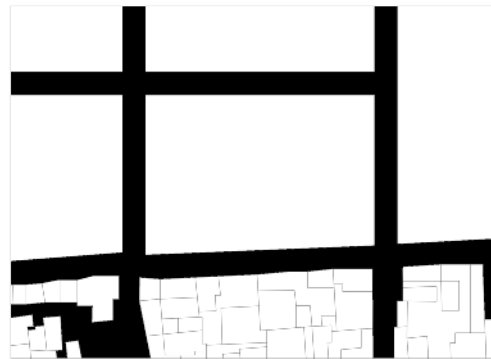
Fig.X



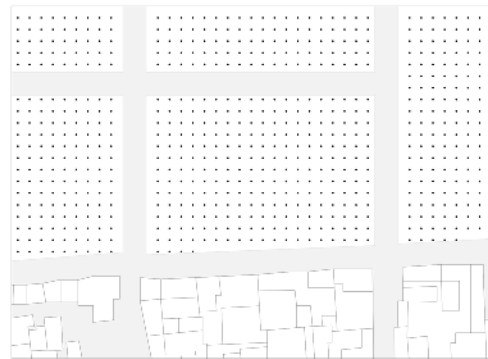
the process of urban development of the growing upscale neighbourhood of Puerto Madero. The materials used for the modules could be the same that are already present in the Villa; a modular structure of beams and columns of reinforced concrete and bricks infill. This is just a possibility, there are no constraints in the materials use.

The spatial conformation of Villa after the project would be very different from the current situation and the new intervention is particularly recognizable. Overall, the new living conditions are meant to give the members of the community more time and energy to develop themselves, their children and their environment in a place that is comfortable and familiar.

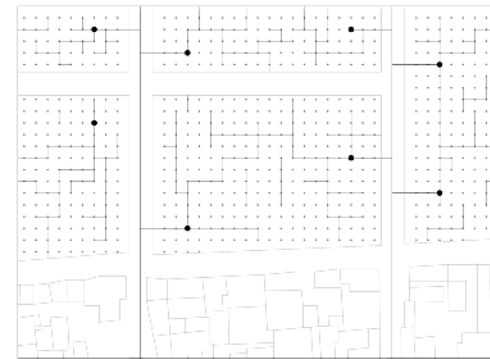
Fig.X



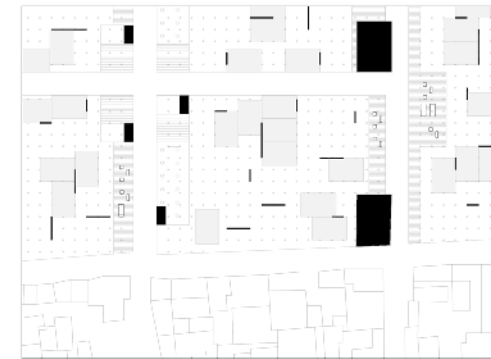
basic infrastructures



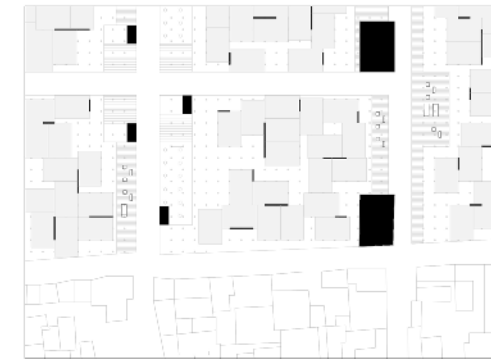
regulatory grid



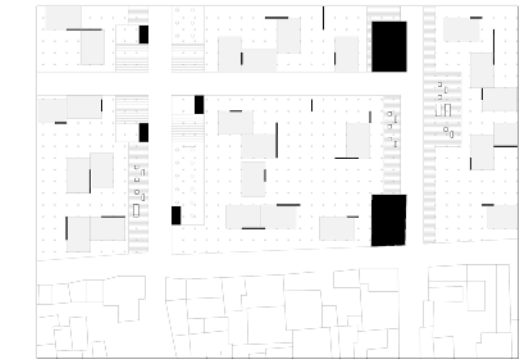
basic infrastructures



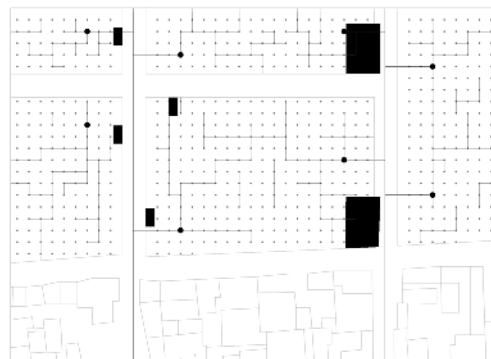
growth device
option 1



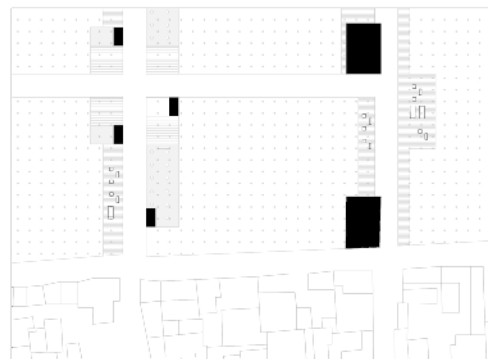
growth device
option 1



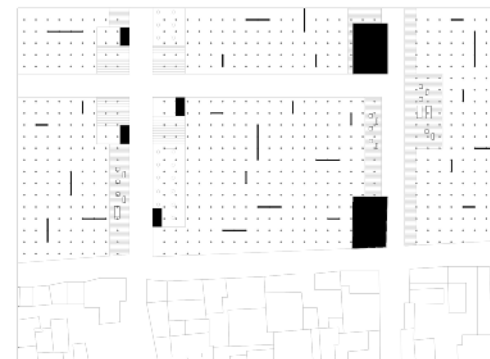
growth device
option 2



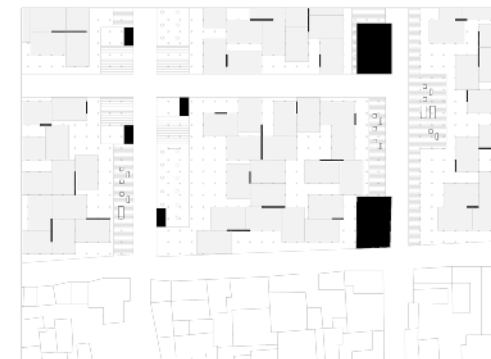
basic infrastructures and services



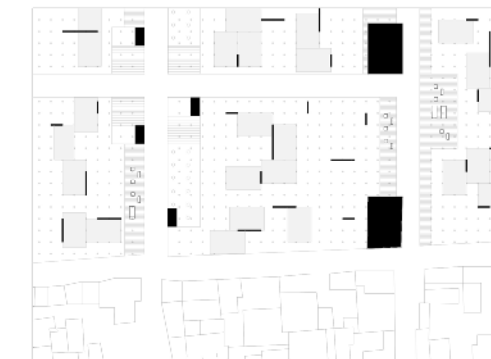
public services



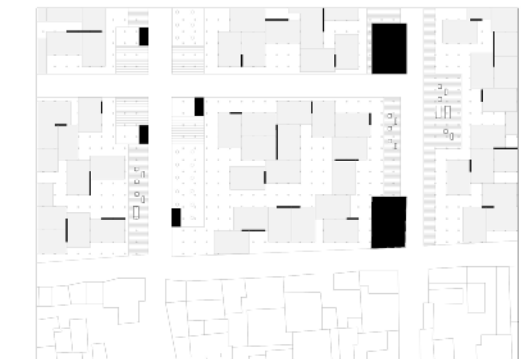
growth device



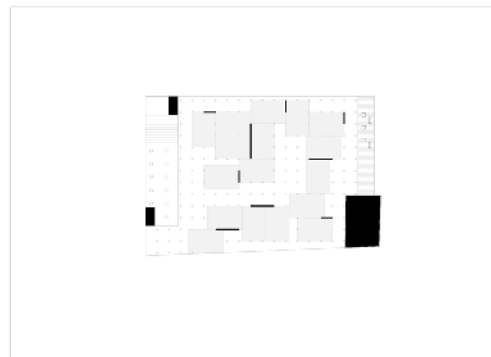
growth device
option 2



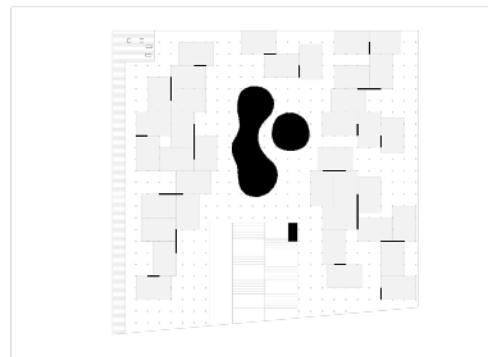
growth device
option 3



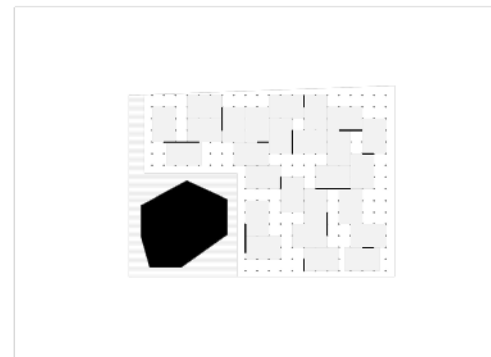
growth device
option 3



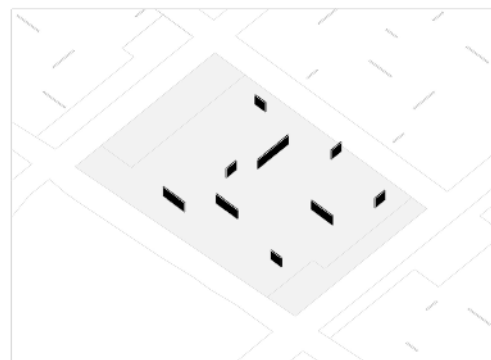
guiding principle
manzana 1



guiding principle
manzana 2



guiding principle
manzana 3



growth device
spatial dimension

MURO + DIDASCALIA

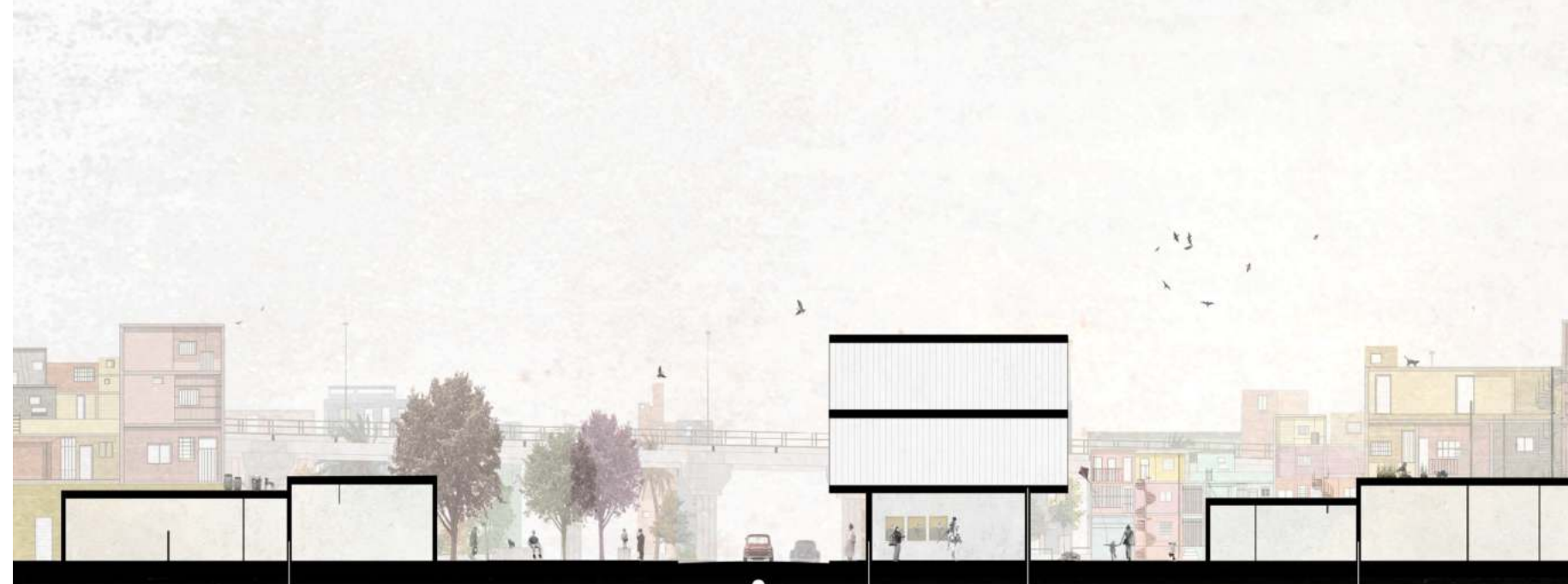
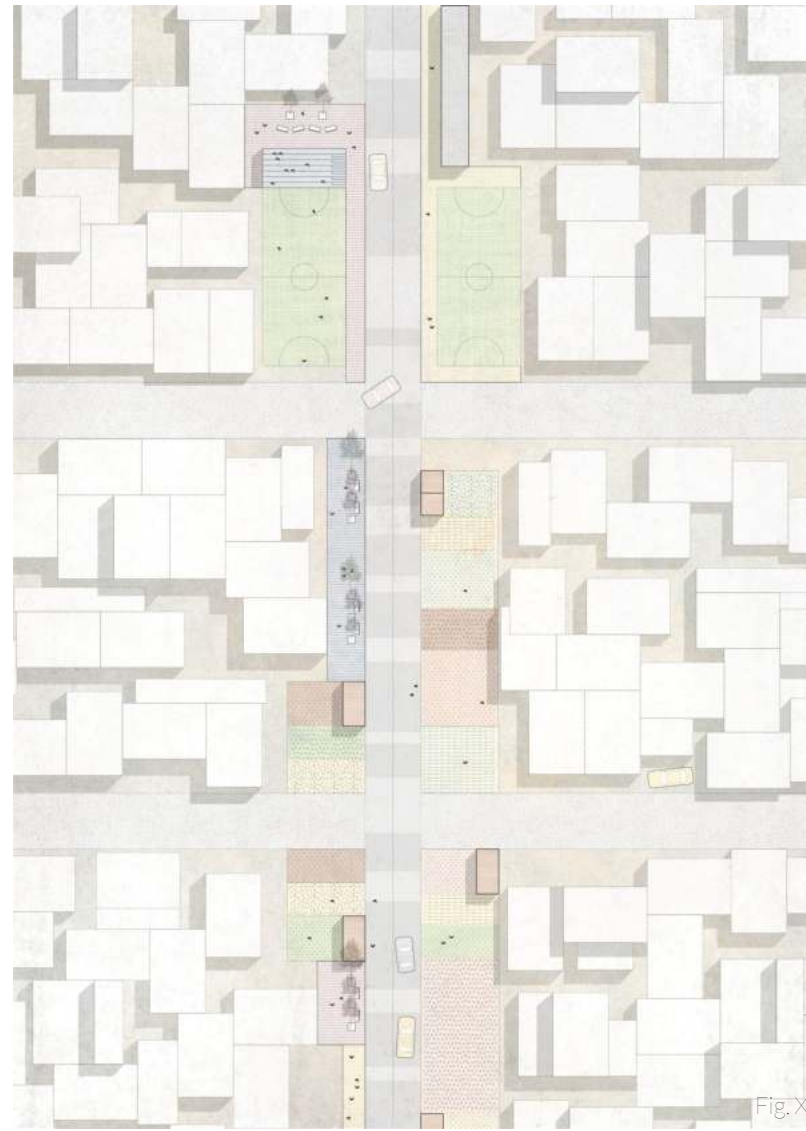
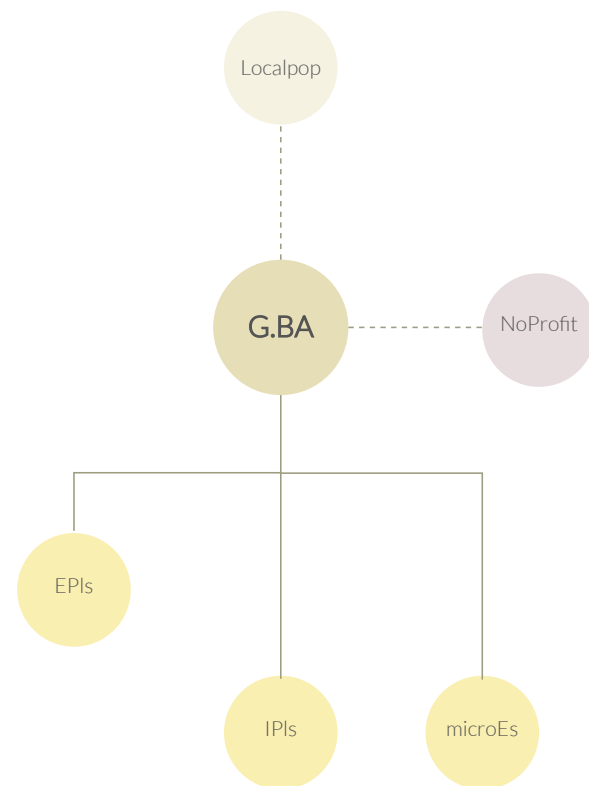


Fig. X



Stakeholders: project financing and process



The complex process of development of the project sees different stakeholders, both private and public investors, as protagonists of the Urban scene. In order to define the stakeholders and their needs, the philosophy relies on three pillars:

Doing – tackling the problems of connectivity creating a new infrastructural system; designing a replicable, flexible system for the development of new housing modules and micro-neighbourhoods following all the normative.

Solving – the isolation and the ghettoization of the informal settlement and the accessibility problem of the Villa with the City.

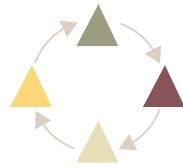
Creating – added value, for infrastructure being an enabler of other levels of Villa social, economical and urban development.

The difficult situation and the ongoing crisis of the Argentinean context generate a deep distrust for any kind of investment for the informal settlement and the result was that most of the project presented to the commission were not considered at

all being too utopian and radical, and based only on the support of government (U.S. Congressional Research Service, 2011). Thus the project strategy is to captivate as many partners as possible, so that reciprocal control generates mutual trust. In order to do so the key activities are spread amongst different stakeholders, with the resources also coming from different sources, depending on the asset and the phase of the project. Even the inhabitants can become producers themselves in the advanced phase of the system starting to built their own living module. Therefore, the mission is to enhance the connectivity between the Villa 31 and the City, so that a vicious circle can be started and produce development, stability and wealth, after having served the Villa population's crucial need for water, medical assistance and access to credit.



GOVERN
CONCESSIONS



several operators

MINIMAL INVESTMENT

Focus on flexible structures
Ownership binded on the time of use
Flexible engagement of stakeholders

CONTINUOS TURNOVER

Fragmentation of risk among stakeholders
Variety of stakes, actors and services
Experimentation and variety of services

Fig.X

In doing so, different kinds of bigger and smaller entities could be involved in the process, in order of importance:

- Government of the City of Buenos Aires (G.BA):
it performs a primary role in financing, managing or running the public infrastructural system as well as the whole process of strategic demolitions of the existing houses. The decision is not to specify its designation any deeper, as in different countries and in different periods these tasks have been carried out by different entities, from the Government itself, to the Ministry of Infrastructure or the Ministry of Transport, from local administrations to ad-hoc created infrastructural agencies. It participates in the realization of the first basic services such as a new sewage system, electricity and basic necessities in the whole settlement, and is the initiator of the finance if the new commercial activities and goods transport.

- Early private investors (EPIs):
this is the main private component for the PPP the project is designing. In fact, the system requires one or more big private investors to finance and run the infrastructural system, for example an investor interested in connecting its sites or even some activities connected to the port through logistics nodes, which are designed to evolve into transformation manufacturing industries in a consequent phase. In fact, the system is meant to easy the creation of process by these investors in the vicinities of the newly realized hubs. It is among the responsibilities of these investors the acquisition and operation of the logistics assets. It is foreseeable that the Villa

is going to be a central point for the city of Buenos Aires and for example the transport authority can be interested in the partial or total acquisition of the logistics hub. Nonetheless, one of the objectives a private company could be pressed to set itself is to use the system for educational/cultural buildings, in order to guarantee a level of professional education to the local population.

- Incoming private investors (IPIs):
these are the private partners who do not initiate the investment but are attracted in the following phase, with the chance of serving the once inaccessible market. The project advises the public partner to attract micro-financing institutions first, in order to inject liquidity and trust in the Villas served. Other relevant investors are to be found into private healthcare and education providers, but also utilities providers - both to serve the population and the other partners - and advertisement companies. Nonetheless, the system shall be let open to new companies which foresee the opportunity in engaging in private different kinds of activities.

- Micro-entrepreneurs (microEs):
any private local citizen who may want to get involved in the system, and rent or buy its own module for its own activity such as *taller* (typical art crafts workshops), cultural events or just commercial activities. Due to the extremely low purchasing power of the Villa population, a collective modality shall be designed to encourage participation. Local citizens, artisans

or marketers may benefit from the flexibility behaviour of the modules. The project does not foresee this category to be relevant in the short nor medium term, but encouraging its participation in the long run should be a primary focus in order to maximize the gains brought by self-employment in the Villa environment.

- No-profit organizations:
Villa 31 has numerous humanitarian organizations which are currently working every day to fight for the *villeros* rights and for the *urbanización con radicaciòn* . They should be invited as frontrunners to exploit the opportunities the project offers, in order to bring first assistance to the population in need in the Villa. Solving the material needs of the population in terms of food, water and medical access is the fundamental premise to the evolution of the Villa economy from subsistence to value-creating. This partner can realize and operate its own modules, but also cooperate with the government authorities in the financing, acquisition and management of the new housing modules and the new services, and an advantageous discount on the use of public services, including the new Illia park, shall be granted.

- Local population:
of course, the local population is involved both as a user and as a provider of the service. Indeed, in order to encourage alphabetization and the creation of working skill, the government authority shall implement provisions such that external private investors must guarantee forms of capacity



building. Then, once the system has become viable, the population can act as user of the infrastructural system and as provider both of labour and small enterprises. The citizens represent also an essential part for the construction of the new developing areas.

The stakeholder map shows how the different parts hypothesized in the project collaborate with each other and which is their role during the three phases. The understanding of the performance of both public and private partners and the distribution of tasks is pretty important to make the organization efficient and working.

7.1 Costs and timing estimation

In connection with the identification of possible stakeholders, an interesting aspect of the research, to deeply understand the process, is the estimation of the investments and the costs of the project and its maintenance per year. In order to calculate an approximated economical support needed for the urban proposal, the strategy was using standard example of urban business models and making a comparison with other similar projects. It is important to clarify that the numbers calculated represent just an order of magnitude and not an actual and accurate cost estimation of the project.

The computation was mainly done selecting the relevant features that better represent the areas of urban expansion

and the new Villa's hubs. Basically the economical forecast considers the costs of each intervention using a 5% more of error flexibility and it takes into account that the maintenance could be around 2% of the total cost of the project per year.

The Fig. X shows which are all the variable costs for each intervention. The calculation considers the favourable position of the Villa which presents the highest land value compared to the other informal settlements of the City and most of the estimations are based on data of the government of Buenos Aires. The main costs derives from the demolitions (according to the number of floors), the construction of the residential and public activities modules both for Step 1 and Step 2 and the two architectural focuses on the Illia linea park and the urban market. The government is also in charge of the infrastructural system which represents an important part of the total amount of money needed to accomplish the project.

The analysis gives as result a cost of investment of about 50 million euros, which coincides in the order of magnitude with other informal settlements projects in South America. The price of each residential module was estimated according to the housing typology by Aravena and it could go from 250 to 300 euros per square meter also considering local materials and the manufacturing of the local people which is not included in the cost forecast (Aravena, 2014).

According to the timeline, it is predicted to be finished in approximately 5 years starting in 2017. First step is the

Fig.X

achievement of all the basic services with as sewage system, lighting, gas and all other necessary utilities in order to start the process. Secondly, the acquisition and construction of the modules and the selling of the concession fees to early private investors will allow the first demolition phase. Later, incoming entrepreneurs will exploit the concessions and advanced services could be introduced in the Villa. One of the main objectives of the whole project is to improve both the

inhabitants and the government awareness of the theme being more and more a active and productive part of the process. The expansion of the new areas and the transformation of the urban hubs will bring the Villa in 2021 to be an essential part of the city promoting different types of activity which let the complete integration start.

Preliminary Costs	N° of modules (floors)	Total Area m ² (GF)	Total Area m ² (1F)	Total Area m ²	Prince per m ² (€)	Total (€)
Demolitions	4 (average)			192000	5	960000
Residencial modules	700 (448+252)		37800	56700	400	22680000
Commercial activities		22680			150	3402000
Linear park				20500	30	615000
Orchards				3000	20	60000
Urban Market				2065	800	1652000
New infrastructure				50400	300	15120000
Maintenance (2% y)						889780
						45378780 €

Fig.X

7.2 Future development

A possible continuation of the project could focus on the evolution of the Villa in the next 10 years, to further help the local-regional development and its integration as a Barrio of the city. One shall focus on sharing the 1st step results to gain more attention and investment for further development, participating in international meetings and competitions, which could enable the project with wider and deeper discussions, sharing the outcomes of the project through research papers, pilot programs, and even using social media, could be one of the means to draw public attention to this transformation project in Buenos Aires. It could be expected that through this kind of discussion a wider number of stakeholders could be drawn into the game and help the next stage development. It could also be an opportunity to collaborate with national and international organizations, both public and private, to provide services for local residents.

As previously mentioned, health organizations, education institutions, sanitary foundation could all join this broad network, together to build the new business landscape, contributing to the socio-economic evolution.

If this model is proved to be useful and effective, then it could serve as a successful experience to be shared with other South American countries baring similar situations, and by building a new information network, fruitful communication could be pushed forward, which could then accelerate the speed of informal settlements development process even in other parts of the world.

CONCLUSIONS

A direct result of the fast and increasing metropolitan growth of the last years of economic boom is the dramatic marginalization, exacerbating the socio-economic and demographic conflicts of the uneven urbanization. The urban asymmetry has become the epicentre of the today's city crisis, polarising enclaves on wealth and poverty sectors.

The worldwide informal settlements are able to elaborate new developing politics for the contemporary city, taking into account the socio-cultural productivity and finding an alternative for unsustainable urban strategies. The informality is not only an image of the precariousness; it is overall a mixture of practices, a scenario of functional urban operations which contrasts the imposed political limits and the hierarchic economical models.

As designers, the principal aim is to challenge the normative notions of a type of architecture which is perceived as an autonomous system out of the spatial and temporal dimension. The new paradigms need to be aware of the difficult situation, understanding the identity of the informal settlements and working on the gap that divides the citizens from the Villas inhabitants. Redesigning the actual logics the borders and the

social environments of the informality is the core action of the research building the community sense and the feeling of social inclusion.

Informal settlements are the evolution of civilizations containing many layers of history that are worthy of preservation and celebration. While portions of Villa 31's built form are newer, other areas have existed for over 80 years. The project, following this idea, aims at preserving as much as possible the cultural heritage, improving the existing living conditions and providing advanced services and new hubs to the Villa.

Therefore, the thesis is not only an urban intervention to physically connect the Villa with the city infrastructure, it is going through a more sensible aspect of the informality. The proposal also includes the awareness of the inhabitants and the right of the community to have a more efficient educational system. Fostering the multifunctionality of the modules prototype is a way to introduce into the Villa all the advanced missing services: from green open spaces, vegetable gardens to guarantee a self-production, cultural-sanitary-religious activities.

Villa 31 becomes an integral part of the city and is equipped with its own infrastructures able to interconnect the various neighbourhoods of the Villa itself, until now so far isolated. Being aware that in each informal settlement exists a unique environment based on policies dictated by the politics and culture of its host municipality and country, the research considers different case studies which contributed to understand the importance of people's participation, the necessity and the urban strategies of similar informal areas. Moreover, the project expands into a period of five years and includes the participation of both the government and the public and private investors, as well as a collaboration of citizens.

In conclusion, an essential and determined factor to fully understand the current situation within the Villa, the citizens' needs and the most effective ways of intervention was the personal experience. The research process has been guided from the outset by multiple surveys in situ and the sensibility of the intervention derives from the deep knowledge of the context and the social and cultural dynamics.

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EXTERNAL PEOPLE INVOLVED

Gabriel Lanfranchi: Architect | Urban planner

Master's degree in urban economics from Torcuato Di Tella University and a MIT SPURS fellowship. Currently I'm the Director of the Cities Programme at CIPPEC and a consultant for the Inter-American Development Bank, Grupo Edisur and AySA. Gabriel was the director of the Metropolitan Office that coordinated the Strategic Guidelines Plan for the Buenos Aires Metropolitan Region. He also led suburban poverty alleviation development projects at Fundacion Pro Vivienda Social. Specialties: Urban and Regional planning, Integral Development, Urban economics, Public spaces planning, Urban Transportation planning, Inclusive Business, Poverty alleviation.

Ramiro Lopez Saubidet: Architect| Urbanist

Government of the City of Buenos Aires from September 2014 - December 2015 (1 year 4 months) Architect Program Improvement Villa 31 and 31 Bis of the Ministry of Habitat and Inclusion of the Ministry of Economic Development. Responsible for control of the infrastructure of the neighborhood sewer , stormwater , water and pavement. Also responsible for the intervention of the public space of squares and courts in the village 31 and 31 Bis.

Sergio Ernesto Cejas: Architect | Urban planner | Professor

Professor at UAI Abierta Interamericana University - Faculty of Architecture.
Projects of urban, suburban and rural housing in Argentina, Republic of Uruguay and El Salvador.
Prototypes of affordable housing in traditional construction, wood and steel.
Obtaining prizes in all categories. Private jury in contests.
Experience: Control and Certifications works. Advice on sanitation networks in the village 31 and 31Bis.
GCABA, Títular study architecture.
Still working on the Villa 31-31 Bis since 2012 (4 years)
Advisor network projects of urban infrastructure and paving projects for public spaces.

Julian Boxe: Psychologist | Professor | Activist of the movement "La Dignidad"

Main member of social movement in the city of Buenos Aires and currently work as a teacher at the UBA, University of Buenos Aires. La Dignidad is an anti-capitalist organization which works mainly with the Villa in order to give a better social state to the people living there. Is also collaborating with the Government to find a compromise and possible intervention to urbanize the Villas.

Gaspar Libedinsky: Architect | Artist | Curator

Graduated at the Architectural Association (AA) in London. Architect assistant for the Rem Koolhaas / OMA studio in Rotterdam and for Diller Scofidio + Renfro in New York as chief designer of the new High Line Park in Manhattan. Visitor professor at Harvard (USA) and at the Architectural Association (AA). As an artist he was awarded the Kuitca / UTDT 2010-11 Scholarship, the most prestigious artist program in Argentina led by Guillermo Kuitca. His work has been published and exhibited internationally.