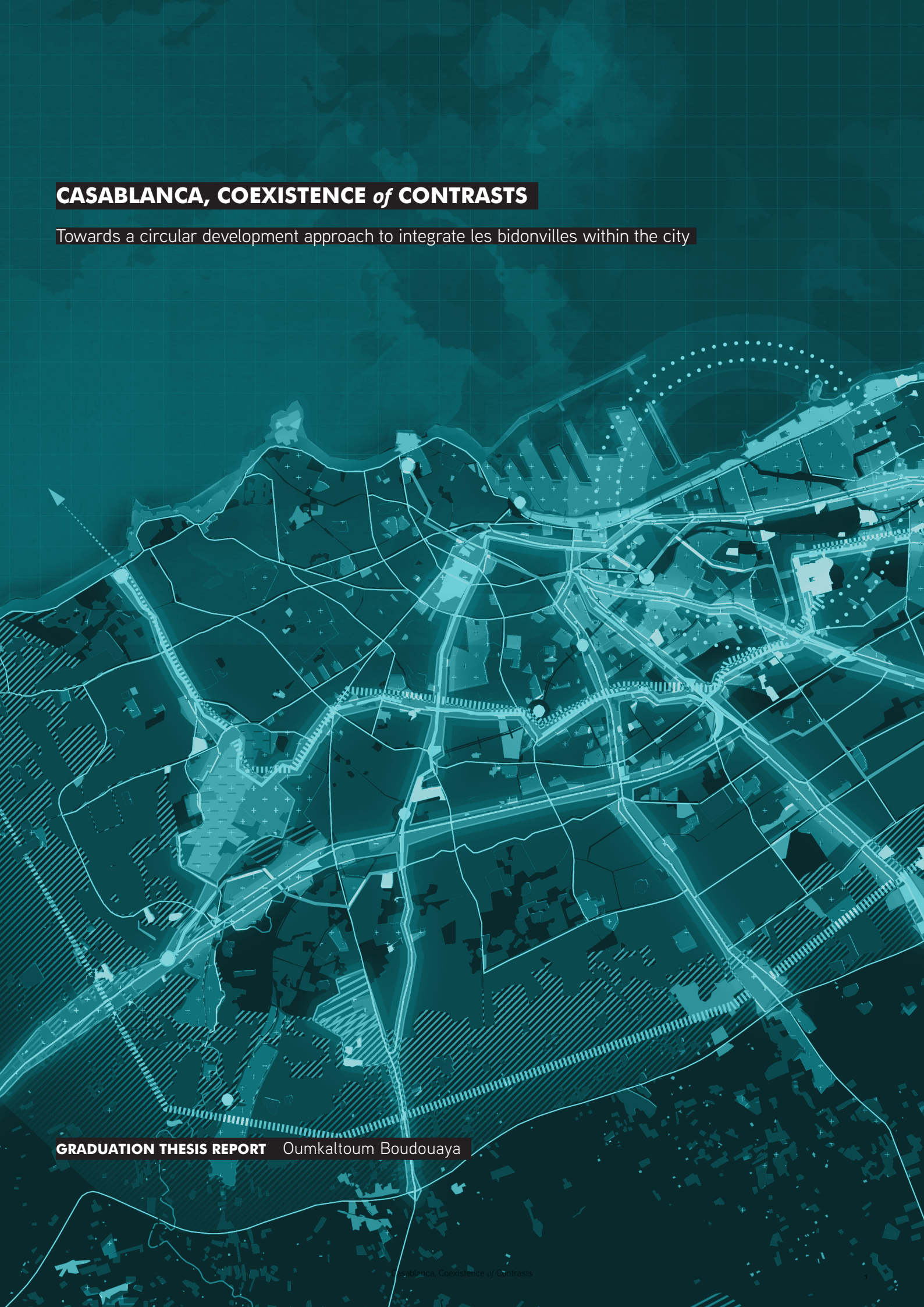
CASABLANCA, COEXISTENCE *of* CONTRASTS

Towards a circular development approach to integrate les bidonvilles within the city



GRADUATION THESIS REPORT Oumkaltoum Boudouaya

MSc thesis in Urbanism P5 Report

Title	**Casablanca, Coexistence of Contrasts** *Towards a circular development approach to integrate les bidonvilles within the city*
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Cover Image	Final Vision Map Casablanca towards Reconciliation. By Author.

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Department of Urbanism
Faculty of Architecture and the Built Environment, TU Delft.

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Delft, The Netherlands

Regarde-la ma ville
Elle s'appelle Bidon
Bidon, Bidon, Bidonville
Vivre là-dedans, c'est coton
Les filles qui ont la peau douce
La vendent pour manger
Dans les chambres l'herbe pousse
Pour y dormir faut se pousser
Les gosses jouent, mais le ballon
C'est une boîte de sardines, Bidon
(Claude Nougaro 1966)

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And to Henry, for our stimulating discussions that I already miss and for your valuable feedback. To you, I say Yes back!

Most grateful I am, to my mother, Amal, for being the strong woman that always believed in me, that always told me to have a meaningful purpose to whatever I pursue in life and to my late father, Abdellah, without whom I would not have been here.

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ABSTRACT

The Slums phenomenon is a global and ethical challenge that hinders the well-being of cities. The vast majority of these areas are located in and around cities of the Global South because of the fast urbanisation and globalisation trends that have been met with insufficient employment, infrastructure and housing opportunities.

This graduation project will explore new slum development alternatives through the lens of circular economy principles. The main focus is to elaborate holistic proposals and strategies that reject eviction and resettlement processes and aim for social, spatial and economic integration.

Taking the case of Casablanca, Morocco, the project takes as a starting point the existing assets of les bidonvilles* which potentially, will lead to better approaches for tackling the challenge of slums at the local and metropolitan scales while developing contextualised circular economy guidelines.

Key words: contextualised circular economy, integration, bidonvilles, Casablanca.

Research Question: How can the development of a Contextualised Circular Economy framework facilitate the integration of les bidonvilles within Casablanca and push towards an inclusive development?

INTRODUCTION

The new realities of cities around the Global South can depict quite a depressive picture: economic and racial segregation, spatial inequality, entrenched poverty... Altogether met with the urgency of environmental challenges and the struggles and failures of authorities to deal with it, makes a person wonder about the future of urbanisation and humanity.
One can argue that the rising rates of extreme poverty is one of the most critical concerns of Global South countries. Poverty encompasses and generates many other problems such as crime, violence, social problems. Consequently, it has an impact on space. The spatial aspect of destitute poverty is partly manifested by the existence and fast expansion of slums.
This thesis purpose is twofold. First, look at the recent development models that emerged as a response to the challenges of circular economy. Afterwards, explore to which extent the new development proposal can be tailored to benefit all the city inhabitants equally.
Casablanca, a city that has always been a laboratory of urban experiments (Cohen and Eleb, 2002) will be taken as a study case to explore potentialities and challenges of its slums and the impact on a broader scale.
Since the emergence of the first bidonvilles in the city in the 1920's, these areas are seen as territories that need to be eradicated. They represent the extreme life conditions of a vulnerable population in dwellings that were built without plans or building permits and often do not have access to drinking water and/or sewage, electricity and experience unsanitary conditions. Therefore, authorities pushed the bidonvilles-dwellers out of the city by providing "formal" social housing in the outskirts.
The implications of these processes are harmful and do not remedy the poverty symptoms (which is the root cause). On the contrary, it makes it even worse since this population survives on informal practices that occur within the city fabric.
This reveals the urgency of questioning the existing development methods and thinking about an alternative model where the vulnerable inhabitants are part of the transformation processes and the city goals to achieve resilient economic growth on a global scale.

The development of alternatives requires a shift in our perception of slums and development priorities. This can be seen as an oversimplification of such a complex issue that has been persistent for so many decades and in so many places around the world. It also reveals another dimension: ***what if slums are not meant to be eradicated? How about we make better slums? And what are better slums?***
This leads to the main hypothesis of this project: Circular Economy can be a proposal for an alternative framework that covers the spatial, socio-economic and ecological aspects of the problem in question. Research conducted by Pretson, Lehne and Wellesley (2019) states that Circular Economy offers a promising alternative strategy for industrial development and job creation by providing new opportunities for economic diversification and value creation . Moreover, not so much research has been done in linking and exploiting the circular economy in developing urban strategies and initiatives especially in vulnerable contexts.

CASABLANCA, COEXISTENCE OF CONTRASTS

Towards a circular development model to integrate les bidonvilles within the city.

CASABLANCA
Casablanca is a fragmented city of almost 4 million inhabitants, in which different strata of different ideologies are spatially visible. The old medina, the European French town (la ville nouvelle), the new medina, the modernist housing experiments by the French, the bidonvilles, the villa neighbourhoods, the clubs of la Corniche...Its character inspired the title of this thesis.

COEXISTENCE
The term Coexistence is evidenced in relationships across differences that are built on mutual respect, recognition, and is widely understood as related to social inclusion and integration. The term coexistence has a particular focus on inter-group relations. Other languages that seeks to describe a similar vision includes social cohesion, social inclusion, and social integration.
This definition by The Heller School describes the intention of this project that aims to preserve all the differences that make Casablanca such a diversified and unique city but while keeping them connected and not fragmented.

CONTRASTS
This refers to all the contradictions, inequalities, identities, religions... It is a city where many people lived their whole lives in the same neighborhood, yet a large portion moved from somewhere else. It is a city with many million-dollar homes and many bidonvilles.

CIRCULAR DEVELOPMENT MODEL
This refers to the strategic approach (chapter 3) that will be developed as a proposal to study and intervene on slums in the context of developing countries.

INTEGRATE
The use of the verb integrate here implies an integration proposal on three dimensions: spatial, social and economic.

LES BIDONVILLES
This term will be used throughout this thesis to refer to the slums in the context of Casablanca.

1. PROBLEM FIELD

CHAPTER OVERVIEW

The first chapter of this thesis introduces the notions of: Globalisation, Urbanisation and Slums. It aims to clarify the ambiguities within slum related to why and how slums emerge; from globalisation and poverty to governance and increasing inequalities. It aims to depict a picture of the slums as physical and social spaces while taking a look at the main challenges and opportunities that emerge from them.

Sections:

1.1 Globalisation and Urbanisation
1.2 Slums around the World

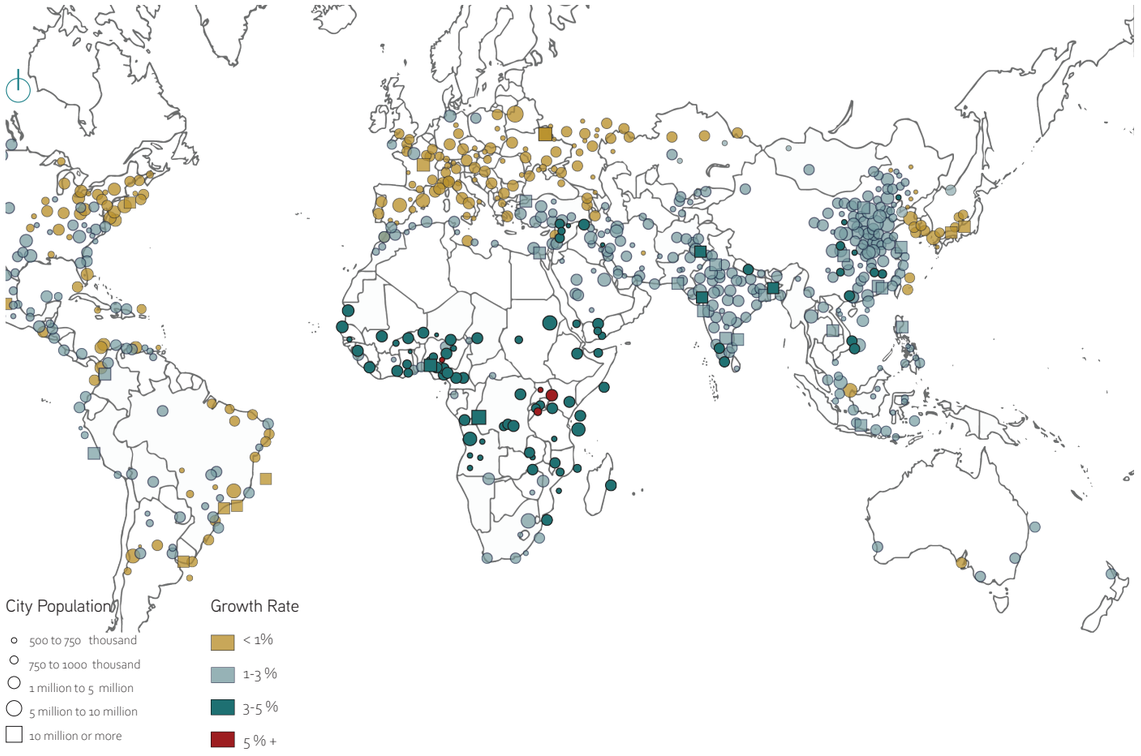

Fig 1.1: World Urbanisation Prospects 2018 Revision. Source: United Nations. Map Adapted by author.

GLOBALISATION AND URBANISATION

"Globalisation is not new."
(Perlman, 2007, p:2)

Trade, capital flows and migrations at the end of the nineteenth century were no less than they are today. However what changed nowadays is the pace of globalisation; the degree by which governments reduced obstacles to the flow of trade and investment worldwide supported by a high rate of technological change reducing the costs of transportation and communication (Bhagwati 2004). Theories about the possibility that globalisation could worsen inequality in the world stood already in 1940. Despite the claim of Bhagwati (2004, p:74) that "growth is good for the poor, globalisation increases growth, so it is likely to reduce poverty", economic growth does not always imply poverty reduction, it depends on how governments and populations deal with the phenomenon (Thorbecke & Nissanke 2006).

Generally, the increase in inequality in the world is due to the liberalisation of the markets, which is one of the direct causes of globalisation. The inequalities come from how this growth is re-distributed. There has been a 60 per cent increase in the wealth of the top 1 percent, the richest 100 billionaires added 240 US billion dollars to their wealth in 2012, enough to end world poverty four times over (Sassen, 2015, p:45). The gap between those who benefit from globalisation and the poor is more obvious in the developing countries (UN-Habitat, 2003). However, "people remain as close as possible to the city regardless of slum conditions because job opportunities are concentrated in urban areas".

Thus, making a 'humane' globalisation that works for the masses is the central economic issue of the day.
(Somers, 2006).

Globalisation produced a large amount of different outcomes, but yet it hasn't directly helped to reduce poverty and inequality. Defining globalisation can be a hard task. It is a multifaceted phenomenon, which interacts with the environment in so many different ways. Globalisation can be either good or bad for the urban poor, depending on the factors taken into consideration at a determined time and place. Which brings out the importance of its management. (Gustini, 2016)

The purpose of this part is to introduce and paint a picture of some of the reasons that might be the cause of the urbanisation of urban poverty and solving it is much more complex than upgrading its manifestation. The focus here is to see how to improve people's livelihoods rather than focusing only on improving the physical manifestation of urban poverty.

1.2

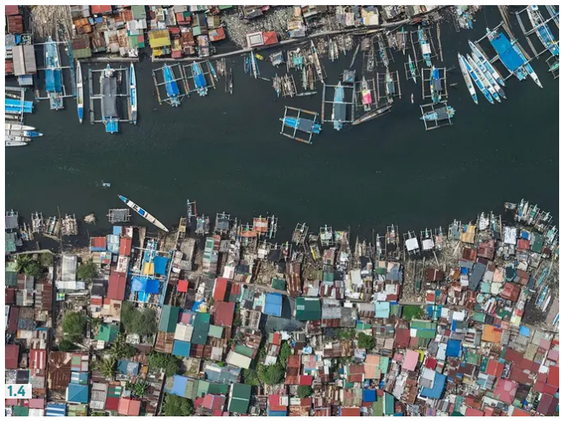
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Fig 1.2: Mumbai, India. Source: Johnny Miller. Quartz
Fig 2.3: Khayelitsha, Cape Town. Source: Slumscapes.
Fig 2.4: Manila, Philippines.Source: Bernhard Lang, BBC.
Fig 2.10: Worli Slum. Bombai. Source: Dinodia Photos.

For slums, as for other urban constructions, central sites are typically older, while those on the periphery are more recent; whereas the former are located in proximity to businesses, the latter are far removed from everything. This, as it turns out, proves to be a shrewd strategy: settling on land that does not yet have value allows for long-term settlement. (Bolay et al., 2016)

SLUMS AROUND THE WORLD

The problem of slums has been experienced - at some point of time - by almost all the major cities in the developing countries. As mentioned in the first part, slums can be defined as the physical and spatial manifestation of urban poverty and intra-city inequality. Slums and urban poverty are not only indications of a population explosion, demographic change, and the forces of globalisation that bring people toward cities, but also the result of a failure of housing policies, laws and delivery systems, as well as national and urban policies (UN-Habitat 2003).To successfully understand a phenomena of this scope and complexity, Mahabir et al. (2016) argue that one must consider the drivers that push people to live in slums, along with their physical location, so that appropriate policies can be developed and explored in order to improve the well-being of their inhabitants.

While a considerable number of the urban poor live in slums, not all slum dwellers are poor, and more importantly, a significant proportion of the urban poor do not reside in the slums (Arabindoo 2011). So one might question: who is the real target, the poor or the city?

Terminologies

Generally, most cities have their own local terms for slums, most of which are descriptive of the look of the degraded settlements or of the way that they were formed. For instance, the 'pirate urbanization' of Bogotá refers to the illegal sale of land and is to be distinguished from the even more 'illicit' invasion (Gilbert, 1981). In Argentina, sympathy imbues the term *villa miseria*, used to describe flimsy invasion settlements. In Chile, the *callampa* (mushroom) describes how flimsy settlement grows overnight, the *toma* (taking) to the invasion of land, and the *población* (settlement) of the ordinary poor is contrasted to the campamento (camp) founded in the late 1960s by the parties of the Left. In Spanish America, the central tenements also have their local names, *conventillos* (little convents because they are formed around a central patio), *inquilinatos, vecindades* — all associated with deterioration and over-crowding (Perlman, 2007). In the case of Morocco and french colonised countries in Africa, the term Bidonvilles - which means oilcan cities - describes the way they were built, by using cans from nearby landfills which represents the method used by rural migrants consisting of using local materials to build shelters. This nomination by itself represents one of the fundamentals of the circular economy concepts: building with local materials.

Potentials

So much has been said about the challenges and problems of the slums and so little about their potentials. In these extreme daily life conditions, the slum dwellers developed innovative abilities in order to be able to survive and make a living. This fosters creativity and gives them a very important entrepreneurial character that needs to be highlighted. As Mike Davis stated in his famous Planet of Slums that 'informal survivalism' is the new primary mode of livelihood in a majority of Third World cities' (2004, p:24). Although, it is true that these conditions could lead to other negative turn of events (violence, ecological vulnerability, terrorism, safety issues...), media and governments rarely show the positive side depicted above, which consequently, limits the potential and proliferation of these ideas, knowledge and underutilised intelligence.
Obviously, no city can afford to neglect the capital of 30 - 40% of its population. Especially if this population possesses special adaptive capacities that make it resilient by character in very vulnerable contexts. An example of this impressive capacity is the Dharavi slum in Mumbai. This slum represents a true economic success story that grew from a small settlement in the marshlands to become a million dollar economy model providing food to Mumbai and exporting goods worldwide (Roy 2015).

Another important incentive to look at this entrepreneurial character is the necessity to focus first on upgrading the slum dweller rather than the slum itself. Gilbert (2007) argues that in poor cities, housing improvements can be counterproductive as "the priorities of the desperately poor almost always lie beyond shelter".
"Above all else, the poor need to eat and to drink clean water. Overcrowding is clearly undesirable but hunger is worse! "(Gilbert, 2007, p: 709)

Therefore, the integration process should start by looking at these potentialities in specific identities and expertise by observing and analysing the 'survival' behaviour rather than focusing on getting rid of these areas. Then, by looking at structuring systems you can inform the space. In other words, the most problematic flows such as food, water, and waste can be catalysts of change, present economic opportunities, and can upgrade the quality of the living environment. Furthermore, in order for this to happen, closer attention should be paid to governance issues by investigating how 'bottom-up' approaches should be presented and integrated with the 'top-down' approaches in a balanced model.

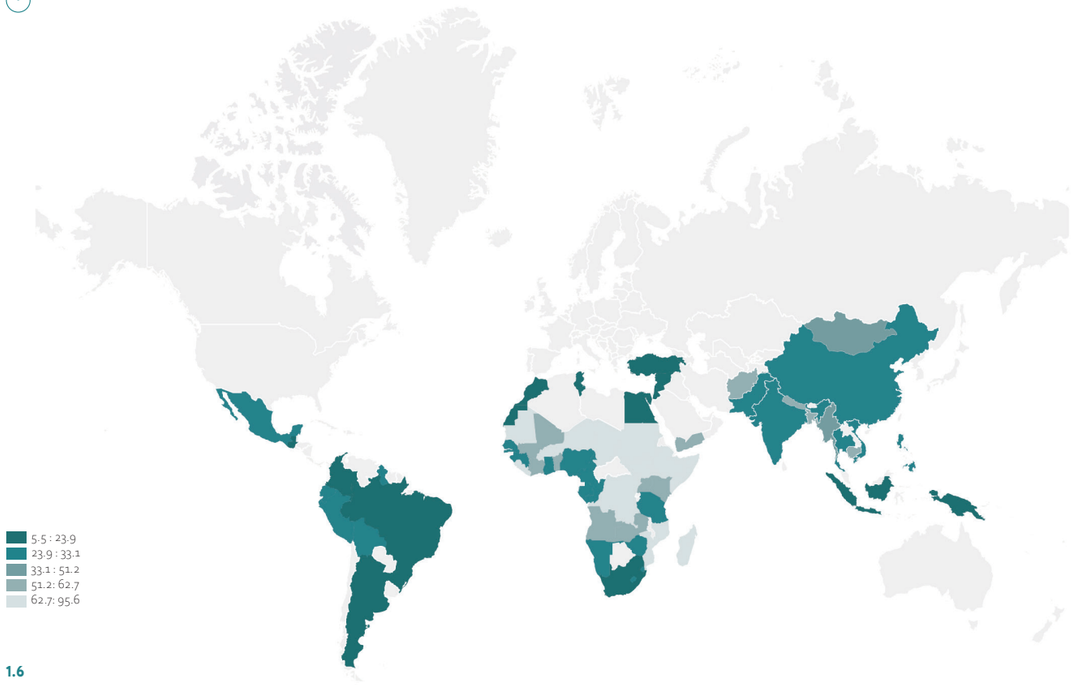

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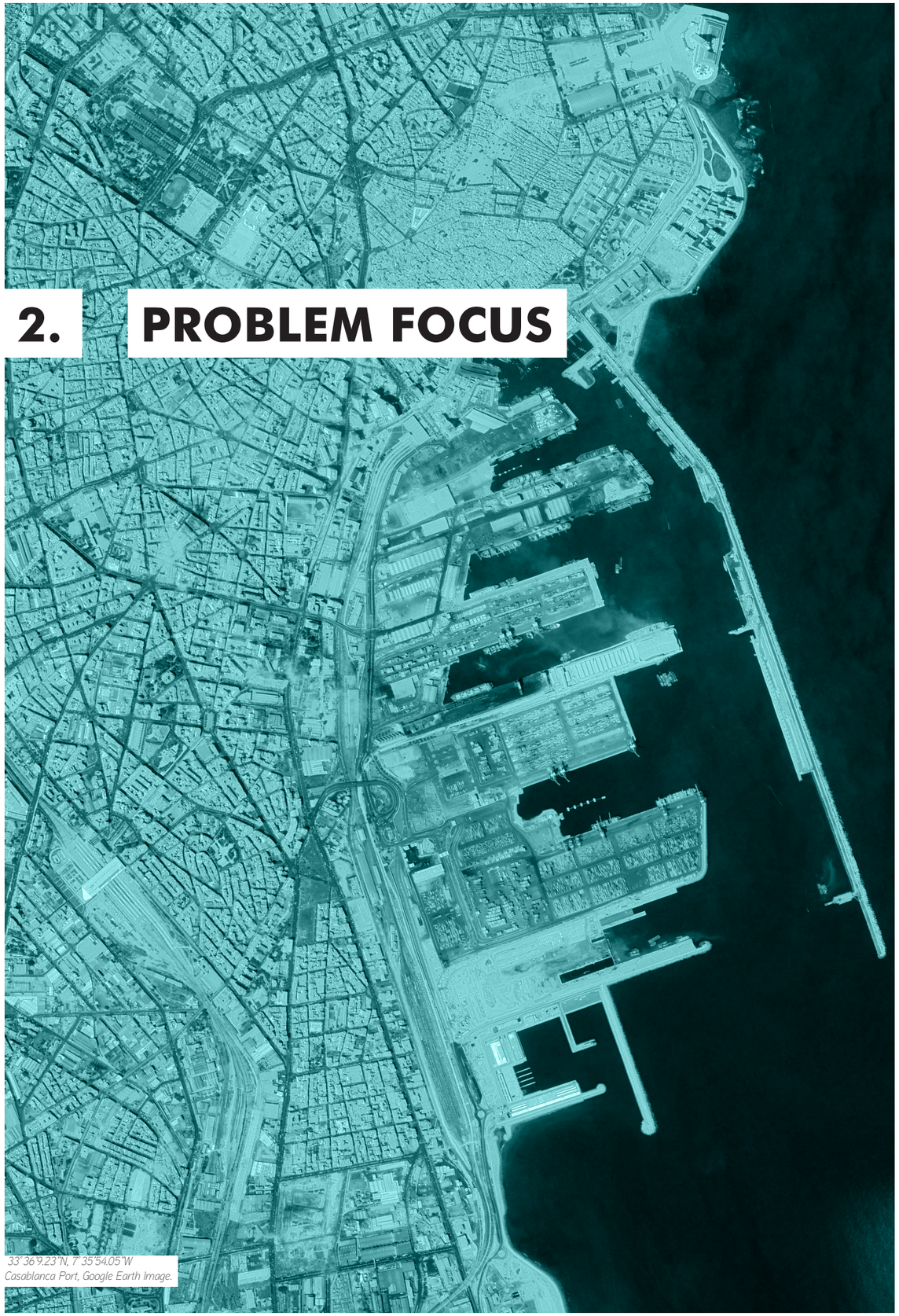
Fig 1.6: Population living in slums (% of urban population) in 2014. Source: World Bank Indicators. Map adapted by author.

2. PROBLEM FOCUS



33°36'9.23"N, 7°35'54.05"W
Casablanca Port, Google Earth Image.

CHAPTER OVERVIEW

The second chapter of this report introduces the location of the project: Casablanca, Morocco.
It will explore how Globalisation and Urbanisation processes affect the Moroccan context.

Casablanca is taken as a study case for this project due to its importance on the African and Moroccan scale. It is the economic engine of the country and simultaneously exhibits extreme urban challenges common to Global South countries.

One of the main purposes of this chapter is to understand the main factors behind the existence and the propagation of les bidonvilles (slums) for so many decades and to start steering the thinking towards better alternatives.

Sections:

1.1 Context: Casablanca City.
1.2 Once Upon a time… the Bidonvilles
1.3 The Drawbacks of Resettlement
1.4 Planning in Casablanca
1.5 Conclusion: Research Aim

> ***❝ The name Casablanca resounds hauntingly in songs and movies. A place of adventure, a "strange and unsettling city" where anything can happen, yet also a locus of invention and modernity - such is the myth that for decades clung to Casablanca.❞***
> *(Cohen, Eleb 2002 p:11)*

Fig 2.1: Casablanca Movie Poster 1942
Source: IMDb.

2.1

CONTEXT: CASABLANCA CITY

2.2

Fig 2.2: Multi-scalar Location Maps . By author.

The city of Casablanca is located in the north-western part of Morocco on the west coast of the Atlantic Ocean (fig 2.2). This rapidly growing North African port city can also be classified as an "emerging megacity". The Grand Casablanca metropolitan area is the most densely populated area of Morocco. It is a crossroads city for the land-based transport network and a convergence point for trade and the national and international flow of goods, which makes it the driving engine of the Moroccan economy. Its power radiates across the entire country (Gisek et al. 2015).

Within 100 years, Casablanca has grown from a small coastal settlement of 20,000 inhabitants to a metropolis of more than 4.6 million. Casablanca can be qualified as a fragmented and a segregated city.The city conveys a strong image of poorly articulated fragments of urban mosaiques.Socially speaking, Casablanca is a city under tension, with serious violence linked to the increasing inequalities and poverty that is becoming more and more visible. Its metropolitan character is the frame of socio-spatial transformations that represents daily life challenges for its inhabitants - urban sprawl, high density, increasing recourse to activities of the street economy, persistence of slums, impoverishment of public facilities, dilapidated housing, insufficient transport network. This raises the question of the experience of socio-spatial differences linked to the size of the differences between standards of living (Anglade, 2016).
The forces that contribute to socio-spatial segregation are many and vary from place to place. It is considered to be a major social pathology that often results in unequal living conditions and unequal access to services and labour markets. In Casablanca, segregation dates back to the beginning of the colonial era: the city was colonised by France from 1912 to 1956. The French refused to cohabit with locals inside the inner city centre -the Medina- while they also refused to let Moroccans live in the newly built area. However, they still needed labour forces for the growing industrial areas.

This part will elaborate on the origins, history and the urban expansion of Casablanca starting from its origins to Henri Prost's expansion plan "European ville nouvelle" outside the walls of the medina in 1918 and how all these decisions shaped the Casablanca of today.The image on the right (fig 2.3) shows the evolution in the last decades. It conveys the idea of how fast the city has developed and how the planning coped with this growth.

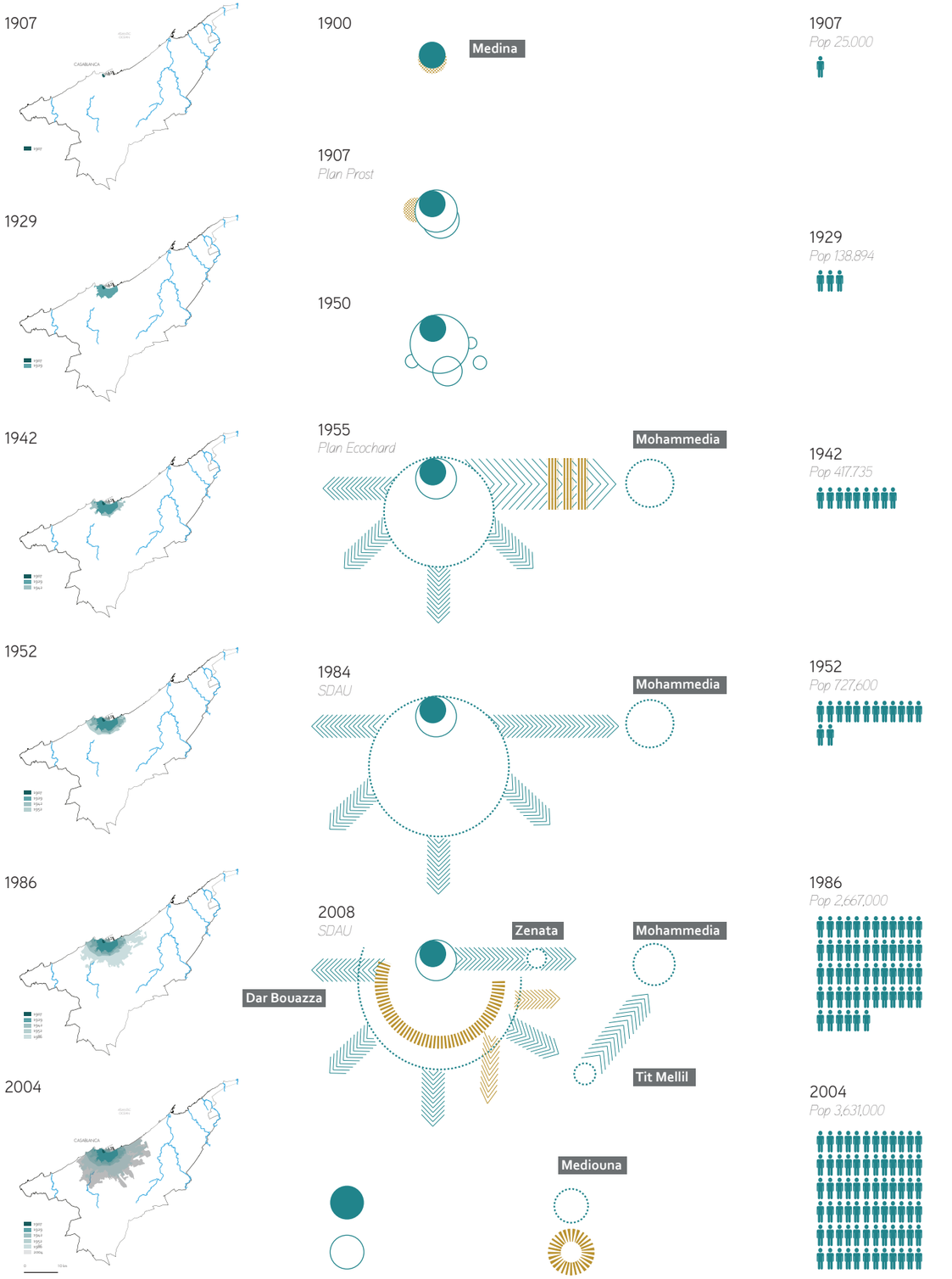


Fig 2.3: Grand Casablanca: features of urbanisation over the last century.
Source: (Giseke et. al 2015 p:65)

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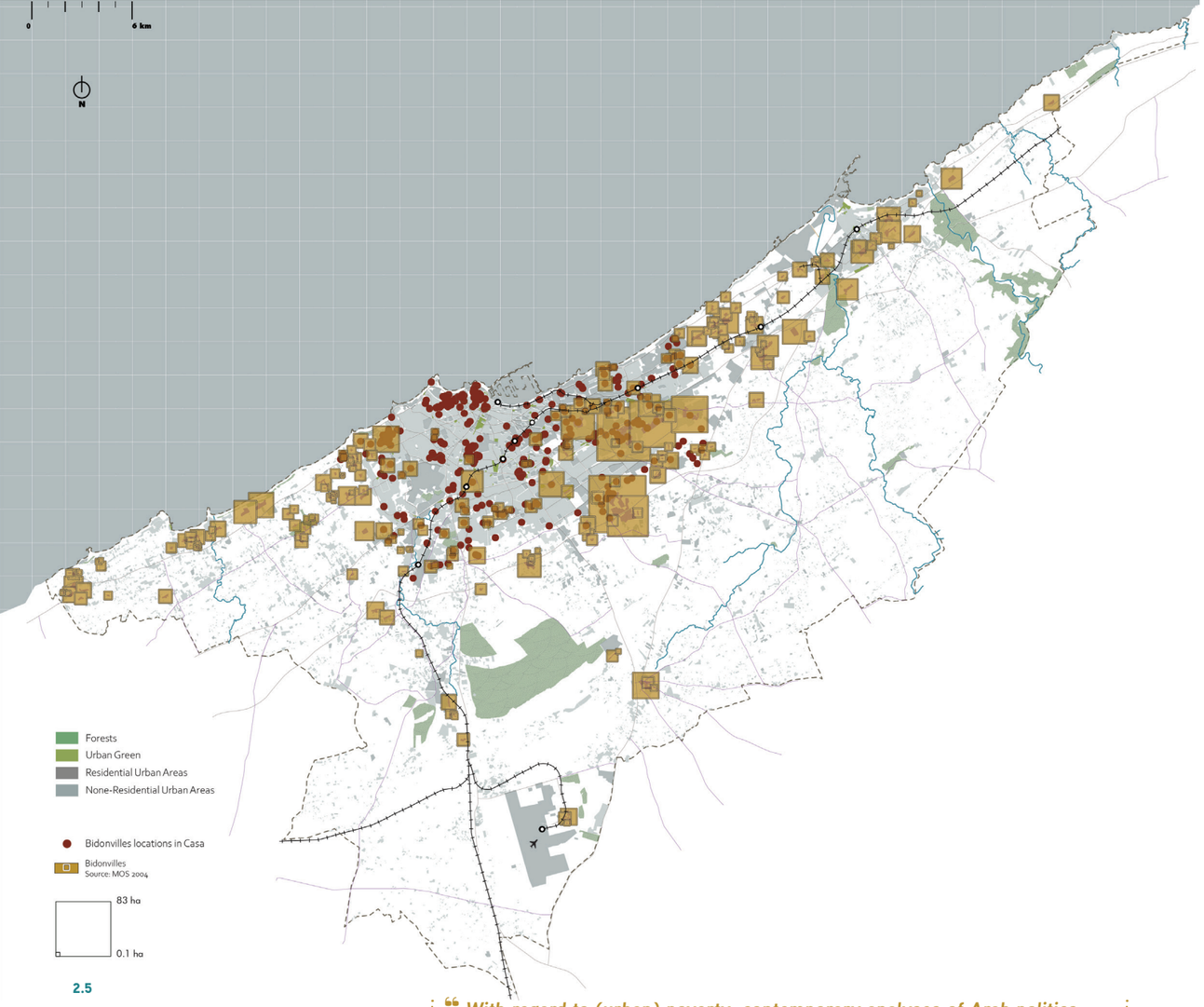

2.5

> ***With regard to (urban) poverty, contemporary analyses of Arab politics should pay close attention to the fact that the poor 'are poor precisely because of their incorporation into the reality of the contemporary capitalist economies' (Bush, 2004: 675). Poverty, as Ray Bush argues, does not emerge from the poor man's exclusion but from his particular inclusion in the neoliberalized local economies. It concerns a 'differential incorporation', leading Bush to direct our focus to the crucial issue of how poverty is created and reproduced.***
>
> *(Bogaert 2011 p:710)*

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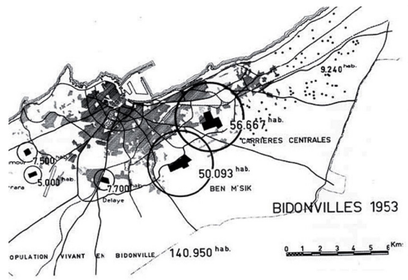


2.7

Fig 2.5: Map of the bidonvilles distribution. Source: AUC , IAURIF, 2006
Fig 2.6: Pictures from of one of the first bidonvilles. Pictures were taken in 1932. Source: Cohen & Eleb 1998, p:221.
Fig 2.7: Location Map of the bidonvilles by Ecochard. Retrieved from: https://www.arquiscopio.com/pensamiento/la-trama-ecochard-en-marruecos/?lang=fr

ONCE UPON A TIME... THE BIDONVILLES

Painting a picture

The "bidonvilles" are settlements built by their inhabitants out of canisters (French: bidon) and arose on the outskirts of North African cities from the 1930s onwards. They were perceived as overcrowded, putrid and unsafe. In 1931, an attempt to ban their construction failed (Cohen and Eleb, 2002, p. 222).

Morocco's bidonvilles were a product of colonisation. Hygiene concerns and the fear of potential uprisings against the colonial hegemony made the French implement strict plans of spatial ethnic segregation by keeping the medinas untouched and building new European cities next to them. (Beier, 2019, p:58) The growth and expansion of the bidonvilles was a result of a rural-to-urban migration. By the end of the French protectorate in 1956, around 75% of Casablanca's population had immigrated from the countryside (Puschmann, 2011).

Chasing prosperity in the newly global city and the illusion of escaping poverty in the countryside, pushed many Moroccans - especially from the southern part of the country - to leave their rural and familial lives. In this process, they lost contact with their tribes and villages and the communal support, just to replace it with feelings of isolation, disconnections and overcrowding. The rural migrants, becoming now bidonvilles dwellers, found it hard to integrate within the city since there were neither provisions in housing nor public facilities (Cohen and Eleb, 2002, p:325).

Despite realising the devastating consequences and conditions migrants suffered from, neither the french protectorate nor the post-independence governments have adequately facilitated the process of integration.

Michel Ecochard *(a French architect and urban planner who played an important role in the urban planning of Casablanca from 1946 to 1952 during the French Protectorate)* recognised that Casablanca's bidonvilles held the potential to be dynamic, transitory spaces that could provide rural migrants with a point of entry to the city. He was the first to map the bidonvilles and discuss them in his book: "Le Roman d'une ville, Casablanca", published in 1955. However, in order for the bidonvilles to function in this way, several preconditions are required:

In his book Arrival city, Saunders (2012) argues that the bidonvilles should create a network of social relationships connecting the departed village to the bidonville to the established city; it should provide access to affordable housing, assistance in finding employment; it must allow for village migrants to save and purchase housing of their own and start small businesses; it must provide access to the established city for education; in sum, it should enable social mobility (Saunders,2012, p:20).

Obviously, these conditions were not met and after the independence, Morocco has failed to reverse the newly-established policies set by the French in order to incorporate generations of rural migrants into mainstream urban society. (Head, 2013) And even though the emergence of most of the existing bidonvilles is

24th of July 2004, the King initiated the VSB programme, making it a national priority.
They (les bidonvilles) are seen as "prejudicial to development".
King in his speech in 2003 about the launch of VSB.

closely connected to industrialisation, occupations amongst residents are diverse and spread all over the city: varying from mobile street vendors in the bidonville itself or in the city to teachers, employed professionals in Maarif (one of the wealthier inner-city districts of Casablanca) and business owners who value the bidonvilles as a safe place within the city without exorbitant rents (Beier, 2019).

Villes Sans Bidonvilles (VSB)

If we fast forward in time and we go to 2003, one bidonville, Sidi Moumen, was home to perpetrators of bomb attacks in Casablanca in 2003. These attacks instilled an even greater sense of urgency into the commitment to eradicate slums. In response to these bombings, the most recent strategy surged. In 2004,the Villes Sans Bidonvilles (VSB) programme (Cities without slums), had been announced by order of the King. However, ignoring urban blight until it became a security threat had dire consequences for the states' ability to address its "slum problem." (Zemni and Bogaerts 2011)

The objective of the "Villes Sans Bidonvilles" programme is to provide decent accommodation to the households living in urban slums across Morocco by 2010. Evaluations of previous slum upgrading programmes provided an overview of learnt lessons and suggestions, which gave further motivation for new plans for substandard housing. The basic principles of the Government's new bidonvilles upgrading strategy were as follows:
a. the integration of single operations at city-wide level
b. contractual engagements of private and public actors in the slum eradication efforts
c. increased provision of social housing by private developers
d. the involvement of the slum population through a process of social support and participation.

Although VSB is a national programme, the biggest challenge is in Casablanca.

VSB Modes of Intervention

The VSB programme's modes of intervention consist of:
a. on-site upgrading, or restructuring of the slum settlement with the provision of roads, drainage and water supply, public lighting and electricity networks
b. production of fully or partially serviced plots (Zones d'aménagement progressif (ZAP)) on urban land, on which the households will build new dwellings and where on-site infrastructure will be provided over time while households build on their plots.
c. construction of apartment buildings to transfer the slum households to.

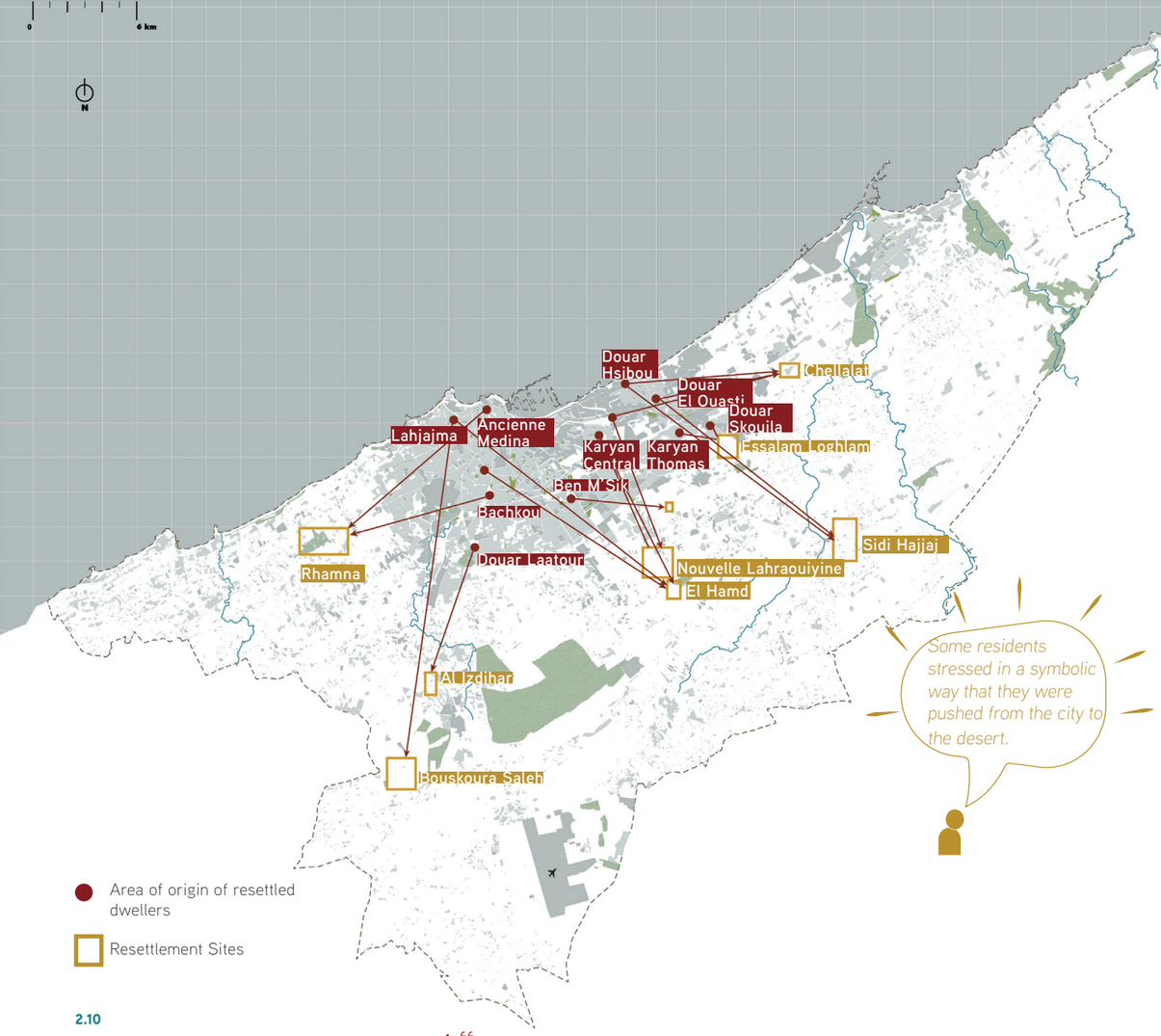
However, the option to relocate to host-sites on the urban periphery quickly replaced both the other options. The sole focus on slums and the prominent use of the word 'reduction' reflect Huchzermeyer's concerns about the misleading effects of the slogan 'Cities Without Slums' (Huchzermeyer 2011). In the case of the VSB programme, this is further enhanced by its focus for resettlement and displacement that is opposed to upgrading policies recommended by UN-Habitat, the Cities Alliance, and, later, the SDGs. (Beier, 2019, p: 108) Hence, there are severe doubts regarding whether

2.8

2.9

Fig 2.8: A woman in the middle of her house ruins' after the destruction of the oldest bidonvilles Casablanca, Carrières Centrales, the 4th of June 2014. Source: AFP / FADEL SENNA.
Fig 2.9: A helpless young man tried to spray himself with flammable liquid to immolate himself. Source: Retrieved from: https://www.yabiladi.com/articles/details/26590/casablanca-fronde-population-care-central.html

the programme's primary focus is on improving the lives of the bidonvilles dwellers or the ambition to clear occupied sites. (Navez-Bouchanine 2003, p:70)
The way that programme authorities measure the programme's progress is by simply stating the number of cities declared bidonvilles-free and the number of people that were moved out of bidonvilles (MHUPV 2011, 21f).
During the fieldwork, an interview has been conducted with the representative of the VSB programme responsible for one of the bidonvilles clearance in one of Casablanca's districts. During this interview, the main goal became clear: a strictly quantitative table of how many bidonvilles were there and how many are there now. To the surprise of this person, the ministry did not ask for any additional reports stating the social or economic impacts of the clearance process.



2.10

> ***“ The Cities Without Slums (VSB) program generally failed to fulfill its promises. Instead of reducing urban poverty it only—or even intentionally—succeeded in displacing that poverty. Moreover, in many cases it exacerbated urban poverty and underdevelopment: many resettlement projects had a negative impact on the education of youth, on the participation and integration of women in new neighborhoods, on solidarity networks between residents, on consumption patterns, on social mobility, and so forth.”***
> *(Bogaert 2018, p:206)*

Fig 2.10 : A selection of resettlement projects in Casablanca since 2004. Data is based on literature research and own interviews from (Beier, 2019, p:123)
Fig 2.11 : Demolition of bidonvilles Douar Wassti in 2018 where people were left in the streets and were asked to find shelter on their own until the authorities could prepare resettlement solutions somewhere outside the city. The picture has been take from a video that captures the massive eviction.
Source: https://www.youtube.com/watch?v=XAr0VqwSBlM&feature=youtu.be
Fig 2.12: The resettlement option (R+3) allows bidonvilles dwellers to construct their own homes on plots of land outside the city.Source: Atia. 2019, p:2.

2.11

THE DRAWBACKS OF RESETTLEMENT

In this part of the chapter, the focus will be on building an argument against resettlement processes that were privileged and used the most by the VSB programme throughout the country within the last years. Obvious challenges while trying to argue why resettlement processes failed several times in different places and not only in Morocco are the question of financial affordability, the way of living, social relations and access to income generating activities. (Bolay et al., 2016)

Resettlement in the case of the VSB programme consists of offering to bidonvilles dwellers plots of land that they could build on themselves. Resettlement gave land to slum residents for 20,000 MAD (approximately 1900 EUR). Two bidonvilles dwellers were assigned 80m2 of land on which they were authorized to build a commercially zoned ground floor unit plus a three-story apartment building (Atia, 2019). The resettlement process occurs in the following four phases: raising awareness and information, demolition of shacks, acquisition of plots of land and construction.

2.12

Argument 1: ***Displacing Poverty does not solve it… it can even worsen it!***

The relocation of residents, often far from their original residential location, decreases access to income that they were able to earn within the city and their neighborhoods. Thus, relocation tends to destroy a very fragile but very real economic fabric. (Bolat et al., 2016, p: 231)

Argument 2: ***Resettlement causes Urban Sprawl.***

Resettlement of inner-city communities served as an instrument to reinforce the development of ‘new towns’ or ‘satellite towns’. In the map (fig 2.10) it is visible how far away and dispersed the relocated areas are. For this, 600ha of public space have been made available for mobilisation and planning at the expense of fertile valuable agricultural land. Still, this land supply is not enough to relocate all slum dwellers. This represents a huge bottleneck for resettlement in Casablanca. And not only the availability of land but also the construction of flats as well as the ‘new town’ concepts with all the required new infrastructure could no longer be financed by the governments and did not meet with the social and economic problems the urban poor faced.

Argument 3: ***Resettlement kills the strong community bonds***

The move into apartments weakens people’s sense of community and solidarity networks that are major driver of collective action in bidonvilles (cf. Zaki 2010; Iraki 2006; Essahel 2015). And women suffer the most. In the new sites, women have more difficulty

integrating and end up staying at home more often (Toutain and Rachmuhl 2014, 34–35).
In the words of an ADS (Agence de développement social) official:
They always talk about a war against degraded housing [guerre contre l'insalubrité]. But the state is losing this war.... In the new sites, there, we can really talk about real poverty. There we can really talk about social exclusion. In a bidonville, there is less exclusion because the inhabitants live close to a market, there is economic activity, a health center, etcetera. But the new sites [often] don't have public services and there are no transport possibilities. In those sites, there is not even the bare minimum. (interview, Rabat, September 12, 2013) (Bogaert,2018, p:226)

Argument 4: ***Resettlement is expensive for both parties.***

Physical intervention in a space that has already developed is obviously less complicated, as land holdings for the creation of basic infrastructure like water and sanitation systems, or the paving of certain main streets, are clear, do not require the displacement of residents and can begin quickly.

Argument 5: ***Resettlement is refused by the people who are supposed to benefit from it.***

More often than not, communities have not been involved in the primary choices pertaining to their own development, but rather have been asked to adhere to a program that had, to a large extent, been previously defined.Involvement of the target population in the implementation of slum improvement was limited to a few cases by ADS, a public agency with a mandate for poverty alleviation, and NGOs financed by USAID. This key element was only introduced after the program had been defined and appears to have not been evenly or widely implemented.
Households were typically given no input as to the type housing and its cost, factors which might lead them to default. Without direct involvement in their pay schedule, there is the risk of mass boycott of payment.

The next few paragraphs will be focusing on countering the arguments that are pro-resettlement.

Counter-Argument 1: ***Resettlement Provides security of Tenure.***

The habitat strengthening process does not require well defined parcels or rights in the form of land titles in order to occur. This offers an important clue as to how to approach land. Private ownership is not an obligation (Durand-Lasserve and Royston 2002; Payne et al. 2007); on the contrary, it promotes gentrification – albeit relative economic speaking, given that in the best possible scenario, residents go from very poor to poor – which naturally follows strengthening.p:235
But what is Land tenure? Is it only owning a piece of land?
It is an urgent necessity to move away from the belief that ensuring access to adequate housing for all is first of all a matter of increasing affordability or improving formal security of tenure (cf.Huchzermeyer 2010a; Payne et al. 2009). In the case of the oldest bidonvilles (Karyan Central) that was resettled to Nouvelle Lahraouiyine, affordability criteria were mostly met, but still, the programme has been strongly disruptive. Housing studies need to acknowledge more explicitly that better shelter and formal tenure security do not automatically lead to better living conditions. Shelter as well as security of tenure cannot be treated as detached elements of housing, disregarding other important aspects of housing such as community cohesion and access to jobs, education, and health care. After five to six years in Nouvelle Lahraouiyine, these residents felt socio-spatially marginalised and deprived of previously existing urban opportunities. Their expectations concerning the resettlement were not fulfilled, and they were starting to miss and crave social life in the bidonville as well as the vibrant urban environment of Hay Mohammadi (The district where the bidonvilles was initially located).

Counter-Argument 2: ***Resettlement is the only way to move up the social ladder.***

It is another form of Stigmatisation: From bidonvilles stigmatisation to outskirts Stigma.

Counter-Argument 3: ***The Affordability question.***

To make mortgages accessible to the population, slum dwellers, who are largely employed in the informal economy, saw the loans as overly risky and the prices as prohibitively expensive. As one official stated "In my opinion, the VSB project is a failure because there are many families that are so poor they cannot even afford to pay 20,000 MAD " (Interview, Ministry of Urban Policy). The credit risk may not only impair tenure security of the urban poor, but could also affect the housing market as a whole (Beier, 2019, p:43).

Many of these new social housing projects and resettling operations transform the urban periphery in a monotonous mass of low-cost apartments. According to a prominent Moroccan econ-omist, "[Morocco is] making the same mistakes as the French. We are creating banlieues" (interview, Rabat, September 26, 2009; see also Laval et al. 2010). (Bogaert, 2018, p:227)

THE QUESTION OF LAND OWNERSHIP, PROPERTY RIGHTS AND SECURITY OF TENURE

Land tenure is defined as the mode in which land is heldor owned (Payne 2000) and a 'rights that individuals andcommunities have with regard to land, namely the right to occupy, to use, to development, to inherit and to transfer'and are thus 'primarily to be viewed as a social relation involving a complex set of rules that governs land use andland ownership' (Durrand-Lasserve and Selod 2007: 4).
The issuing of ownership rights has become a central element of many slum upgrading and resettlement projects around the globe (Almansi 2009; Beier 2019; Charlton 2018; Restrepo Rico 2017; Roy 2014; Spire et al. 2017).

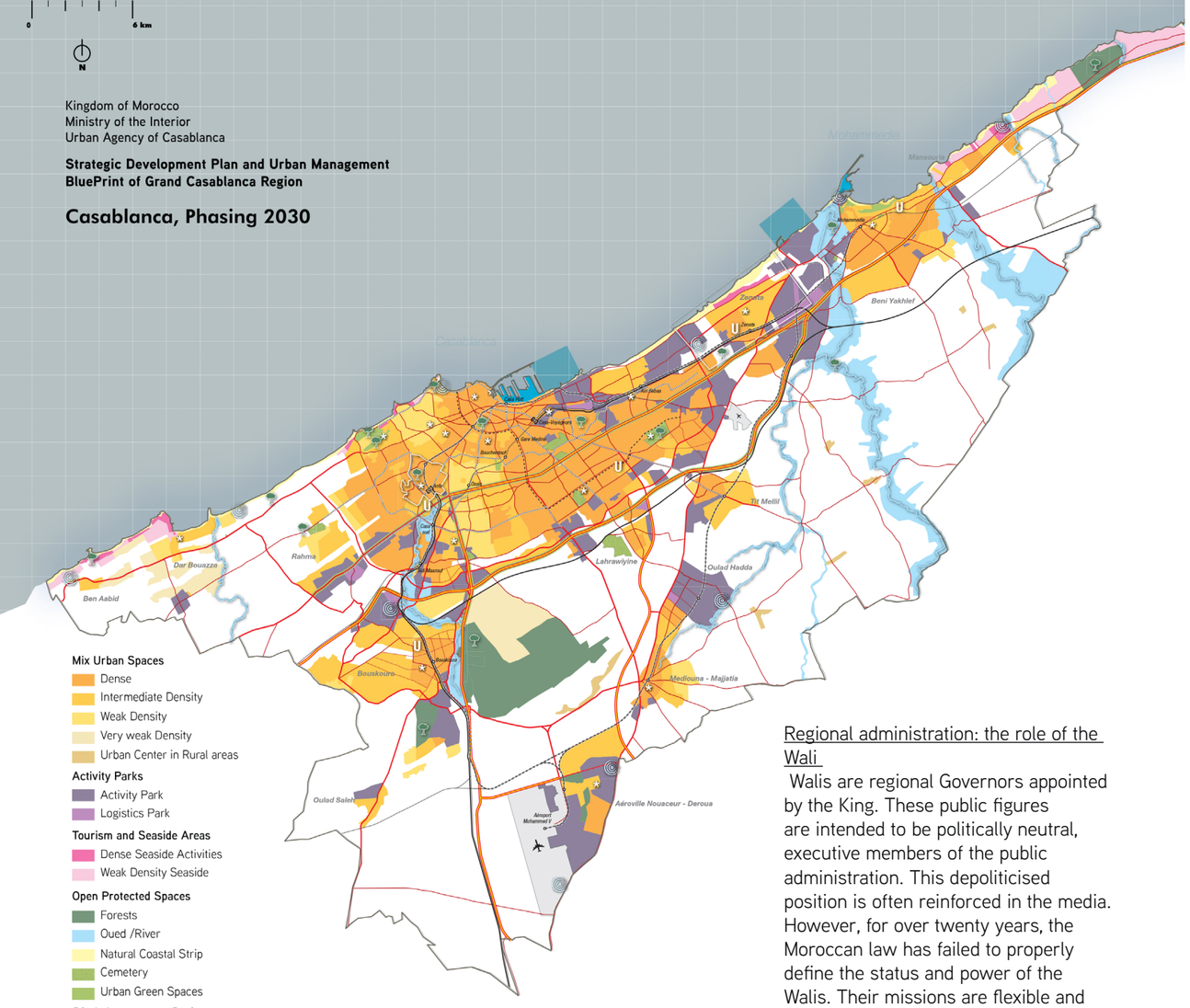


Fig 2.4: Grand CasablancaStrategic Development Map. Source: AUC, MOS 2004. IAURIF 2008.

An overview of Governance Power Structure

Even though Morocco is now a constitutional monarchy, the new provisions fall short of demands for a real constitutional system. For example, the Prime Minister is still appointed by the King, chosen from members of the elected party holding the parliamentary majority. The Wilaya, who is dependent on the Minister of the Interior, has become more powerful in reinforcing the central power. "The president of the Local Council (the Mayor) becomes not only the executive authority of the Municipality, but receives,by law, from his majesty the King a dahir that provides him with his majesty's highest recommendation". In this light, the new 2002 Charter undoubtedly adds to the legitimacy of the royal seal in local authority.

<u>Regional administration: the role of the Wali</u>

Walis are regional Governors appointed by the King. These public figures are intended to be politically neutral, executive members of the public administration. This depoliticised position is often reinforced in the media. However, for over twenty years, the Moroccan law has failed to properly define the status and power of the Walis. Their missions are flexible and vary according to the King.

<u>AUC roles: (Urban Agency of Casablanca)</u>

Within the limits of its territorial jurisdiction which includes all the urban and rural communes of the Grand Casablanca Wilaya as well as the other areas included in the Urban Master Plan of Greater Casablanca, the Agency is in charge of:

- Carrying out the studies necessary for the establishment of the Greater Casablanca Master Plan for Urban Development and follow the implementation (see fig2.4)
- Programming the development projects inherent to the achievement of the objectives of the Master Plan;
- Preparing draft regulatory urban planning documents, including development plans and their by-laws;
- Giving assent to all subdivision, fragmentation, commercial, industrial or housing projects, which projects must be forwarded for this purpose by the competent authorities;
- Controlling the conformity of subdivisions, parcels and constructions in progress with the provisions of the laws and regulations in force in urban planning;

And many more. This is mentioned in order to comprehend that the majority of decisions and actions related to the dev. of urban spaces are taken are directly or indirectly taken by the AUC. Thus, it is very important as a main stakeholder in this project.

Fig 2.5: Administrative Devision of the Grand Casablanca. Source: AUC, MOS 2004.

SPATIAL PLANNING IN CASABLANCA

King Mohammed VI

Ministry of Urban Planning and Housing

Ministry of the Interior

The Wali

Governor of the Region of Casablanca_Settat is appointed directly by the King Mohammed VI)

Grants Derogation

VSB

Villes Sans Bidonvilles

24th of July 2004, the King initiated the VSB programme, making it a national priority.

AUC (Urban Agency Casablanca)

AUC is a public institution endowed with juridical person and financial autonomy, placed under the supervision of the Minister of the Interior and the financial control of the State.

The Municipality (Local Authority)

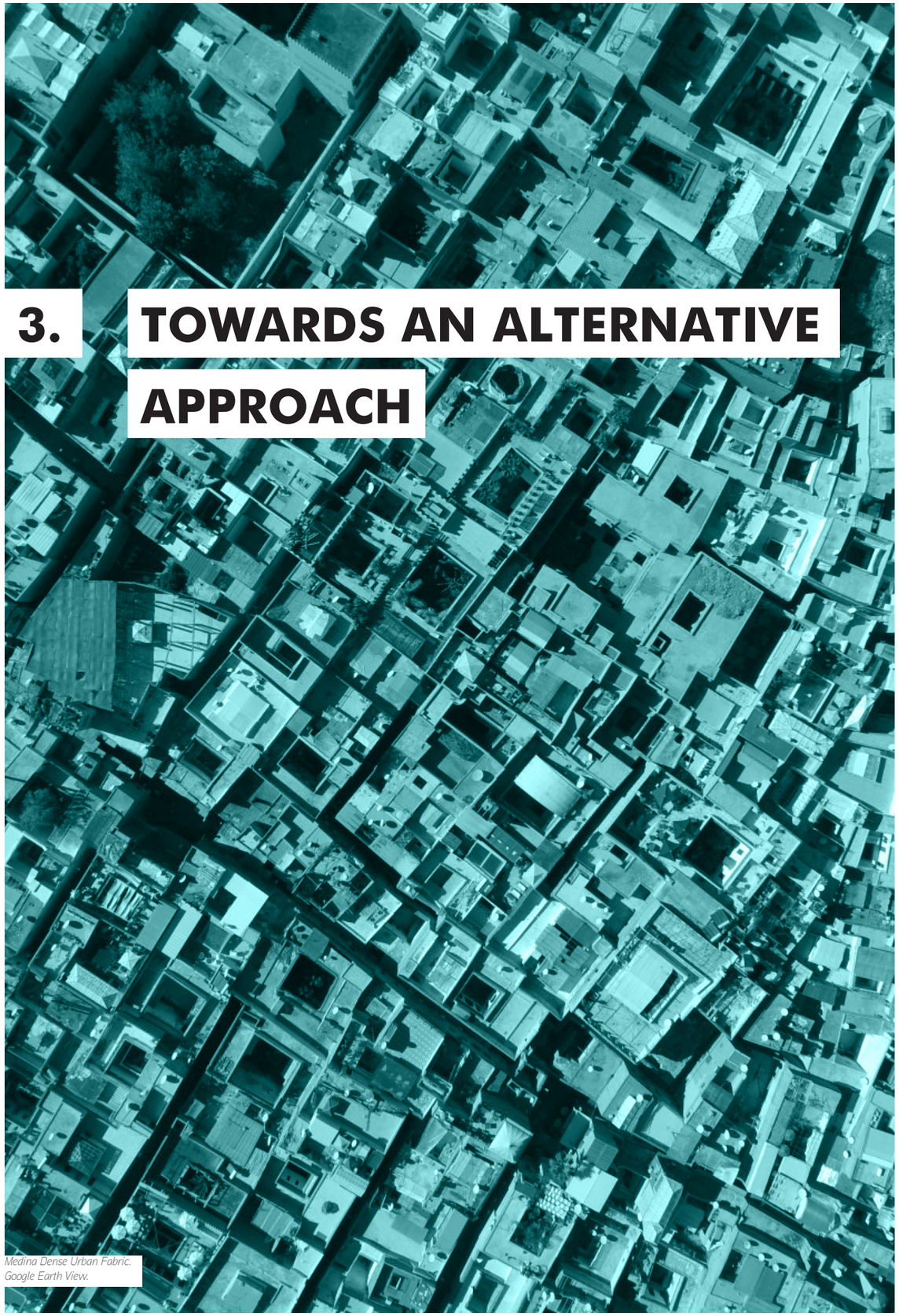
Commune Urbaine

Has the authority to deliver Construction Permits and sets their regulations.

CONCLUSION: RESEARCH AIM

After discussing the negative impacts of Resettlement and the unsuccessful approach of the VSB, it becomes clear that developing an alternative model for dealing with les bidonvilles is crucial. An alternative that makes the vulnerable inhabitants part of the transformation process, integrate them in the city agenda to achieve resilient economic growth and, most importantly, not to see them as a threat that needs to be eradicated. This requires a step back in order to observe the specificities of the context, understand the opportunities at hand, the origins of the problems, and the uncertainties of the future. Thus, the research aim is to:

Elaborate on an alternative development proposal to holistically integrate les bidonvilles on spatial, social and economic levels within Casablanca.



3. TOWARDS AN ALTERNATIVE APPROACH

Medina Dense Urban Fabric. Google Earth View.

CHAPTER OVERVIEW

The third chapter introduces the strategic approach that aims to define the how of this project. It is a proposal coming as a response to the problems mentioned in the earlier chapter on the context, the nature of the assets and challenges found in les bidonvilles.

Sections:

1.1 What alternative Strategic Approach is needed?
1.2 Circular Economy
1.3 Contextualised Circular Economy
1.4 Conclusion: Research Questions

WHAT ALTERNATIVE STRATEGIC APPROACH IS NEEDED?

The conclusion drawn from the last chapter was the importance of questioning the existing development methods and steering the thinking towards an alternative model.
To recapitulate: the aim of this project is to achieve Integration on three levels: Spatial, Social and Economic on different scales. Now the question that arises is:
What kind of strategic approach could orientate the project towards achieving the above mentioned aim?

First Step: Clarifying the nature of the bidonvilles assets'

This part will elaborate on the main arguments that will lead to the establishment of the strategic approach. Starting from looking at the "positive" aspects hidden behind the decaying conditions. .
The first asset is the culture of reusing materials. It is a concept that belongs to the culture and consumption trends, which are pretty low due to the poverty state. This represents a potential that can be guided towards achieving higher levels of sustainability at the local and city scale in relation to waste management.

Another important asset is the entrepreneurial character of the slum dweller: "No city can afford to neglect the capital of 30 to 40% of its population. Especially if this population possesses special adaptive capacities that makes it resilient by character in very vulnerable contexts." This part is explained a bit more in the Potentialities paragraph in the Problem Field Chapter (p:16).

And ultimately the Derb Ghallef bidonville experience that was one of the motivations behind this project. Essentially, Derb Ghallef is a notorious informal market that is visited by at least half of the country's population annually. It is presented as a hub of creative intelligence and vital IT knowledge. It also has the notion of Ghallef Valley attributed to it. (Mörtenböck and Mooshammer, 2015). It is located within the city center and connected to the tram network. It has the identity and reputation of fixing and repairing electronics. The success of this bidonville is mainly related to the repair, reuse and recycle behaviours in relation to the e-waste.

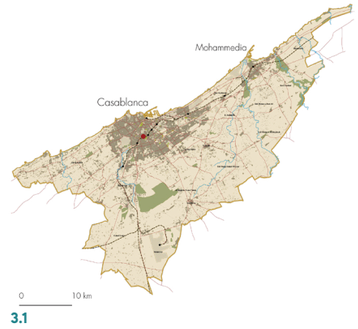
Second Step: Clarifying the most pressing challenges of the bidonvilles

- Poverty: Inadequate Income, Exploitation of the informal work (cheap labour), Unstable Income
- Social Stigma
- Unhealthy environment
- Fear of Eviction
- Inadequate Shelter
- Lack of accessibility to public infrastructures

Third Step: Identifying the alternative approach to deal with the facts in hand

Inspired by the appellations; *Joutiya* for local markets, which is a slang term coming from french: Jetez-là meaning throw it away or Bidonvilles explained in the previous chapter, one cannot help but wonder the essence behind these nominations.
Re-use of materials is a concept part of the culture and consumption trends are pretty low due to the poverty state. Moreover, looking at closing the loops in the main flows of a city is the big focus of the Circular Economy. Lastly, the imperativeness of thinking of new sustainable business models in order to create new job opportunities is part of the Circular Economy agenda. These three elements were also identified as potentials that can be guided by better governance and circular economy.
The main hypothesis is that Circular Economy can be a proposal for an alternative framework that covers the spatial, social, economic and ecological aspects of the problem in question. The research conducted by Pretson, Lehne and Wellesley (2019) states that Circular Economy offers a promising alternative strategy for industrial development and job creation by providing new opportunities for economic diversification and value creation.
An example in a slum in Kenya where new jobs are being created as waste streams shift or new business models emerge. An e-waste recycling scheme is estimated to have created over 2,000 jobs within four years of its launch (Pretson et al., 2019).
"The informal sector can be the engine for our Circular Economy" said the CEO of Kenya Association of Manufacturers and the UN Global Compact Network Representative for Kenya.
Thus, this represents an opportunity for Job creation and integration in the economy.
Another important factor where CE can play an important problem on the local and city level , is the water shortage and sanitation problems that the Bidonvilles of Casablanca are suffering from.
An interesting example in this context is the Genius of Space project in Langrug (Fig1)It is about building innovative water and waste treatment solutions in Langrug – an informal settlement in the Western Cape, South Africa. The project uses Biomimicry principles to clean up the grey water, storm water, and solid waste challenges that the community faces. These low tech, easily maintained solutions will help to address the key challenges faced by this community such as health and well being.*

Lastly, city branding is important, especially for emerging megacities like Casablanca who are trying to squeeze in the Global network. Thus, one of the main motivations behind the eradication of the slum landscape is their visibility as 'ugly' spaces that ruin the city image. So when it comes to the metropolitan scale, CE implementation can play an important role in the attraction of foreign investment -that the authorities are craving for- by promoting Casablanca as a Circular City.



3.1

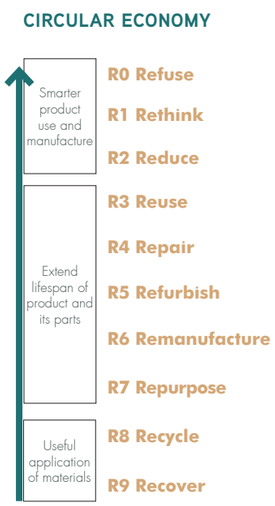
3.2

3.3

Fig 3.1: Location of the Derb Ghallef Bidonvilles.
Fig 3.2: Derb Ghallef Bird View. Source: My MOracle – WordPress.com
Fig 3.3: A close look at a store in Derb Ghallef.Source: https://chantiersdumaroc.ma/actualites/casablanca-debarrassera-derb-ghallef/

CIRCULAR ECONOMY

Currently, humanity is using nature 1.7 times faster than our planet's ecosystems can regenerate1; heavy urbanisation, rapid population growth, drought of natural resources; all of this makes the idea of circularity a vital and urgent concept to adapt. This implies that the actual economy model has to be changed from a linear into a circular model.
The model that is mostly referred to in CE is the Ellen mc Arthur foundation model. Their working definition of the circular economy is:
"A circular economy is a global economic model that aims to decouple economic growth and development from the consumption of finite resources. It is restorative by design, and aims to keep products, components and materials at their highest utility and value, at all times." (Ellen MacArthur Foundation & Granta Design, 2015)." 1
The ways to translate this theory into practice was elaborated into several frameworks by different scholars.
One of these frameworks is the 10 R's explained in figure 3.4.
These principles can be used as tools to achieve circularity within the project framework.



CONTEXTUALISED CIRCULAR ECONOMY

A concept that follows the CE principles while taking under consideration the sensitive character of the targeted population, the weak institution structure of developing countries and the limited resources

Fig 3.4: 10 R's Different cycles in the circular economy (adapted from Kirchher, Reike, & Hekkert, 2017)

Fig 3.5: An informal collector of Plastic in the city center of Casablanca. Source: Garret, 2018.
Fig 3.6: « L'homme à l'esquimau ». Source: Garret, 2018.
Fig 3.7: Bagging of plastic chips after grinding. Source: Garret, 2018.

CIRCULAR CATALOGUE

This section demonstrates the possibilities of social integration and waste valorisation. From the conducted fieldwork and trying to investigate the existing circular activities, I came across this design center that is part of the NGO that works with young people who were not able to integrate the job market or they come from very poor conditions and they teach them how to valorise waste and create a variety of products through an Upcycling brand called Koun, which literally translates to “Be” or “Exist”.

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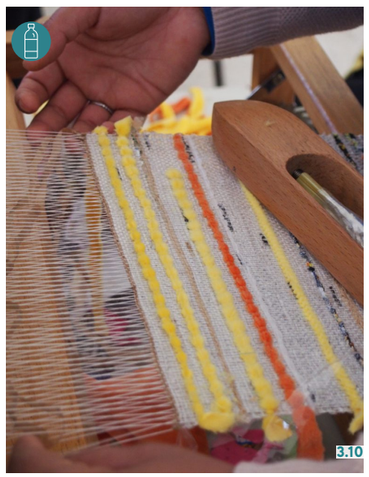

3.10

3.12

3.15

Fig 3.8: Ressourc’In is a social enterprise for integration and recovery of plastic and paper waste. They have 3 workshops that allow the integration of people far from employment, in a precarious situation. They create and manufacture designer products, from creators, from collected waste: - creation of plastic pouches and handbags, woven paper packaging - manufacture of furniture and lighting in recycled plastic - manufacture of recycled paper. It was founded by the NGO Ikram for social insertion of the most vulnerable. Source: Ressourc’in Facebook Page.
Fig 3.9: Bench made from 18 kg of recycled plastic. From Plastic Atelier Design of Koun Source: Koun, 2018. Retrieved from: http://koun.ma/tabourets-design/
Fig 3.10: Bags From Weavin Atelier. The team is made up of 5 young girls in social reintegration, who are accompanied by Siham, stylist and head of the Workshop. Source: Koun, 2018.
Fig 3.11: High-end Bags and cushions made from thrown fish skin gathered from restaurants by a group of women. Source: Picture taken by author.
Fig 3.12: Who is behind the products. This is Zakaria Haram and he is part of Paper recycling Atelier. Source: Koun, 2018.
Fig 3.13: Stools made from tires. Source: Picture taken by author.
Fig 3.14: Designer stools made from recycled plastic, HDPE and PP.
Fig 3.15: KOUN offers a whole range of recycled paper packaging solutions. Everything is made of recycled paper, 100% hand-made in Morocco, by young people in professional reintegration. Source: Catalogue Koun 2019.

CONCLUSION
RESEARCH QUESTIONS

Therefore, the research questions that this project aims to answer are:

How can the development of a Contextualised Circular Economy framework facilitate the integration of the bidonvilles within Casablanca and push towards an inclusive development?

PRE-CONDITIONS

1. How did the urban evolution of Casablanca influence the socio-spatial inequalities within the city? What can we learn from the past and actual attempts in dealing with les bidonvilles? Specifically the resistance towards eradication and resettlement initiatives?

METHODOLOGY

2. How can the bidonvilles be integrated in the city’s economic, social and spatial systems?

DEVELOPMENT

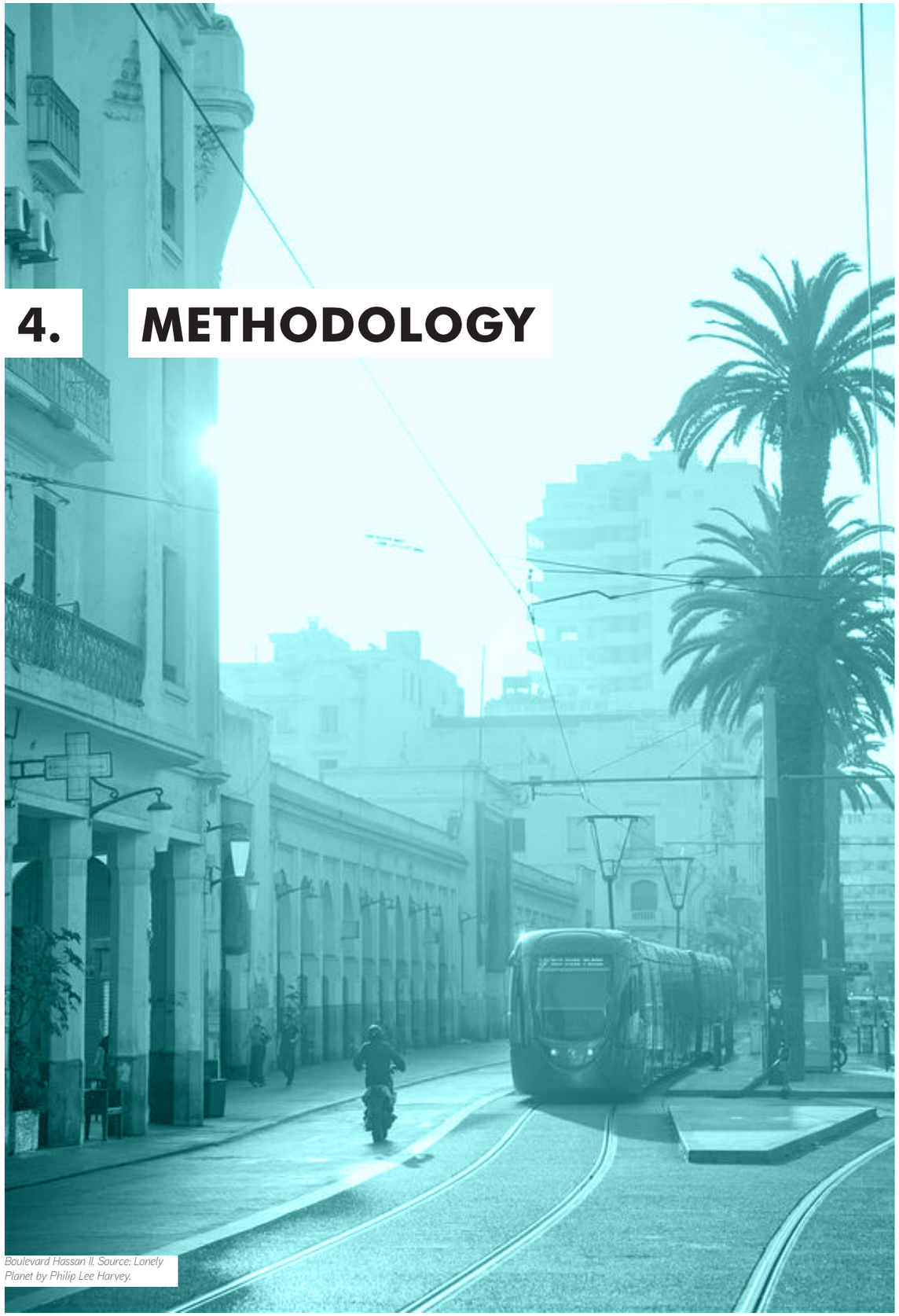
3. By addressing the bidonvilles challenges from flows and activities perspective, how can the transition to circular economy affect the spatial dimension in the city and the bidonvilles?

4. What has to be introduced and strengthened in the existing Governance system in order to facilitate the transition towards a more sustainable inclusive Casablanca?

EVALUATION

5. Can Circular Economy principles help to alleviate poverty and address the challenges of the bidonvilles?

4. METHODOLOGY



Boulevard Hassan II. Source: Lonely Planet by Philip Lee Harvey.

CHAPTER OVERVIEW

This chapter will elaborate on the research and design methodology that has been selected to address the problem and context of study, analysis and design phases of the project in hand.
The following diagram presents the overall research framework laying out the steps that will be taken throughout the graduation phases. Afterwards, elaboration on the theoretical foundation and the conceptual framework.
Thereafter, the methods used for theoretical, conceptual and analytical understanding of the problem will be introduced. Lastly, an overview of the roadmap for the next steps of the project.

Sections:

1.1 Research Framework
1.2 Theoretical Underpinning
1.3 Conceptual Framework
1.4 Methods and Project Outcomes
1.5 Project Road Map

RESEARCH FRAMEWORK

Problem Field
Urban Poverty, Sustainability.

Key Words
Contextualised Circular Economy, Integration, Bidonvilles.

Context
Casablanca, Morocco.

Problem Statement
The Bidonvilles are a manifestation of multiple complex problems (Unequal access to the city serivices, market-oriented development, Planning deficiencies, Migration...) that Casablanca suffers from. The current state of these areas represents a spatial and socio-economic crisis. The approach of Resettlement proved to be inefficient and problematic. **Therefore, it is important to explore alternate comprehensive approaches that deals differently with the bidonvilles and their inhabitants.**

Strategic Approach
Contextualised Circular Economy

Research Questions

How can the development of a Contextualised Circular Economy framework facilitate the integration of the bidonvilles within Casablanca and push towards an inclusive development?

1. How did the urban evolution of Casablanca influence the socio-spatial inequalities within the city? What can we learn from the past and actual attempts in dealing with les bidonvilles? Specifically the resistance towards eradication and resettlement initiatives?
Descriptive

2. How can the bidonvilles be integrated in the city's economic, social and spatial systems? inclusive Casablanca?
Inductive

3. By addressing the bidonvilles challenges from flows and activities perspective, how can the transition to circular economy affect the spatial dimension in the city and the bidonvilles?
4. What has to be introduced and strengthened in the existing Governance system in order to facilitate the transition towards a more sustainable inclusive Casablanca?
Implementation Processes

5. Can Circular Economy principles help to alleviate poverty and address the challenges of the bidonvilles?
Evaluation

Theoretical Foundation

The Resettlement Objection
Fight

Potentials as vectors of Change
- Entreprenarial Character of the Slum Dweller
- Contextualised Circular Economy
Promote

Research Approach
Exploratory Research

Used Methods
Literature Review
Case Studies
Field Work
Multi-Scalar Mappping
Stakeholder Analysis
Policy Analysis
Document Analysis
Statistical Analysis

Expected Outcomes

Metropolitan Scale
Regional Vision of Reconciled relationship with the Bidonvilles. Future possible scenarios

City Scale
Implementation strategies (spatial and non-spatial) for circular transition in Grand Casablanca.

Local Scale
Local scale circular strategies of bidonvilles upgrading.

Transferability Product
Toolbox of Circular Upgrading

Fig 4.1: Research Framework Diagram.

THEORETICAL UNDERPINNING

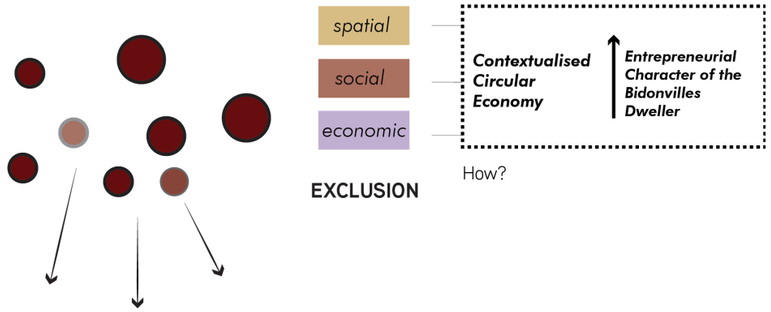
The theoretical foundation part will clarify the main theories that guided the project. It is divided into two main parts: The first part encompasses the theories evolving around the character of the problem statement. This part is more developed in the Problem Focus where there is an extensive argumentation against Resettlement.
The second part focuses on the potentialities of the depicted problems and how it led to the strategic approach (Contextualised Circular Economy). Therefore, it highlights the entrepreneurial character of the slum dwellers and how it relates to Circular Economy principles. Namely, Potentialities as Vectors of Change.
The next section will be the conceptual framework where it explains the combination of the main research concepts elaborated on the theoretical part and how they interact and affect each other in the context of this project.

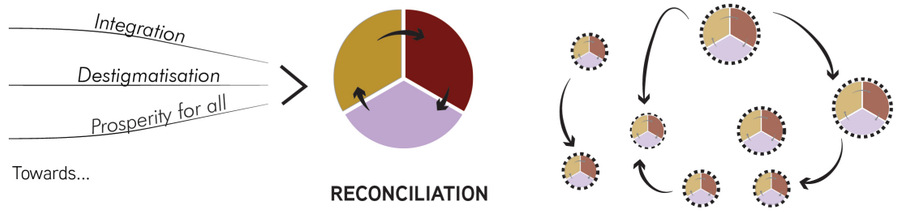
Part 1: The Resettlement Objection
So much has been said about the challenges and problems of the slums and so little about their potentialities. Therefore, this part of the paper will draw attention to the positive side, assets and potentialities.
In these extreme daily life conditions, the slum dwellers developed innovative abilities in order to be able to survive and make a living. This fosters creativity and gives them a very important entrepreneurial character that needs to be highlighted. As Mike Davis stated in his famous Planet of Slums that 'informal survivalism' is the new primary mode of livelihood in a majority of Third World cities' (2004, p:24). desperately poor almost always lie beyond shelter'.
"Above all else, the poor need to eat and to drink clean water. Overcrowding is clearly undesirable but hunger is worse! "(Gilbert, 2007)
Therefore, the integration process should start by looking at these potentialities in specific identities and expertise by observing and analysing the 'survival' behaviour rather than focusing on getting rid of these areas. Resettlement and far displacement takes away with it all these potentials for making a better life for the inhabitants. (refer to p: 27 for more explanation on this matter).

Part 2: Potentials as Vectors of Change.

Entrepreneurial Character of the Slum Dweller.

As it was mentioned in the first part, despite the extreme daily life conditions, the slum dwellers developed innovative abilities in order to be able to survive and make a living. This fosters creativity and gives them a very important entrepreneurial character that needs to be highlighted (Davis, 2004). Furthermore, no city can afford to neglect the capital of 30 to 40 per cent of its population. Especially if this population possesses special adaptive capacities that makes it resilient by character in very vulnerable contexts. An example of this amazing capacity is the Dharavi slum in Mumbai. This slum represents a true economic success story that grew from a small settlement in the marshlands to become a million dollar economy model providing food to Mumbai and exporting goods worldwide (Roy 2015).
Therefore, the integration process should start by looking at these





potentialities in specific identities and expertise by observing and analysing the 'survival' behaviour.

Contextualised Circular Economy

A recent research paper by Felix Preston, Johanna Lehne and Laura Wellesley (2019) in the Energy, Environment and Resources Department states that there is a general lack of knowledge on the spatial planning dimension of Circular Economy and an even bigger gap in developing countries context.

This paper insightfully arguments on the strengths of Circular Economy that fit perfectly the problems and aims of this project. Especially on the poverty alleviation issue and the economic integration. It states that:
"CE offers a promising alternative strategy for industrial development and job creation to the traditional manufacturing-led growth pathway. The CE continues to be understood primarily as a waste management and recycling strategy, but the economic opportunities are far broader and more diverse. With the right enabling conditions, the CE could provide new opportunities for economic diversification, value creation and skills development. Developing countries are in a strong position to take advantage of the new economic opportunities. Their large informal sectors already practice 'circular' activities – in areas such as electronic waste (e-waste) and phone repairs, for example – and could engage in higher-value CE supply chains. Moreover, with enough investment, developing countries can 'leapfrog' developed countries in digital and materials innovation to embed sustainable production and consumption at the heart of their economies." (Pretson et al., 2019. p:2)

To clarify, the spatial dimension of CE could be understood and developed by looking at structuring systems that are essential for the city to function. These flows can inform the space. In other words, the most problematic flows such as food, water and waste can be catalysts of change, present economic opportunities and can upgrade the spatial qualities of the living environment. Furthermore, in order for this to happen, a closer attention should be paid towards governance issues by investigating how 'bottom-up' approaches should be presented and integrated with the 'top-down' approaches in a balanced model.
There is also a gap in knowledge on the role of social factors such as social identities and institutions, in CE transition in cities and also the potential of CE to alleviate social vulnerability issues (Fratini et al., 2019; Moreau et al. 2017; Korhonen et al., 2018).

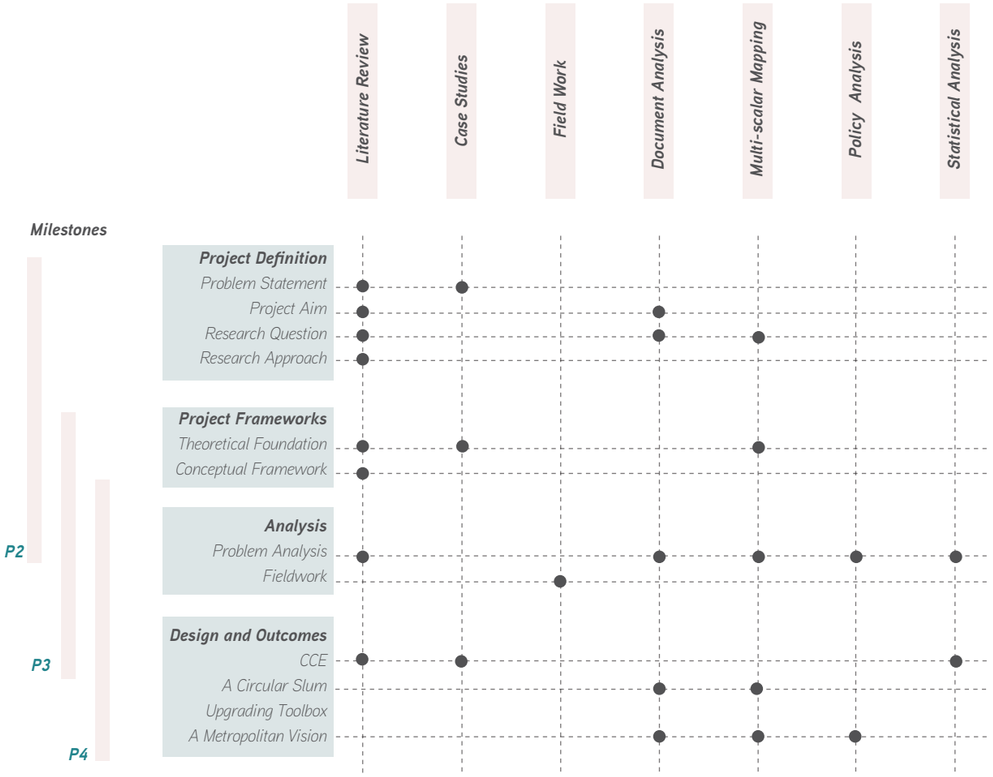
Fig 4.2: Conceptual Framework Diagram. By author.

CONCEPTUAL FRAMEWORK

Achieving Reconciliation between the city and the bidonvilles means working towards spatial integration, acceptance and social destigmatisation and fighting poverty by pushing towards prosperity. As seen in the diagram above, working towards this goal implies that the bidonvilles are within the city fabric and are functionally integrated. This is where Part 1: The resettlement Objection explains the importance of the geographic location as a requirement of the success of the proposal. Moreover, the activation of the vectors of change also depends on this. Enhancing the Potentialities is the main How of the project: Upscaling and valorising the entrepreneurial character of the bidonvilles dweller through the implementation of the Contextualised Circular Economy.

> ***"The spaces of the expelled cry out for conceptual recognition. They are many, they are growing and they are diversifying. They are conceptually subterranean conditions that need to be brought above ground. They are, potentially, the new spaces for making: making local economies, new histories, and new modes of membership."***
> *(Sassen, 2015, p:54)*

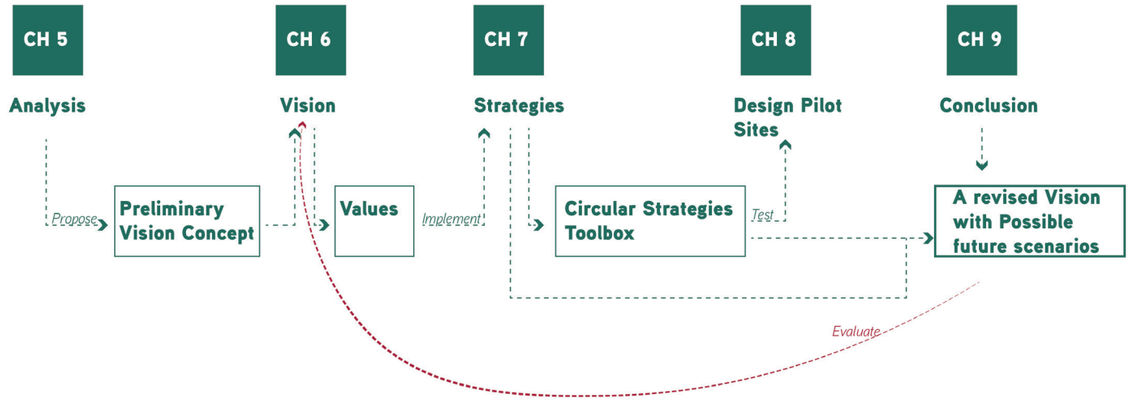
METHODS *and* PROJECT OUTCOMES

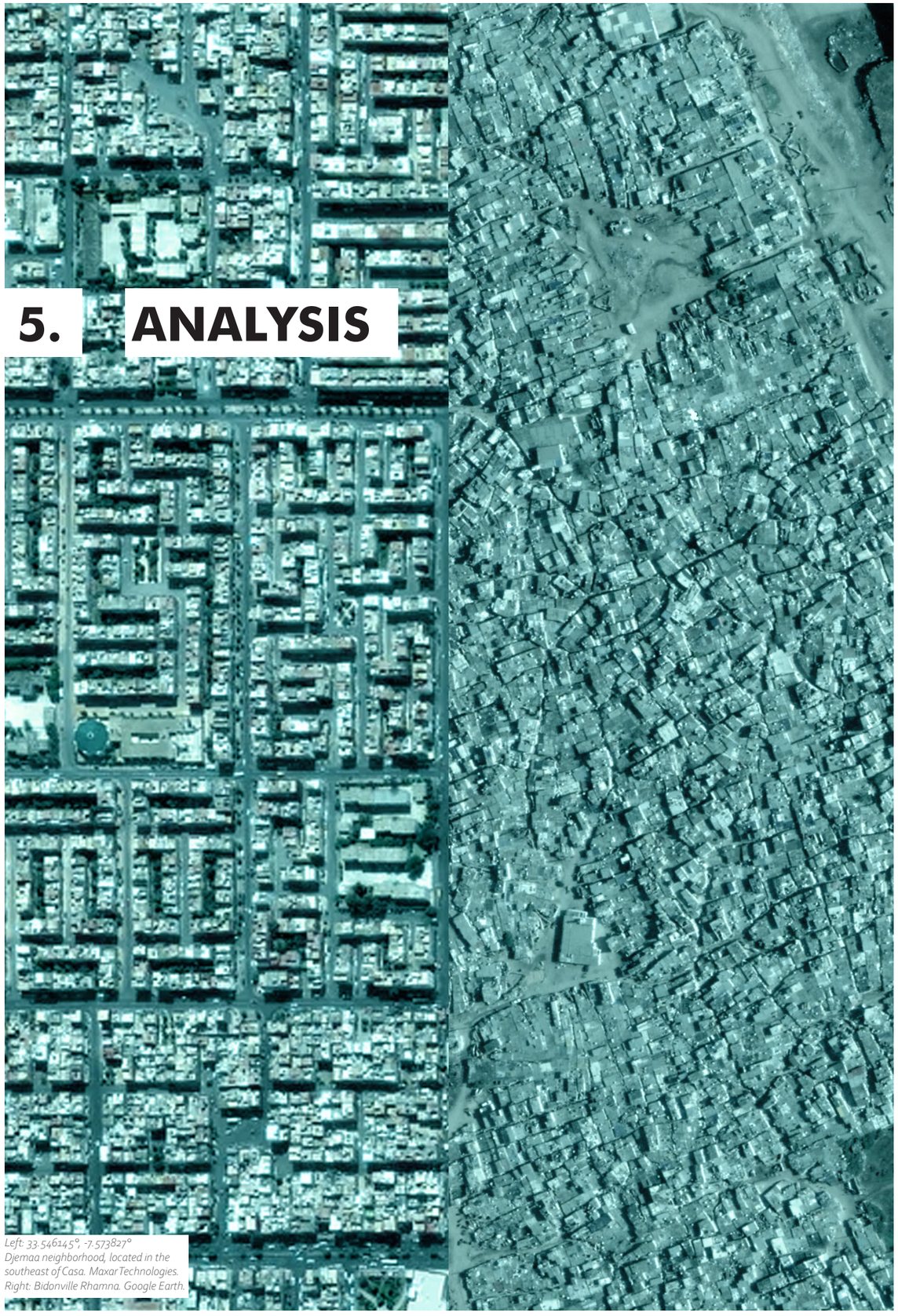


Possible Outcomes	***A Contextualised Circular Economy Framework (CCE)*** *Definitions, recommendations and guidelines on spatial, social and economic implications.*	***A Circular Slum Upgrading Toolbox*** *Based from analysed local sites with different identities and flows involved, propose a toolbox of possible designs for similar cases in different cities*	***A Metropolitan Vision for a circular Casablanca*** *- Vision* *- Implementation Strategies* *- Recommendations* *- Policy guidelines*
Scales	*Multi-Scalar*	*Local: bidonvilles scale*	*Metropolitan scale*
Target Groups	*Practionners, Policy Makers ...*	*Wider users, local planning authorities, communities*	*AUC, Planning authority of Grand Casablanca*

ROADMAP

This is a representation of the project structure and the main storyline; the build-up from the problem statement to the end result in order to clarify the content and the reasoning behind the next upcoming steps.





5. ANALYSIS

Left: 33.546145°, -7.573827° Djemaa neighborhood, located in the southeast of Casa. Maxar Technologies. Right: Bidonville Rhamna. Google Earth.

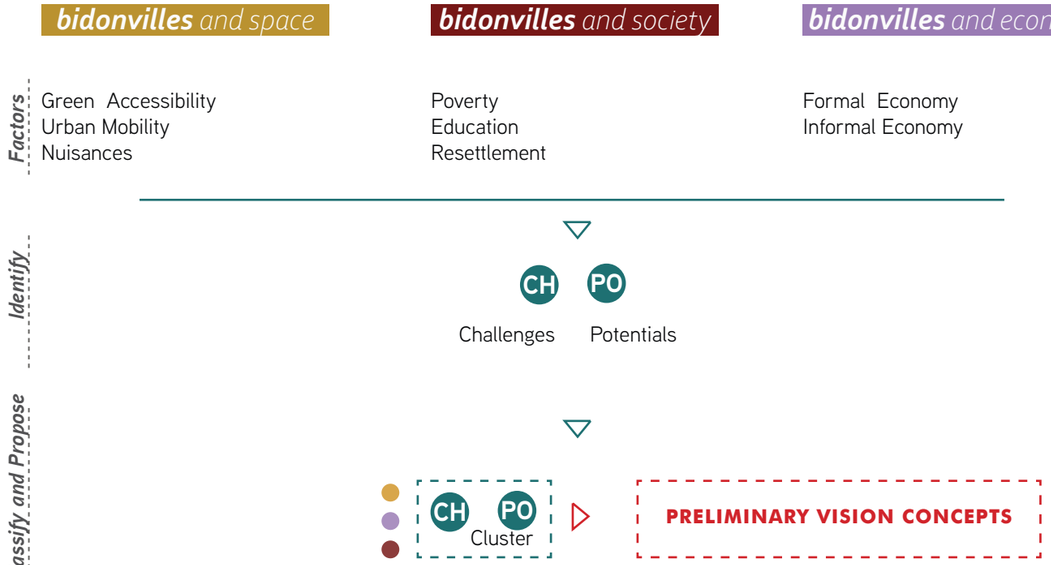
CHAPTER OVERVIEW

This chapter focuses on understanding the bidonvilles relation with the city. An integration analysis is carried out based on the spatial, social and economic conditions. The Integration Factors (fig5.1)were established based on the central challenges that Casablanca suffers from as a fast urbanising city and the potentials that can be upscaled. The task of this section is to relate these challenges to the slums and see how they are affected by and affecting them. Based on an identification of challenges and potentials, the process of grouping and clustering the ones that could be solved together will lead to a clear set of requirements that are needed to start shaping guiding the preliminary vision concepts.

Sections:

1.1 Structure
1.2 bidonvilles and Space
1.3 bidonvilles and Society
1.4 bidonvilles and Economy
1.5 Clustering
1.6 Proposing: Preliminary Vision Concepts

STRUCTURE



5.1

Fig 5.1: Analytical RoadMap

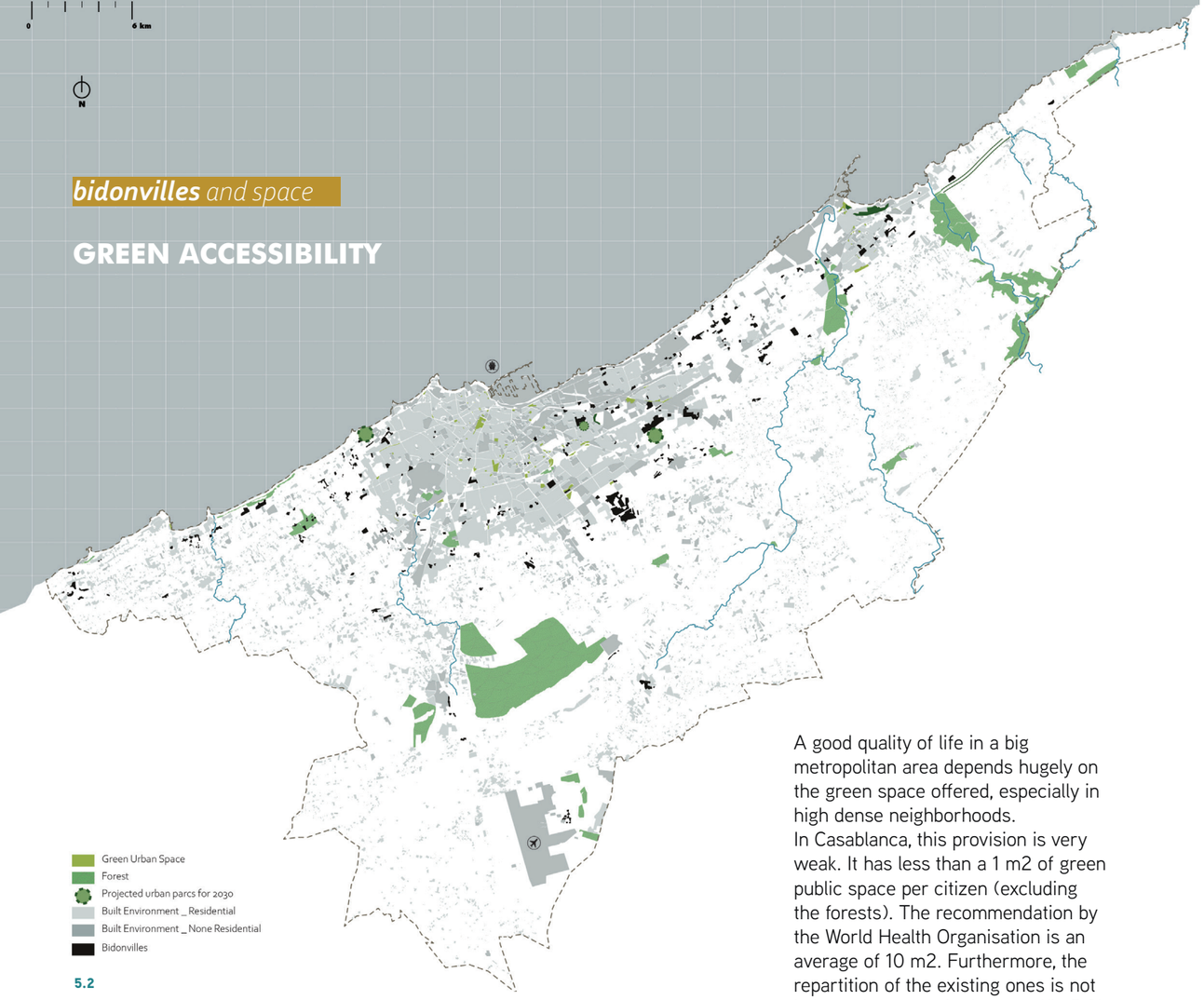
bidonvilles and space

In this first part of the city scale analysis, the focus will be on identifying the main challenges and opportunities on a city level in relation to specific spatial factors that play important roles in understanding and evaluating the quality of life within the city and how it relates to the existing bidonvilles.
It is important to mention that Casablanca's urban planning is faithful to its voluntarist tendency, strongly guided by real estate opportunities rather than by an overall strategy. Indeed, land speculation shaped the appearance of the city, which was characterized by the discontinuity of its buildings and by excessive fragmentation. It was also responsible for the lack of public green spaces from which Casablanca still suffers to the present day and which do not exceed 0.65m2 per capita (AUC, 2006, p64). Most of the major urban green parks were realised during the first development phases of Casablanca. (Giseke et al 2015 p:64)
Therefore, the layers that will be investigated in the Space vs bidonvilles are:

Green Accessibility
Mobility and Transportation
Nuisances and Industrial Pollution

Then, a concluding map that synthesises the main challenges and opportunities in relation to these layers.

GREEN ACCESSIBILITY



5.2

5.3

Fig 5.2: Distribution of Green spaces.
Source: AUC, 2004. IAURIF 2008.
Fig 5.3: Example of a typical Green parc in the city center: Jardin Zerktouni.
Source: Swaminathan, Google photos 2018.

A good quality of life in a big metropolitan area depends hugely on the green space offered, especially in high dense neighborhoods.
In Casablanca, this provision is very weak. It has less than a 1 m2 of green public space per citizen (excluding the forests). The recommendation by the World Health Organisation is an average of 10 m2. Furthermore, the repartition of the existing ones is not balanced, as seen in the map (fig 5:2). The deficiency is noticeable a lot in the peripheral areas. (SDAU, 2006)
The bidonvilles occupants suffer from this lack of public space and it has higher impact due to the extreme density that characterises these areas. Another observation is that some existing slums are in proximity with projected urban parks in the city vision for 2030 (fig:2.4). This represents an opportunity for intervention.
However, the proposed urban parks are still not enough nor equally distributed within the city fabric. Thus, came the proposal of improving the city network by developing a green backbone that follows the city main connectors offering flexible spaces for different interventions.

CasaAmenagementSA:
(SDL*) Created in 2008 and centered on the urban planning and development of the Region of Grand Casablanca through the execution of large structuring projects. It has a status of a public limited-liability company, by Decree following the presentation of the Master Plan for Urban Development (SDAU) for the Grand Casablanca Region. It is presided by the Wali of the Grand Casablanca Region.

Stakeholders

	Planning	*Execution, Management and Funding*	*Affected Actors*
Public Sector	AUC Municipality Wilaya	CRI	
Public Private Partenrship		***CasaAmenagementSA***	
Private Sector	Architects		Real Estate Market
Civil Society			Citizen

Urban Governance in Casablanca

Quick Facts

*Local Development Companies (SDL)
It is an Implementation Tool. It plays a role of an operability facilitator and a better governance tool in the management of local government services. It must impose more clarity and more transparency in the management of local development projects. is limited to industrial and commercial activities which fall within the remit of the municipality, inter-municipal cooperation establishments and groups of local authorities. (Retrieved from: https://fnh.ma/article/economie/societes-de-developpement-local-les-risques-a-ne-pas-perdre-de-vue)

Conclusion
It is crucial to work on improving the quality of life in Casablanca. CasaAmenagement is working on the rehabilitation of three major existing parks and the city is planning to improve the green belt. However this does not solve the unequal and easy access to green space within the city and especially in denser neighborhoods. Moreover there is no land offer for creating new parks. This should steer the wheel towards a more tactical urbanism type of Intervention.

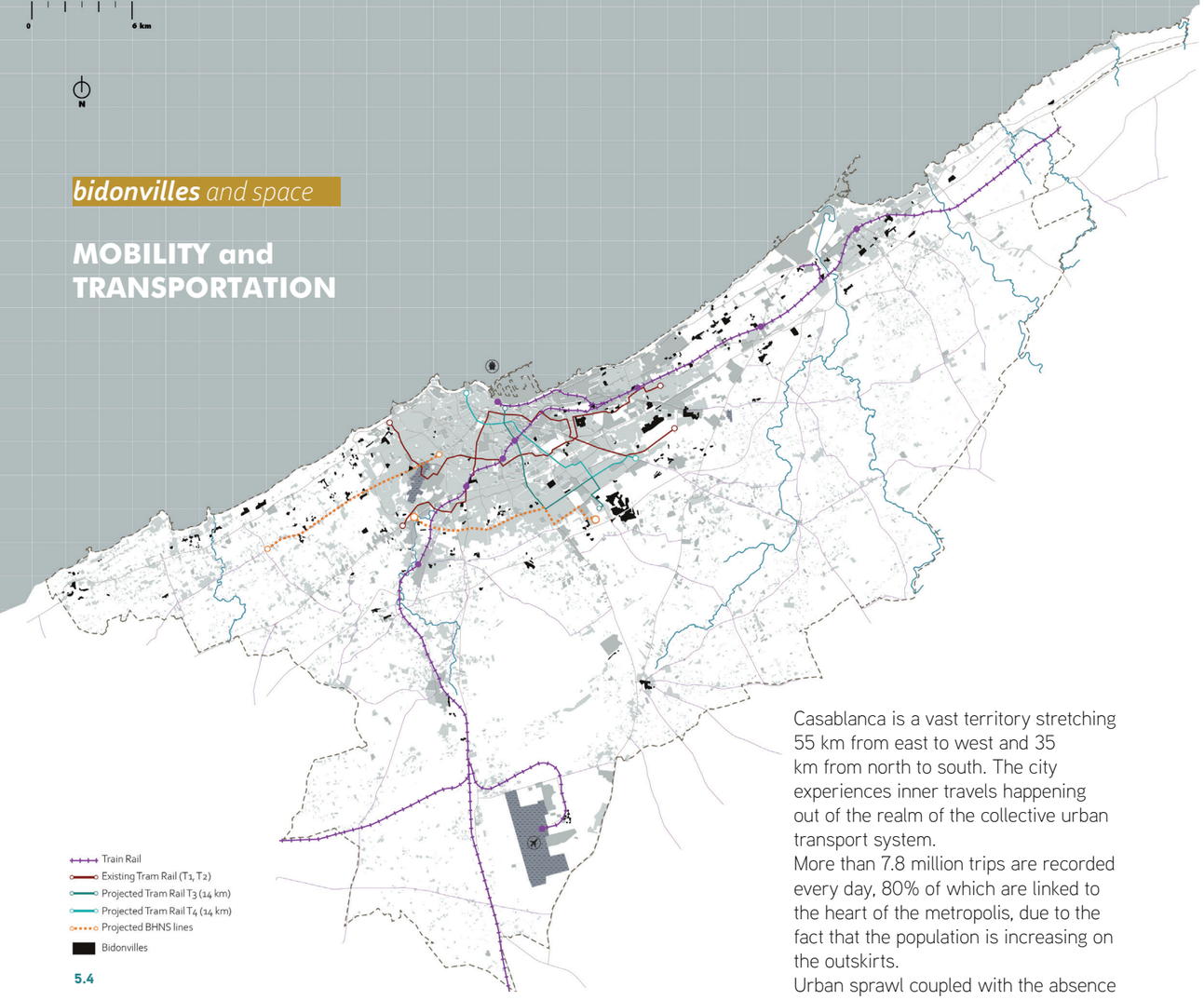
CHALLENGES

- Insufficient and unequal access to green.
- Not a priority for Local Authorities.

POTENTIALS

- Opportunity for a Linear/Green network development

MOBILITY and TRANSPORTATION



5.4

5.5

Fig 5.4: Mobility Program for 2025.
Source: PDU 2018. http://casatransport.ma/pages/voir/1-reseau-global-a-lhorizon-2022
Fig 5.5: Tram Line, Avenue Hassan II.
Retrieved from: https://www.polisinternational.com/2014/05/transportation-planning-poverty.html

Casablanca is a vast territory stretching 55 km from east to west and 35 km from north to south. The city experiences inner travels happening out of the realm of the collective urban transport system.
More than 7.8 million trips are recorded every day, 80% of which are linked to the heart of the metropolis, due to the fact that the population is increasing on the outskirts.
Urban sprawl coupled with the absence and lack of attractiveness of the public transport system is cultivating the motorisation process and the rate is increasing: 113 cars / 1,000 inhabitants in 2018 against 90 cars / 1,000 inhabitants in 2004 and 39% of the families have at least one car.(PDU 2018).
A survey done by the Casa Transport company on a total of 22960 people where a third are studying, a third are working and a third without activities answered to this question:

"Would you be ready, if the public transport system was efficient, to limit the use of your car only for destinations that are not served by public transport? "

How do the Casablancans move?
The table below, taken from the PDU document, demonstrates the modes of mobility in the city, the main destinations and the users' functions.

	62%	Average distance: **1.2 km** **46%** walk to go to school
	12%	Average distance: **7.5 km** **73%** to go to work
	9%	Average distance: **5.4 km** **43%** to go to work
	13%	Average distance: **7.5 km** Mainly used for going to work or study.
	3%	

5.6

5.7

Fig 5.6: Mobility Program for 2025.
Source: PDU 2018. http://casatransport.ma/pages/voir/1-reseau-global-a-lhorizon-2022
Fig 5.7:

The main challenges of Urban Mobility raised by the PDU *(Plan des Déplacements Urbains - Urban Mobility Plan)* that are hindering socio-economic development of the city are:
Poor-use of public transport: Due to the very weak supply, poor coverage of different city agglomerations', and an insufficient quality of service, public transport did not respond well to the travel demand of urban populations.
Significant development in car travel (from 300,000 vehicles in 2001 to 1,300,000 vehicles in 2014): Car travel (private vehicles and taxis), which was increasing sharply, has made traffic conditions difficult during rush hour, threatening Casablanca with severe congestion. As a result, citizens' access to services and economic activities was significantly reduced and accidents, air pollution, and other nuisances were steadily increasing.
Walking: (dominant mode of transport) Despite the vast spread of the city, walking today represented more than half (53%) of urban travel, and sometimes covers very important routes. Walking being the most used mode of movement is seen as a challenge by officials. However, with the current crisis on mobility and public transportation in relation to the pandemic, this could be seen as an **opportunity** that should be upscaled by turning Casablanca into a more walkable city.

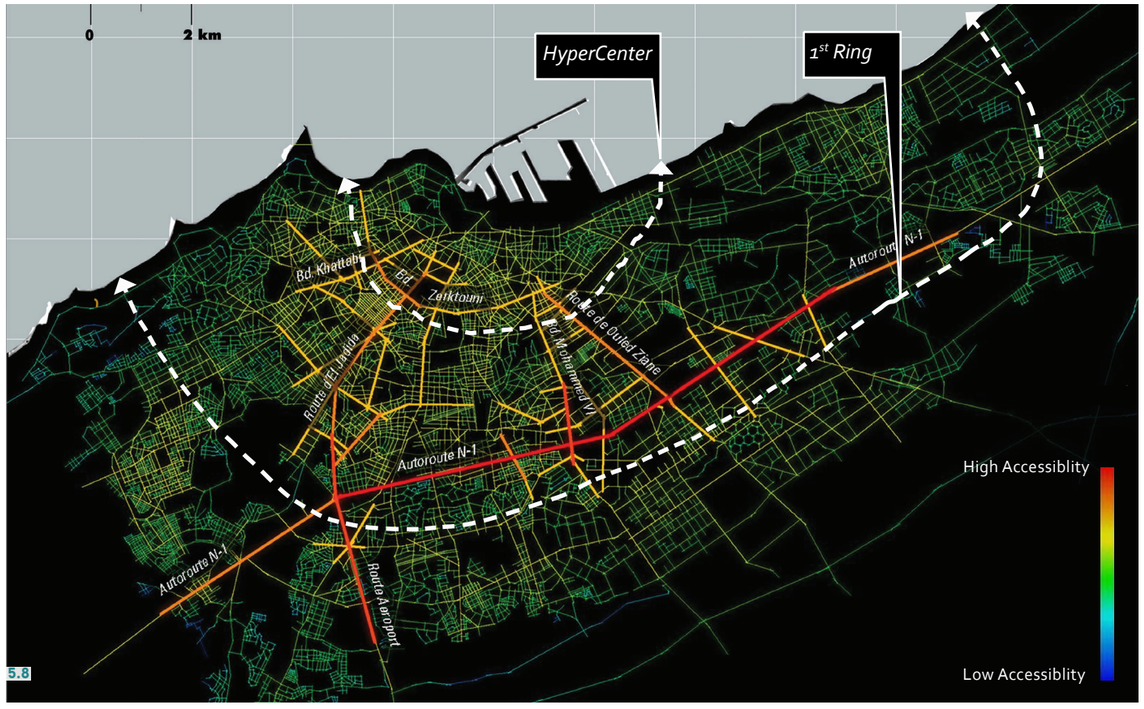
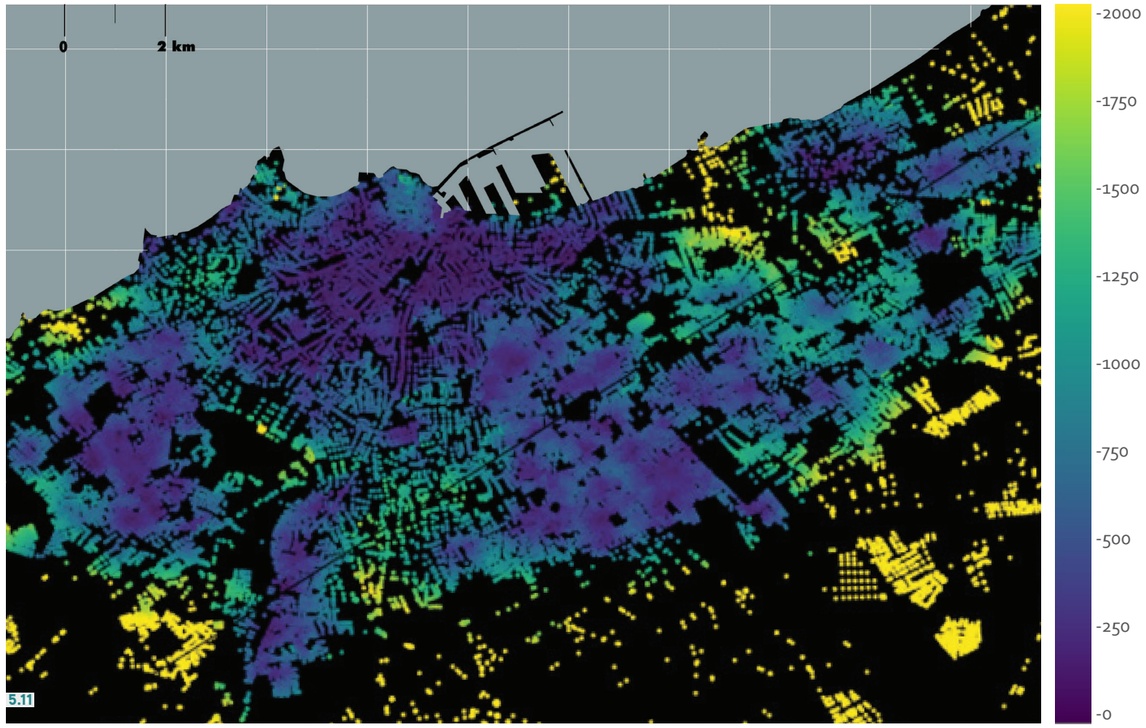


Fig 5.8: Space Syntax map done by Fundacion Metropoli within the context of the Eco Boulevard Project in Casablanca presented in the 45th ISOCARP Congress 2009. Retrieved from: http://www.isocarp.net/Data/case_studies/1458.pdf

Why Cars are a big problem

The Casablancan road network has become extremely congested, especially in the centre of the city. Traffic congestion reached the saturation point generating alarming levels of air and sound pollution. This created another problem that greatly impacts the quality of space particularly in the city center: finding a parking spot is a nightmare (Fig: 5.10) (Giseke et al 2015, p:118).
A study done by a private mobility consultancy (TransiTec) states that these problems are mainly related to the dilapidated status of private cars, taxis and buses, the use of bad quality fossil fuels and the persistence of heavy vehicle traffic in urban areas (including the transport of dangerous goods), linked to the presence of industrial establishments including “heavy industries”, as well as the ports of Casablanca and Mohammedia in central urban areas. The use of cars would further increase the traffic congestion with rise with increasing urban population and deteriorate the quality of space and environment (noise & air pollution) .
Therefore the importance of promoting the use of public transport and limiting car access to the city center by improving the quality and attractiveness of this service. Which the city has set a clear priority on in terms of planning, execution and allocated budget.
The first Ring as we can see on the map and on the first picture to the right is basically the main and only connector between and is also a regional road linking Rabat
A research done by Isocarp states that the radial urban planning of road networks (Hypercenter, ring 1, ring 2…) is no more adapted to the nowadays fast growing density of the population of Casablanca. The traffic congestion is amplified by the location of social housing programs which are to the south of the urban expressway (Ring1), while the majority of job locations are to the north, increasing the necessary daily journeys between the 2 banks.
Road traffic regulation and organisation of road intersections and ring exits and entrances, is not at its best and therefore aggravates congestion of the road network. In case of an accident, the congestion and the traffic fluidity is gravely hindered.
This reaffirms its role as a bypass and as a traffic distributor for the entire southern part of the city and the importance of the introduction and enhancement of softer mobility alternatives. For instance, a proposal could be: the implementation and facilitation of multi modal solutions. Traveling from the southern part by a car and then parking it at some of the entry points in the ring and using a public transport facility to relieve pressure from the inner ring.

Fig 5.9: An example of daily life struggles. Source: Challenge.ma
Fig 5.10: Parking on sidewalks in the city center. Retrieved from: https://www.libe.ma/Sabot-de-Denver-sabot-de-l-enfer-pour-l-automobiliste-marocain_a81239.html



Walking in Casablanca

As it was mentioned earlier, walking is the most used mode of mobility in Casablanca (62%). However, the sidewalks, road signs, stakes, crossroads are not sufficiently convenient nor safe compared to this heavy use. As a consequence, 44% of those killed and 25% of those injured in 2016 were soft mobility users (cyclists and pedestrians) (Transitec, 2019) This demonstrates clearly the necessity to improve and work on encouraging this sustainable mode of movement in particular within the realm of the city center.
But where exactly is it more valuable to invest in walking infrastructures?
A study was done using Pandana and GIS data to measure pedestrian accessibility in Casablanca by Nick Jones. (Jones, 2018). He measures the walkability of a city by answering this question: “can I accomplish most daily tasks on foot?” This is done by listing amenities of interest and then building a weighted index of them. In the map above, weight all amenities equally, and visualize distance to the fifth nearest amenity in meters.

Fig 5.11: Pedestrian Accessibility in Casablanca (Walking distance to fifth amenity). Source: https://towardsdatascience.com/measuring-pedestrian-accessibility-97900f9e4d56#--responses.

CasaTransportSA: *(SDL)*
Created on 2009 to carry out implementation of mobility strategies.

Stakeholders

	Planning	*Execution, Management and Funding*	*Affected Actors*
Public Sector	State (DGCL) AUC Municipality Wilaya Education Institutes (INAU	CRI	
Public Private Partenrship		***CasaTransportSA*** CasaAmenagementSA	
Private Sector	Architects Engineers	RATP Dev	Public Transportation Companies *(Al Baida Hafilaty, CasaTramway)*
Civil Society			Citizen User

Conclusion
The provision of urban public transport services, including the maintenance of infrastructure and its equipment, is a municipal competence (Charte communale de 1960) with the support and supervision of the State (via the DGCL).

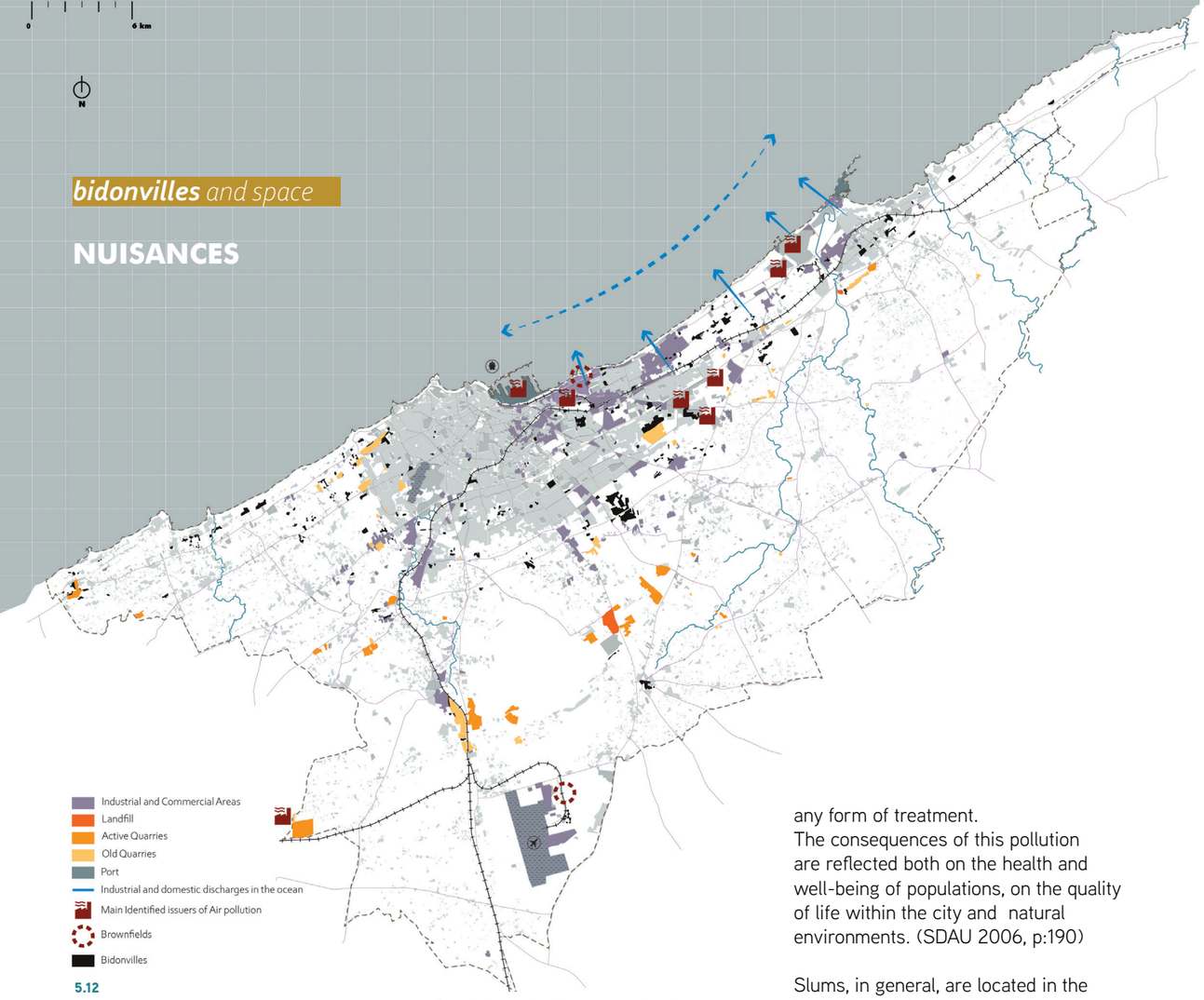
CHALLENGES

- Traffic Congestion
- Lack of light mobility Infrastructure.

POTENTIALS

- Existing Walking Culture.

NUISANCES



5.12

Fig 5.12: Nuisances and Industrial Pollution..
Source: SDAU 2006.

Casablanca is Morocco's leading economic and industrial center. The region hosts more than 40% of the country's industrial establishments. However, the industrial sector today suffers from a negative environmental image linked to the numerous pollutions and nuisances generated directly or indirectly by its activities. These nuisances are felt even more as many establishments are in direct contact with the residential areas and the population. Industrial and similar activities (including energy production, sanitation, waste management, etc.) are indeed the source of a significant proportion of pollution of water, air, soil, etc. Industries produce liquid effluents, solid waste and potentially toxic atmospheric emissions which are largely released into the natural environment, especially in the ocean (as you can see in the map fig:) without any form of treatment.
The consequences of this pollution are reflected both on the health and well-being of populations, on the quality of life within the city and natural environments. (SDAU 2006, p:190)

Slums, in general, are located in the immediate vicinity of employment areas. In the case of Casablanca the development of the bidonvilles is a response to the industrialisation of the city since the french protectorate. Factories emerged along the northeast coast starting from Les Roches Noires neighborhood to Hay Mohammadi and Sidi Bernoussi. This explains the importance of this layer in the three different temporalities: Emergence in the past, reason of existence and persistence in the present despite the health and environmental risks, and the possibility of reuse for affordable housing in the future. Looking at the future possibilities and potential of these brownfields and the fact that so many are inactive for several years, a discussion with the Roches Noires district council confirms that these industrial remains are very high and a reconversion discussion is starting

ANCFCC
L'Agence Nationale de la Conservation Foncière, du Cadastre et de la Cartographie (The National Agency for Land Conservation, Cadastre and Cartography) exercises, on behalf of the State, the attributions recognized by the laws and regulations in force to the public authorities in matters of land ownership registration, cadastre and cartography.

Stakeholders

	Planning	*Execution, Management and Funding*	*Affected Actors*
Public Sector	AUC, Ministry of environment, Municipality, Wilaya, ANCFCC		
Public Private Partenrship			
Private Sector		Industries	Real Estate Market
Civil Society			Citizen

especially with the current high housing shortage and the urban sprawl as a consequence. The president of the council said: "But what will be the adopted methodology? Before starting this transformation and recovery operation, it will first be necessary to go through a first step consisting of making an inventory of all the brownfields in the three industrial districts. This mission will be entrusted to the design office designated as part of a call for tenders. This inventory will make it possible to know what type of reconversion will be reserved for these former industrial zones".

There is no doubt that there is a high potential of development in the east and maybe create more balance in the overall city development(West-east) However this brownfields valorisation is still vague. How many of these wastelands are polluted? When will the inventory of these polluted sites be completed? What is the estimated number of these sites? Will the remaining industries be located in more suitable areas? And finally, how can land speculation be avoided and possibly elaborate on future relocation of the bidonvilles within the city realms?

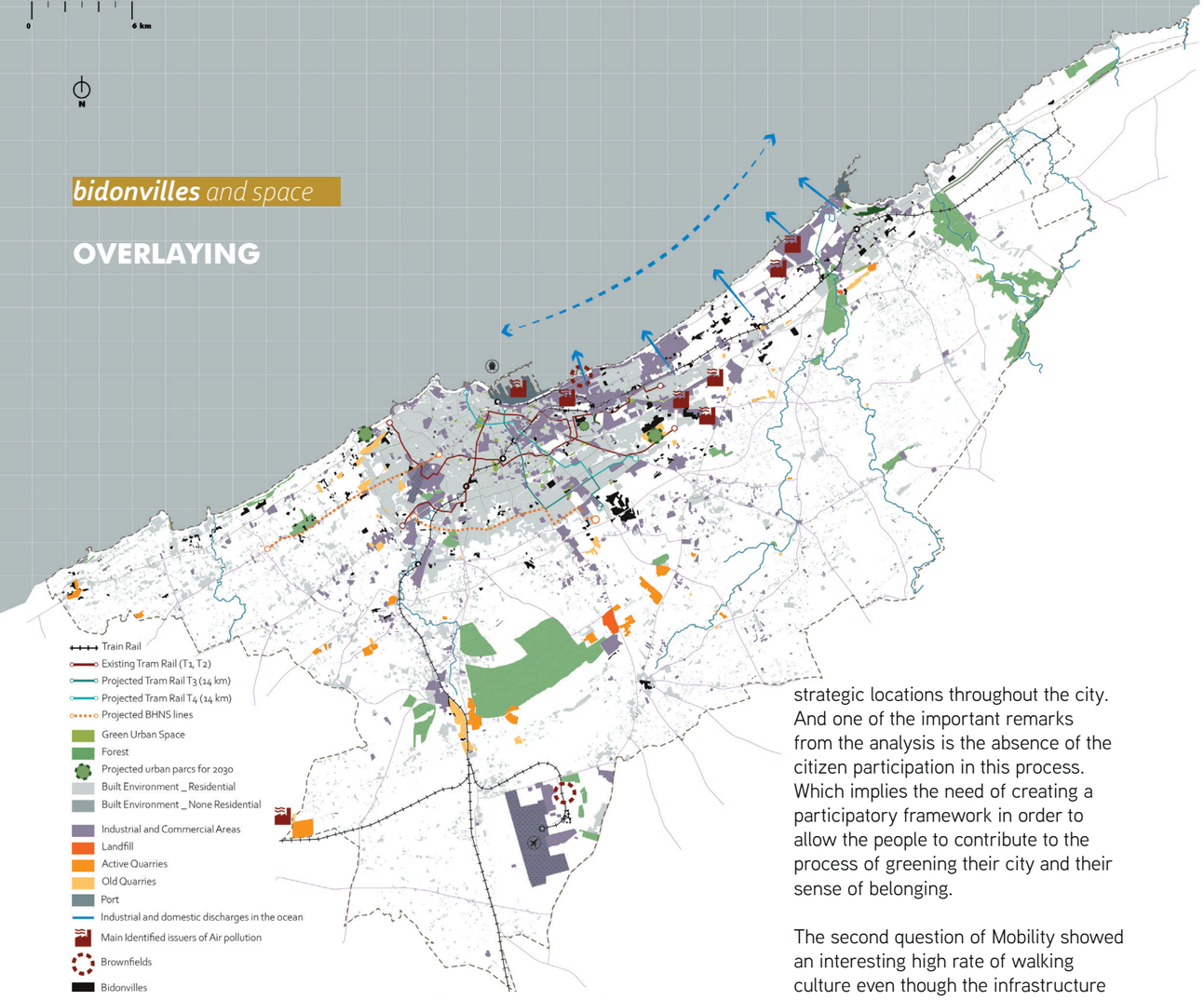
CHALLENGES

-Environmental and health hazards.

POTENTIALS

- Land re-use. (Wastescape regeneration for resettlementent and affordable housing purposes).

OVERLAYING



5.13

Fig 5.13: Concluding bidonvilles and space map by overlaying the three factors: Green, Mobility and Nuisances.

The goal of this part is to provide an insight into the ongoing challenges and potentials with regard to the relationship between the city and the bidonvilles. Three factors were discussed:
The first question of green accessibility represents a major challenge that the city is aware of and is planning to create a network that connects the urban parks with the forests, the open spaces that need to be preserved and the non urbanised areas with productive capacities. However, this does not solve the very low rate of green and the unequal access especially the low income who do not own a car and are in the obligation of traveling long distances for recreational activities or simply some fresh air. Urban green space is under pressure due to the market driven development policies. This requires more tactical greening interventions in strategic locations throughout the city. And one of the important remarks from the analysis is the absence of the citizen participation in this process. Which implies the need of creating a participatory framework in order to allow the people to contribute to the process of greening their city and their sense of belonging.

The second question of Mobility showed an interesting high rate of walking culture even though the infrastructure is not facilitating this. Therefore the idea of improving the green infrastructure in parallel with promoting safer and more attractive walking routes is a first preliminary proposal. This is a proposal for the general city development and not only for the bidonvilles dweller. However, as mentioned before, access to green is harder for the most vulnerable population.

The third question of nuisances and brownfields of the northeast is an environmental and city hazard but also represents a big potential of revalorisation, a new type of development for affordable housing and possibly locations for “healthier” bidonvilles resettlement. Also for new sustainable industries to take place with several opportunities for recreational coastal activities along the shore towards a more inclusive development.

CHALLENGES and POTENTIALS x space

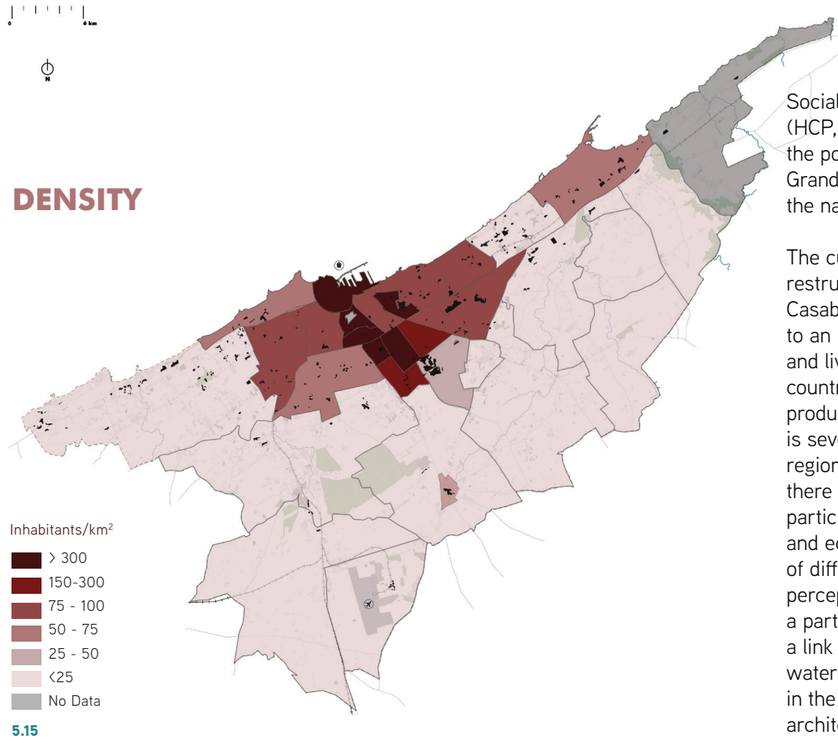
- Insufficient and unequal access to green. - Not a priority for Local Authorities.	- Opportunity for a Linear/Green network development
- Traffic Congestion - Lack of light mobility Infrastructure.	- Existing Walking Culture.
-Environmental and health hazards.	- Land re-use. (Wastescape regeneration for resettlementent and affordable housing purposes).

bidonvilles and society

The layers that will be investigated in bidonvilles and society are:
Density and Poverty
Illiteracy
Education
Then these layers will be combined with the resettlement and bidonvilles locations.

5.14

Fig 5.14: Photo of the Luxurious new Marina facing Cuba district. Source: Yassine Toumi. TelQuel.
Fig 5.15: Population Density. Source: (SOFA,2004)
Fig 5.16: Poverty Map. Data Source: Ministry of Territory Management, Water and Environment. (SOFA,2005)



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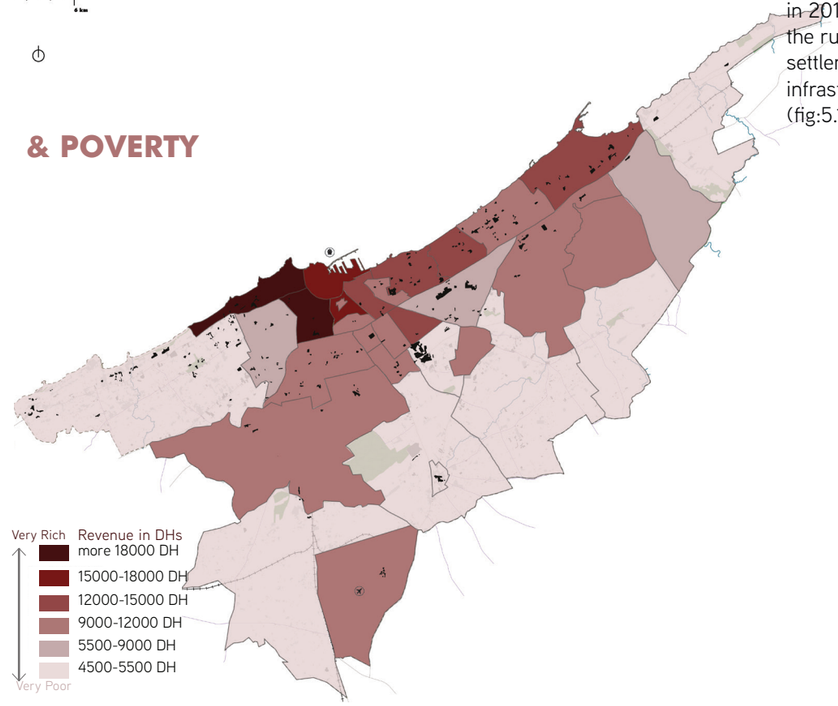
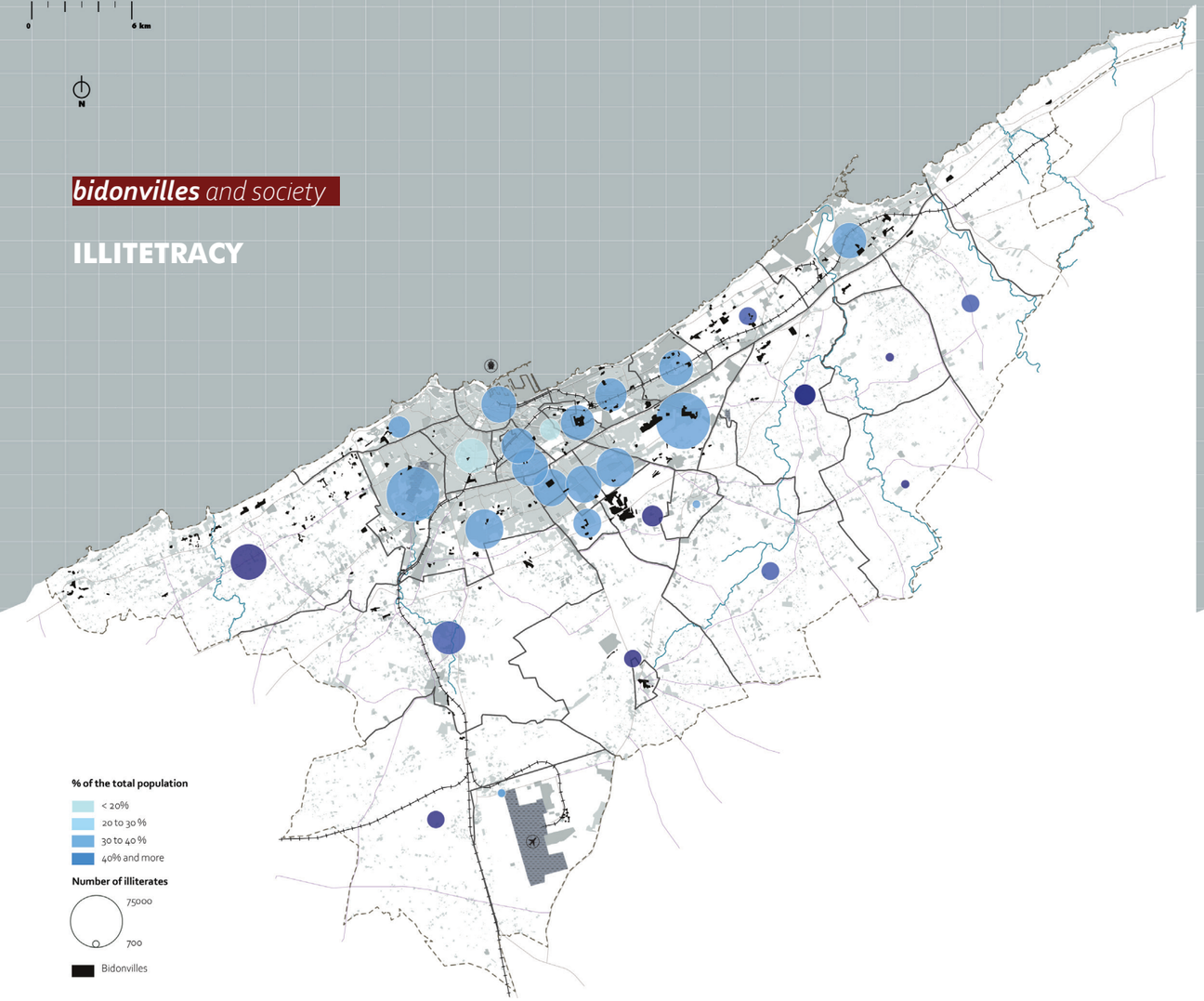


5.16

Social indicators in Morocco from 2009 (HCP, 2009, p62) clearly indicate that the poverty rate is 3.2% inside the Grand Casablanca region, well below the national average (9% in 2007).

The current developmental and restructuring processes in Grand Casablanca are contributing significantly to an increasing heterogeneity of space and living conditions. This applies to the country as a whole: the gross domestic product (GDP) in Grand Casablanca is several times higher than in other regions), but within the region itself there are significant differences in the participation in and access to markets and economic activity. These processes of differentiation are physically perceptible within the cityscape. While a part of the city is being prepared for a link to global society (e.g. the entire waterfront along the Atlantic Ocean in the east side now boasts flagship architecture and Africa's largest shopping centre, the Morocco Mall, which had 250,000m2 of floor space in 2011).On the other hand, areas like the rural communities and the informal settlements have a serious lack of infrastructure and basic equipment (fig:5.14).

ILLITETRACY

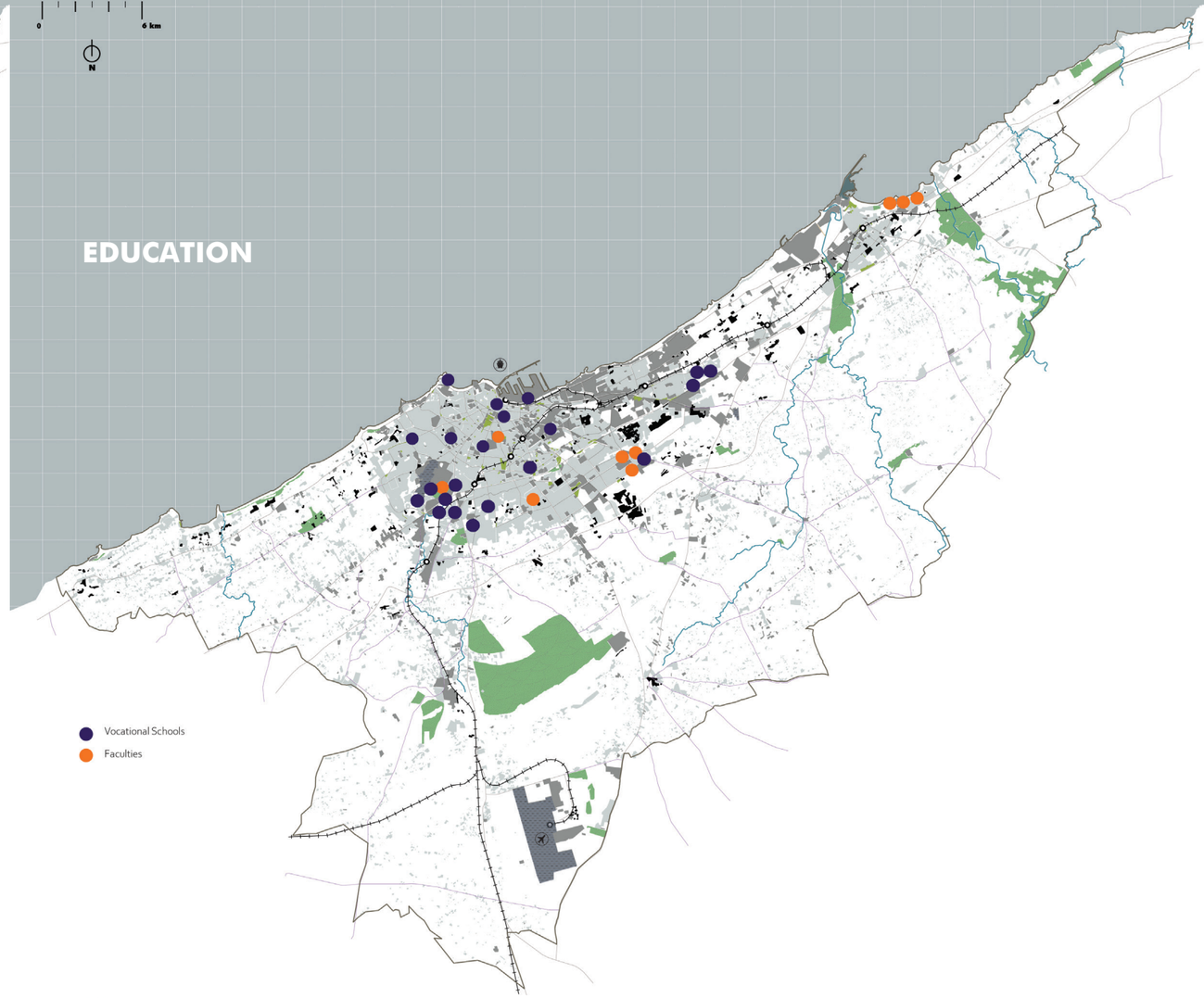


5.17

illiteracy is prominent and it is worrying. It concerns a quarter of the total population and a third of the women population.

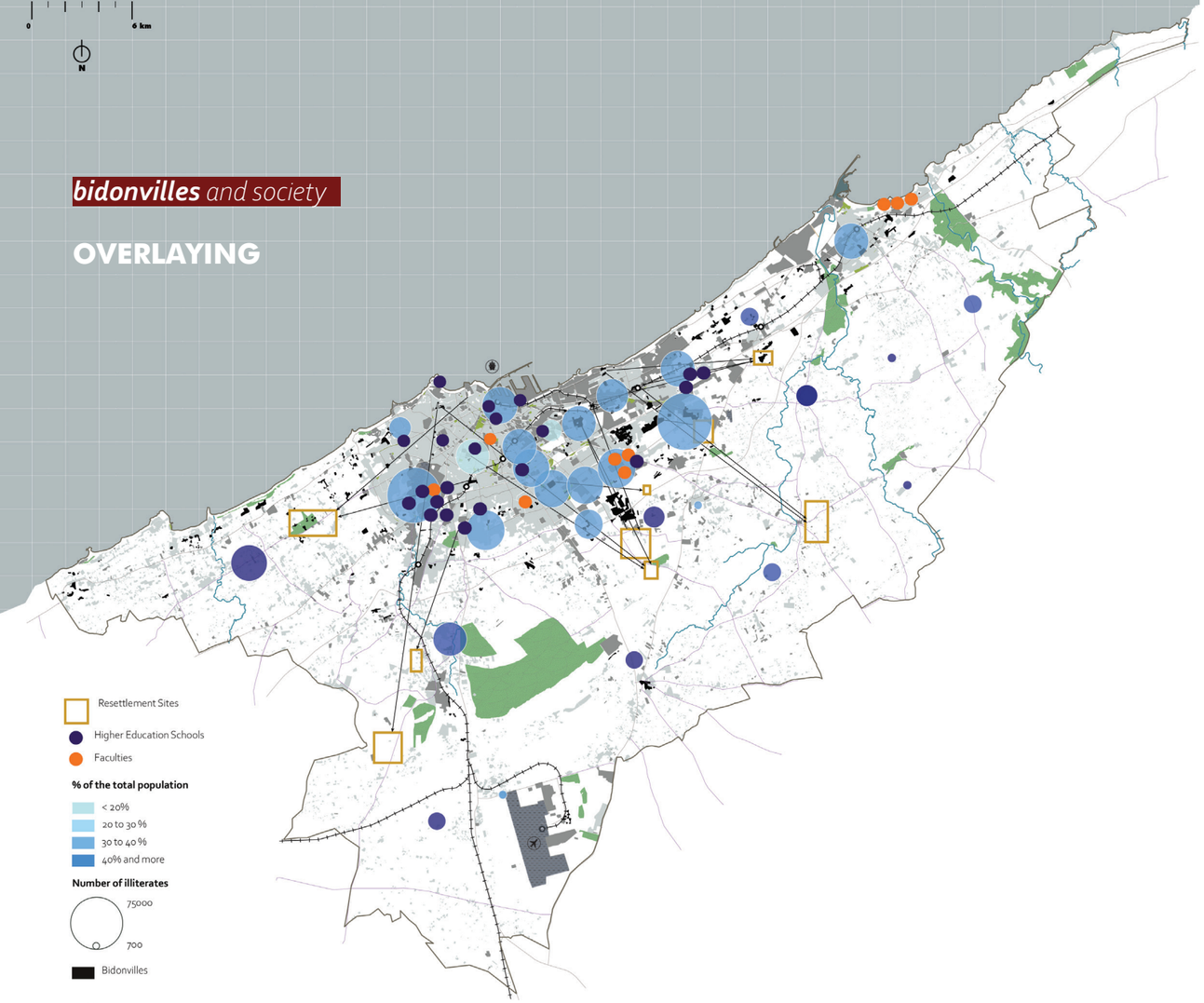
It is much more concentrated in the outskirts since there are no education facilities.

EDUCATION



5.18

This map represents another argument against resettlement.
It shows that all the education infrastructure is available only within the city.
In order for this project to work, lot of government efforts should focus on investing in Education infrastructure and also facilities to integrate circular vocational trainings.
Furthermore, it is important to make the children aware since a young age on circular concepts and life-skills (where does your food come from, where does your plastic bottle go to...)



5.18

bidonvilles and society

OVERLAYING

CHALLENGES and POTENTIALS x space

- Insufficient and unequal access to green. - Not a priority for Local Authorities.	- Opportunity for a Linear/Green network development
- Traffic Congestion - Lack of light mobility Infrastructure.	- Existing Walking Culture.
-Environmental and health hazards.	- Land re-use. (Wastescape regeneration for resettlementent and affordable housing purposes).

CHALLENGES and POTENTIALS x society

- Stronger Poverty Rates in the Outskirts of the city.	- The stronger is the Poverty, the less educated are the people. Investing in Education is the ultimate opportunity for poverty Alleviation.
- Weak integrated education system.	
- Consuming Agriculture Land - Urban Sprawl - Desintegration from the city systems.	- Opportunity of resettlement withing the city in the Industrial zones.

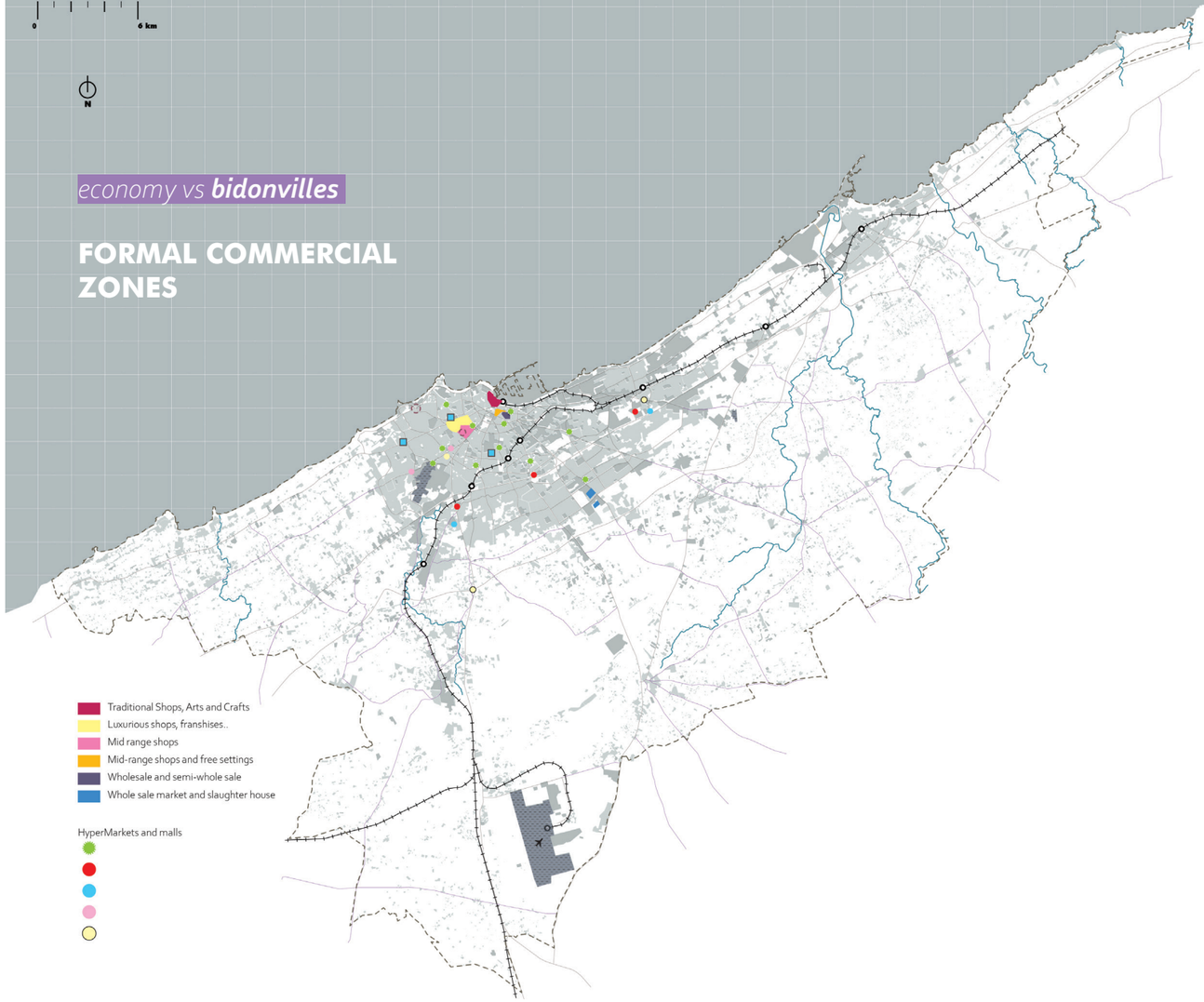
bidonvilles *and economy*

In order to alleviate poverty, combating unemployment is an essential step. As it was argued before, (Chapter 3: Strategic Approach) with the right enabling conditions, the CE could provide new opportunities for economic diversification, value creation and skills development.

The large informal sector already practices 'circular' activities – in areas such as plastic upcycling, electronic waste (e-waste) and phone repairs ... This could engage in higher-value CE supply chains. Moreover, with enough investment, developing countries can 'leapfrog' developed countries in digital and materials innovation to embed sustainable production and consumption at the heart of their economies. (Pretson, Lehne and Wellesley, 2019, p:2)

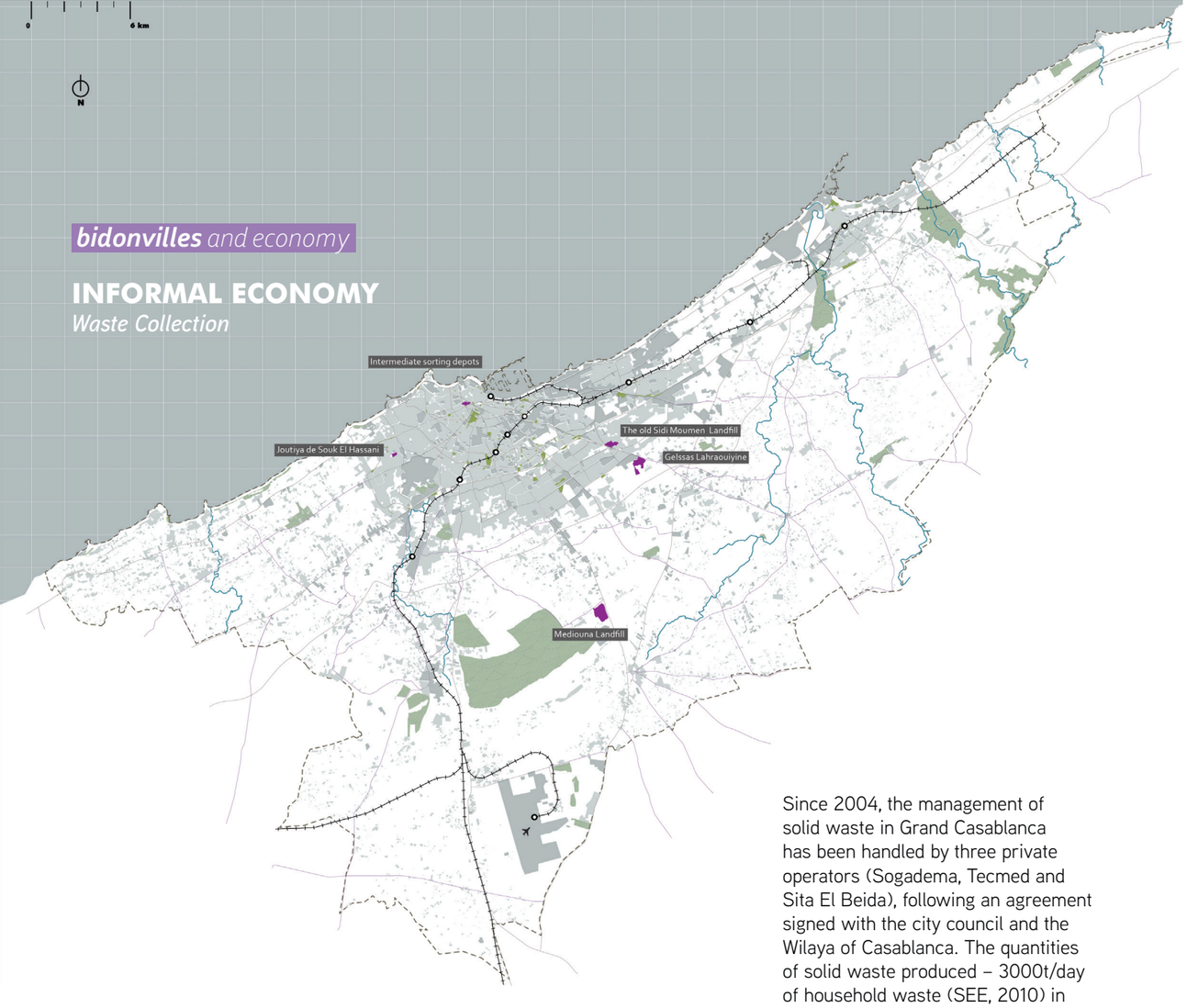
This sets a priority towards looking and investigating the bidonvilles that presents potentialities regarding economic activities. The example of Derb Ghallef, given in the beginning, illustrates the importance of strong economic activities in order to upgrade a vulnerable area.
Mapping Informal Economy is a difficult task. In this Analysis section, waste and formal activities will be shown in order to get a grasp where these activities are happening and the ones that present the highest integration factors.

Fig 5.13: Coexistence of Formal and Informal Markets in Casablanca. Source: Le 360, janvier 2018



INFORMAL ECONOMY

Waste Collection



Since 2004, the management of solid waste in Grand Casablanca has been handled by three private operators (Sogadema, Tecmed and Sita El Beida), following an agreement signed with the city council and the Wilaya of Casablanca. The quantities of solid waste produced – 3000t/day of household waste (SEE, 2010) in addition to hospital and industrial waste – is increasing continuously along with urban expansion, demographic growth, industrialisation and the setting up of administrative services, businesses and general services. Apart from hospital waste, which is incinerated partly at its origin, all other waste is transported to the Mediouna landfill, where it is disposed without treatment. This uncontrolled landfill site is currently being prepared for closing and renovation. A new controlled landfill and mechanical biological treatment is planned to be set up next to the existing landfill and will cover an area of 40ha. However, even if the problem of environmental and health impacts of the discharge at Mediouna is solved, many challenges remain, such as the recovery of energy from waste and the composting of agricultural organic waste.

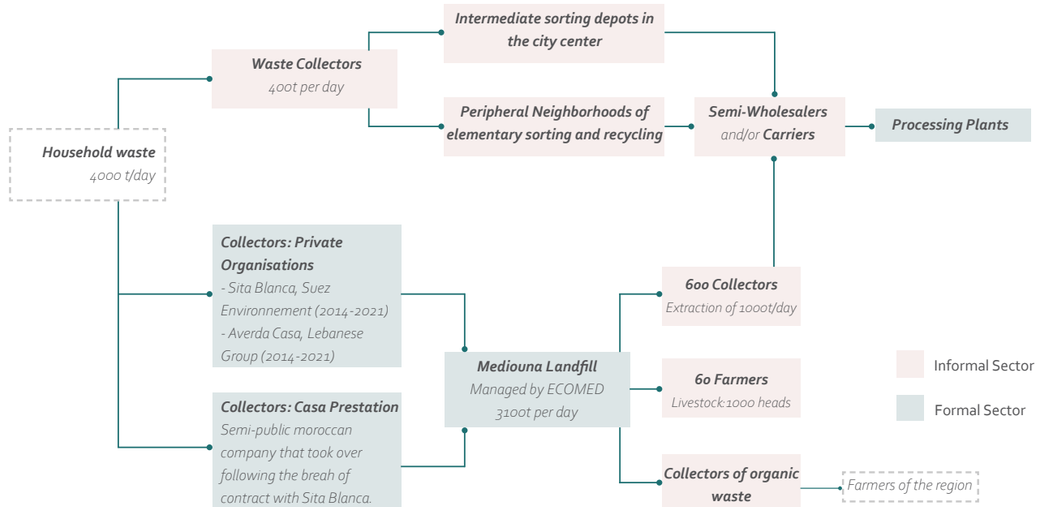
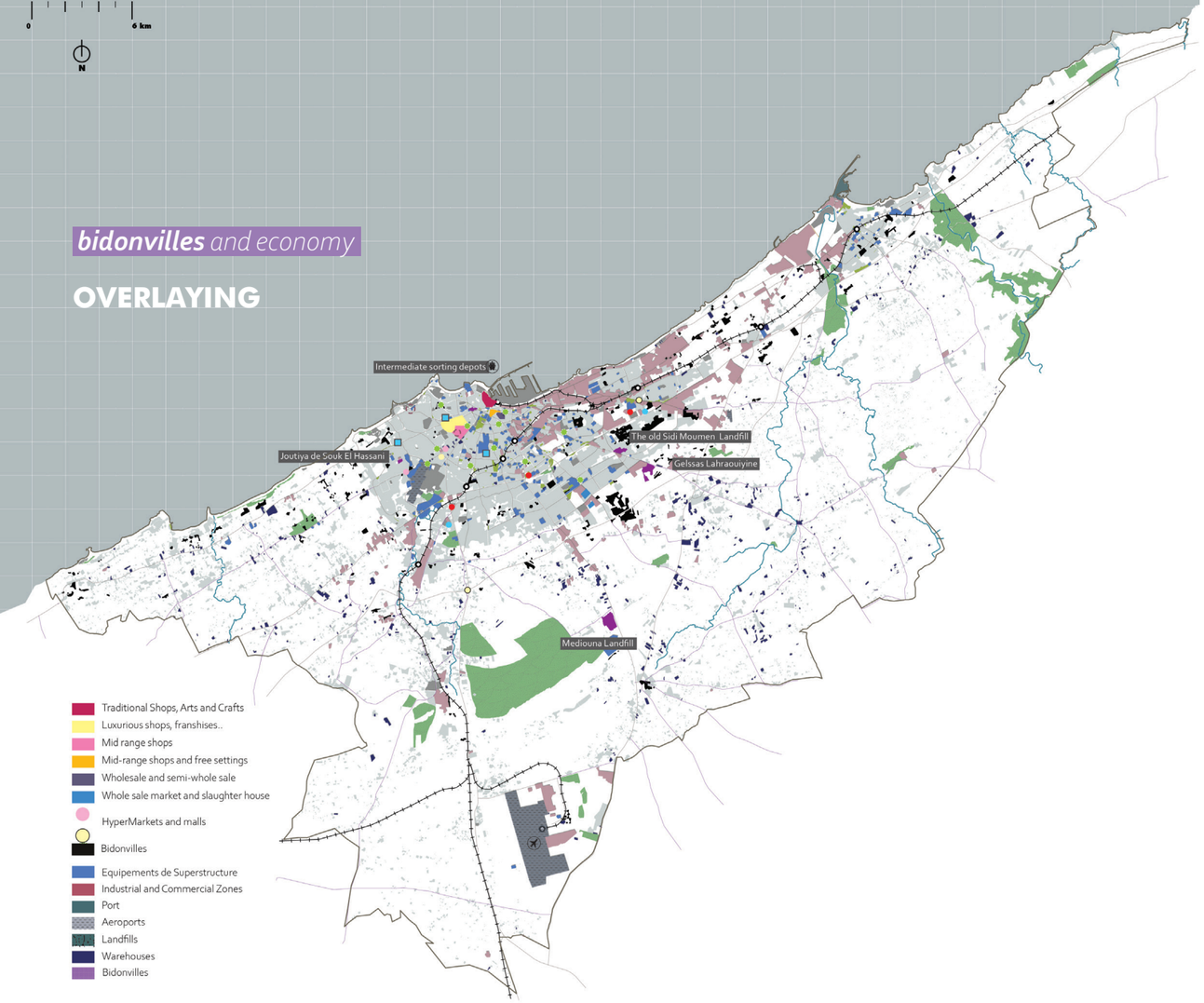


Fig 5.13: Concluding space x bidonvilles map by overlaying the three factors: Green, Mobility and Nuisances.


bidonvilles and economy
OVERLAYING

CHALLENGES and POTENTIALS x space

- Insufficient and unequal access to green. - Not a priority for Local Authorities.	- Opportunity for a Linear/Green network development
- Traffic Congestion - Lack of light mobility Infrastructure.	- Existing Walking Culture.
-Environmental and health hazards.	- Land re-use. (Wastescape regeneration for resettlementent and affordable housing purposes).

CHALLENGES and POTENTIALS x society

- Stronger Poverty Rates in the Outskirts of the city.	- The stronger is the Poverty, the less educated are the people. Investing in Education is the ultimate opportunity for poverty Alleviation.
- Weak integrated education system.	- Existing Walking Culture.
- Consuming Agriculture Land - Urban Sprawl - Desintegration from the city systems.	- Opportunity of resettlement withing the city in the Industrial zones.

CHALLENGES and POTENTIALS x economy

- Undervalued basic services - Formal/Informal Conflict	- Informal Productive Identity - Basic services are provided only within the city fabric.

CLUSTERING

CHALLENGES and POTENTIALS CLUSTERS

Green Accessibility

Urban Mobility

Nuisances

Resettlement

Formal vs Informal Economy

Poverty Alleviation

Education

PROPOSING

PRELIMINARY VISION CONCEPTS

GREEN BACKBONE

Green Accessibility challenges could be gathered with Urban Mobility in order to be solved with one proposal which is the development of a Green backbone that accomodates soft Mobility and a network of green spaces.

BIDONVILLES NETWORK

Nuisances represents an opportunity of Development while Resettlement is a process that needs to be solved and found an alternative for.

PRODUCTIVE IDENTITY

Finding a common skill (potential), developing and upscaling it through Education and Awareness can have a potential of tackling Poverty at the source.

***the* PRODUCTIVE GREEN BACKBONE**

6. VISION

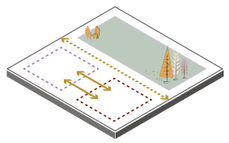
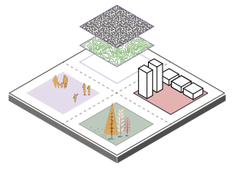
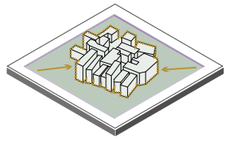
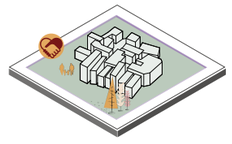
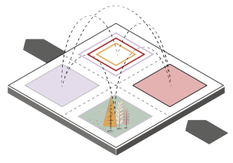
Casablanca Vision Map. By Author.

CHAPTER OVERVIEW

The research and analysis on the bidonvilles integration and opportunities for circular development in Casablanca was conducted in order to develop a Vision for Casablanca 2050. It is a spatial imagination based on social and economic values that guide the development of the bidonvilles upgrading process in the city. This chapter elaborates on this vision for the city and the bidonvilles scenario for 2050 that sets the conditions and requirements for design strategies in shorter terms.

Sections:

1.1 Vision
1.2 Values and Principles
1.3 Vision Development
1.4 Vision Statement
1.5 Visualisation

VALUES	PRINCIPLES
Adaptive *bidonvilles and* ***Space***	• ***Porosity***  • ***Multifunctionality*** 
Inclusive *bidonvilles and* ***Society***	• ***Destigmatisation***  • ***Acceptance*** *of les bidonvilles.* 
Productive *bidonvilles and* ***Economy***	• *Power of productive* ***Identity.*** • *Flows as a ressource:* ***Circular Oriented Productivity.*** 

VISION 2050

The Vision Casablanca 2050: Coexistence of Contrasts is a spatial conceptualisation that guides the transition to a more inclusive Casablanca . It defines goals and values for the upgrading of existing bidonvilles in Casablanca, and principles to steer toward a more circular and inclusive development.
Important decisions that will require a big change in the way things are held now and a paradigm shift.
A reminder of the most important required decisions/guidelines order for this vision to come through.
1- Eradication and resettlement processes should give place to in site upgrading. (See explanation Chapter 2 p:22)
2- The destigmatisation process should start first by accepting the bidonvillois as part of the city that needs to contribute to the development processes.

VALUES AND PRINCIPLES

Adaptive: bidonvilles and Space
The city of Casablanca is described as a fragmented city. (Cohen , 2002) The fragmentation here refers to the dynamics of the interdependence and division between social groups, and between their relations within different compositions of urban areas. Krellenberg argues that a fragmented city is characterised by varying spatial-structural forms of isolation and segmentation that can also open up new opportunities for adjacent areas (Krellenberg et al. 2014).
The city should aim to have a high degree of flexibility and dynamism to adapt for future and fast transitions, namely the circular ones. The adaptive capacity of these spaces comes from the necessity-driven behaviours of "doing it by yourself". Once it is enhanced and upscaled it can help develop ***multifunctional*** "non-regret" projects that offer solutions for short and long term problems to mainly improve the quality of life of les bidonvilles.
Apart from the systemic adaptability, the future casablanca must focus on improving the overall openness by strategically intervening on the ***porosity*** of crucial borders that articulate the fragmentation between the informal and the formal.

Inclusive: bidonvilles and Society
The future Casablanca aims to build a more inclusive society that puts human development high on its list. In order to establish these values, focus has to be switched towards a radical change in the perception of les bidonvilles. Destigmatisation processes take time and holistic efforts in order to be undertaken. Based on this, came the focus on not only improving on the bidonvilles scale, but also the idea of bringing the informal to the formal. Therefore, this enhances the equitable access to the city development, and helps mitigating the social problems engendered from poverty and social stigma.
The visibility of these areas plays an important role in this process. Thus, improving the overall accessibility plays an important role in creating connections and opportunities of interaction. Ultimately, this could be the start of new and efficient forms of citizen participation and social entrepreneurship.

Productive: bidonvilles and Economy
As mentioned in the Problem Focus chapter, the main argumentation behind this project and the importance of keeping les bidonvilles in their initial location is the Poverty alleviation potential that underlies by being part of the urban fabric and by staying visible. It is argued that the poor are undercapitalised; they do have skills and knowledge that is essential for the thrive of a more inclusive economy.
"Inclusive growth is giving identity" (source quote) and acknowledging the existence of these social groups and letting them be part of the fruits of development by establishing the foundations not only of social inclusion but also.
From tin-can canopies to frugal latrines, the poor 'make-do" and such forms of making-do are a new idiom of urban ingenuity and entrepreneurialism. Self-organisation, intense emancipatory zones.. All of this needs to be brought up through creating new frameworks of participation and facilitating economic exchanges between les bidonvilles and the rest of the city.
It is a difficult challenge to convert and upscale these ingenuine informal systems in regard to the land ownership and ultimately into assets with globally legible value. However it is important to set this foundation and start putting it on the ground.

VISION DEVELOPMENT

Based on the city and site analysis, the raised challenges and opportunities, the vision of Casablanca will be elaborated through three main layers.
A first "base" layer that will serve as a backbone for future spatial city development: The Green Backbone. It is safe to say that the lack of green and access to public space in the city is a major problem that has a big impact on the quality of life. Besides, there is no room for development of new green areas due to the high density and land use.
Therefore, the Green Backbone is a proposal of green development that evolves through time (a continuous city project) starting by the most connected roads to the less connected while promoting light mobility infrastructure and detourning the city from the path of car-orientation.
This backbone could accommodate and promote several networks, platforms and activation projects of several sizes depending on the locations. In the case of this vision, an example will be deployed: ***The bidonvilles Network.***
This Network consists of creating connections between a certain typology of bidonvilles that are in the center and offer opportunities of Integration. This fits in the part of the agenda of social acceptance and social inclusivity. In other words, improving the conditions of the slum itself may not be enough to mitigate the stigmatisation . However bringing the informal out to the formal (by using the green backbone) and upscaling the productive identities and the positive and facilitating economic exchanges could have a big impact on changing the image of the bidonvilles.
Finally, a third layer that connects the bidonvilles to the problematic and essential flows of the city in order to enhance the circular opportunities and start the process of valorisation and upscaling the city development towards more sustainability and inclusiveness: ***The Circular Network.***

Green Backbone

Industrial and Commercial Areas

Bidonvilles

Casablanca and les bidonvilles: Towards Reconciliation.

The Vision Casablanca 2050: Coexistence of Contrasts is a spatial conceptualisation that guides the transition to a more inclusive Casablanca. It defines goals and values for the upgrading of existing bidonvilles in Casablanca, and principles to steer towards a more circular development. Casablanca 2050 will reconcile with its existing urban challenges namely the slum phenomenon by first, accepting and learning, then adapting. Thus this project's main purpose is to lay down possibilities on how to improve spatial conditions through adaptive spatial solutions generated from existing knowledge and skills while bringing them to light by constructing frameworks aiming towards an inclusive society that focuses on destigmatising and recognising the slum dweller as an important productive contributor to the city's new circular economy.

Fig 6.1: Photo of Casablanca street with informal economic activities. Retrieved from: https://theearthbeneathmyfeet.wordpress.com/2017/02/09/the-streets-of-casablanca/

Fig 6.2: Photo of Avenue Hassan II.
Source: le360.ma.

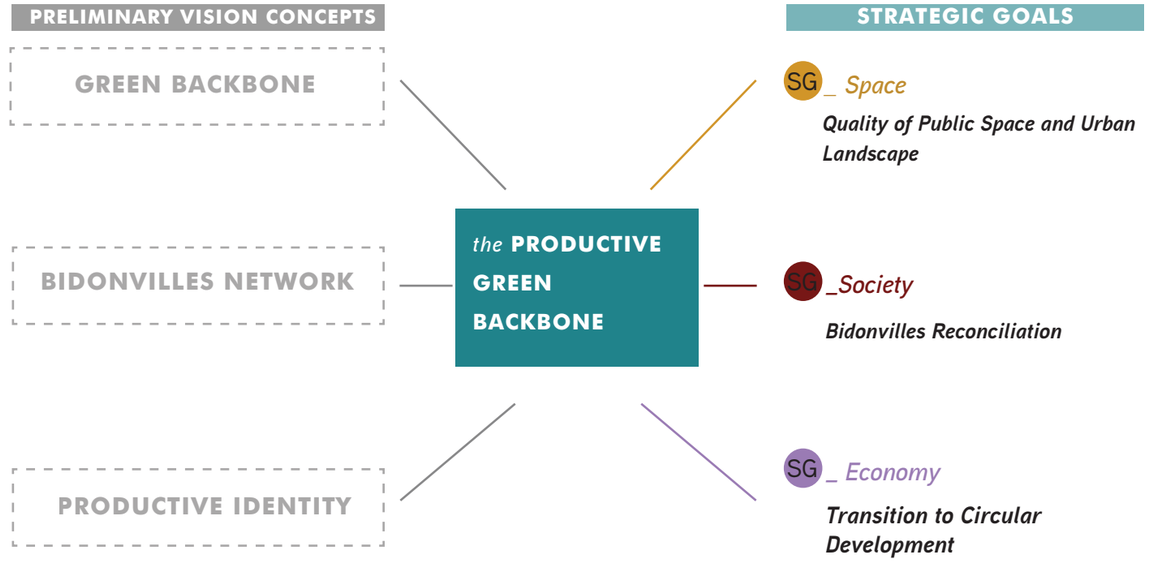
7. IMPLEMENTATION STRATEGIES

CHAPTER OVERVIEW

This chapter investigates the implementation process required to install the vision. It starts by giving an overview of the phasing and the needed steps to achive the strategic goals highlighted below. Then proposes a detailing of each phase in spatial and non spatial terms. Finally it concludes by exploring possibilities to summarise the process in a toolbox that could be applied in different contexts.

Sections:

1.1 Strategic Phasing
1.2 PGB1: Connect
1.3 PGB2: Attract
1.4 PGB3: Create
1.5 PGB4: Expand
1.6 Strategic Toolbox



STRATEGIC PHASING

A “radical” project that is completely against the state agenda and attitude towards the bidonvilles will not be well received. Arguing against resettlement and emphasizing the (negative) social consequences might not be sufficient to convince the government to adopt and implement this project. Discussions with people in charge of the urban issue at hand (during the fieldwork) and Bogaert’s (2018) extensive research on the VSB confirmed that this attitude towards the bidonvilles is unlikely to change, at least not in the short term. It fits deeply in much wider political and state-control programmes and strategies that try to prevent radicalisation and extremism, enhance social and political control over the bidonvilles. and to maximise profit.

The question - therefore - is how to convince the State for this proposal? The proposed starting point here is to embed the strategy into a range of proposals that have already been accepted by the authorities Thereby,this project should become part of a bigger existing city project and target a larger group of actors (not only the bidonvilles inhabitants themselves). The requalification of the A3 Highway - for instance - is part of the AUC vision (see fig 2.4 p:30) and the PGB builds upon this project and points out to extension possibilities. Better outcomes can be achieved through a series of strategic but gradual experimental interventions. However,one of the complex and crucial questions of this proposal is: what type of financial tools could ensure the financial inclusion of the poor on fair terms in the context of this project?

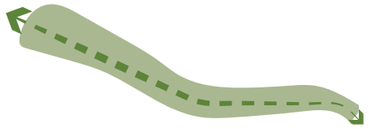
The fiscal strategy that was adopted by the VSB has to be investigated in order to find possibilities of more adequate proposals. The VSB was praised internationally because of its innovation of third party involvement* (add a footnote) and for being able to grant even the poorest among the urban residents access to property. Simultaneously, the intentions were criticised: was the VSB a pretext to break open a new market? More generally, is the support of the state in VSB — via subsidies, tax cuts, and financial guarantees — a way to give the urban poor a new hope for the future, or is state support an instrument to privatise benefits and socialise risks and losses? These were questions that were brought out extensively by Bogaert (2018).
VSB was promoted, and for a long period of time, that access to land and assets is essential for the poor to become “active citizens, good clients and municipal taxpayers” (Gattoni, 1999) George Gattoni, former director of the World Bank’s Urban Poverty Thematic Group (quoted in Werlin 1999, 1531). Thus several tools were developed to help activate the market of social housing using social financial incentives. Al Omrane (the ppp company responsible for most of the resettlement projects see more p:23) says: “Access to ownership allows bidonvilles dwellers to improve their living conditions and induce a new social behaviour as well as an increased involvement in local affairs” (Al Omrane 2010). However, the effective proposal here would be to replace ‘access to ownership’ by ‘access to income-generating activities’ that allows bidonvilles dwellers to improve the city living conditions and be active citizens.

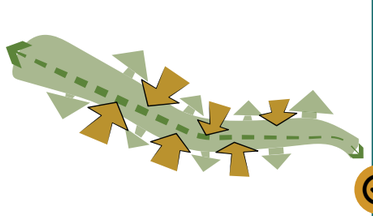
Nevertheless, the critical task and a lesson to be learned for proposing new implementation alternatives, is to look beyond the promises of the project in terms of its impact and pay attention to the underlying restructuration of relations of capital and power relations of government. Developing this extensively is beyond the scope of this thesis, but it is important to mention the urgency of involving experts that can innovate on this aspect.

The PGB agenda presented in the next chapter might seem like it is trying to conceal the local challenges of the bidonvilles themselves and instead focusing on linking them to the wider city. But tTo integrate the bidonvilles, contest their resettlement and mitigate their challenges, this is the required first step in order to be successful, or at least to start a discussion on alternative pathways. Linking the bidonvilles to the rest of the city aims to intensify interactions between the local economy and the wider urban economy, which can eventually foster new circular economic opportunities. In order to save the bidonvilles, you have to save Casablanca first.

The proposed phasing should be a coherent strategy in itself. It will be explored through two zoom-ins that illustrate different opportunities of development.

STRATEGIC PHASING





	How? Spatial Strategies	*How? Policy Programme Focus*	*With Whom? Stakeholder Engagement*
2020 Phase 1: CONNECT ***A3, from a barrier to a connector*** Restore North-South Connections. Renaturalise the Urban Landscape.	Change the vocation of A3 to a **multi-modal Eco-Boulevard**. Define the possible different meanings of "green productivity" throughout this first phase.	**Regulation:** Safe Mobility **Facilitation:** Vacant Land Use	**Key Existing Stakeholder:** *to convince:* CasaAmenagement, CasaTransport, AUC. *to involve:* ISOCARP, grassroot leaders, local communities, NGOs. **New Stakeholder: CasaCirculaire.**
2025 Phase 2: ATTRACT ***from Crosssings to Centralities*** Enhance the existing activities by developing the productive identities.	Identify strategic and catalytic projects linked to the established strategic goals. Integrate specific activities (public space, markets, tram station, urban farming...) along the A3 eco-boulevard, especially in the intersecting nodes based on the potential existing functions.	**Communication:** Raising awareness about the benefits and consequences of contribution and use of the PGB.	**Key Existing Stakeholder:** *to align:* CasaAmenagement, CasaTransport, AUC. **CasaCirculaire** Extension of Network, More involvement in Urban Decision-Making, Education and Awareness in Circular Development, Reaching out to International Funding Agencies.
2030 Phase 3: CREATE ***towards a Circular Casablanca*** Create and introduce productive activities along the PGB. Facilitate and promote creative grassroot and circular business models.	Create new circular activities and upscale the existing ones along the PGB.	**Facilitation:** Facilitate and promote innovative grassroot and circular business models.	**Key Existing Stakeholder:** *to align:* CasaAmenagement, AUC **CasaCirculaire** Extension of Network, More involvement in Urban Decision-Making, Education and Awareness in Circular Development, Reaching out to International Funding Agencies.
2040 Phase 4: EXPAND Expanding the Productive Green Backbone throughout the city and the region forming a network of circular activities in different scales.			**Key Existing Stakeholder:** *to convince:* ANP (National Port Agency) **CasaCirculaire** In charge of the new Industrial Revitalisation Project
2050 *Towards Reconciliation*			

0 2 km

N

GREEN BACKBONE

1- CONNECT

A3

- Bidonvilles
- Residential Built-up
- Industrial Built-up
- Urban Green
- Tram Lines
- A3 Eco-Boulevard

Why Connect?

To initiate city wide development. Through a corridor of economic opportunities and environmental conservation.

Stakeholders Engagement Legend

REGULATE R

The proposal goes against the interest of some important stakeholders, and this cannot be overlooked. This mainly concerns Al Omrane: the Real Estate company responsible for Resettlement and Social Housing Development, but also other actors from the private sector interested in buying and developing valuable land.
Having these parties onboard with, or at least neutral towards the proposal is desirable, as their political lobby could be a potential threat to the success of the project. There are two possible ways to address this: either by providing them a more attractive alternative investment opportunity, or by offering them a good enough return on investment if they allow the project to go through. The solution would likely be a combination of these two, and some other approaches.
A natural consequence of reintegrating the bidonvilles in the social and economic fabric of the city is that the wealth of the inhabitants will increase over time. This will gradually allow more and more development and social housing construction within the area itself. In the meantime, introducing some top-down regulations to protect these areas could serve as a deterrent for buying the valuable land, and bundled with other prospective city development initiatives, it just might be enough to shift the stakeholders' interest from short-term to long-term investments in the area.

CONVINCE C

Building a strong argumentation study to pitch to stakeholders that have the most power and might not be in the same line of thoughts.

EMPOWER E

Make stakeholders that share the same values and that are willing to contribute, to gain substantial role and influence in the planning and decision-making process.

COLLABORATE C

and reach out to innovators, designers, architects, start-ups, and the creative industry in order to find new smart ways of construction and upscaling the potential activities. Make them aware of their role in this transition process.

PGB1_CONNECT

A3, from a bypass to a connector

Main Objectives	Main Strategies
Restore North-South Connections	Change the vocation of A3 to a multi-modal Eco-Boulevard.
Renaturalise the Urban Landscape	Define the possible different meanings of "green productivity" throughout this first phase.

Objectives Description

The phase Connect comes as a first response to the challenges presented in the analysis (see p:xx). Choosing the A3 as an experimenting ground in order to solve existing problems while demonstrating what can happen throughout the city in regard to improving the spatial qualities.
The development of an urban boulevard on the skeleton of the current urban expressway will, instead of strengthening its role of an expressway exclusively dedicated to car traffic, confirms its role as a connector throughout the entire city, and at the same time will physically weave the urban fabrics of the city and its suburbs and upgrade the social link between the inhabitants of the two sides. It also demonstrates and sends a message towards the type of development Casablanca is aiming for through a clear urban project.

Strategies Description

To change the vocaction of the A3 to an eco-boulevard, several actions need to take place:
- Build a safe and attractive walking and biking infrastructure.
- Pin point strategic nodes for development opportunities.
- Relieve pressure from the center and set the ground for new urban regeneration opportunities

By renaturalising the Urban Landscape, a first step would be to:
- Identify, protect and introduce ecological spaces within the boulevard that will contribute to define different productive identites for these areas. (recreational, agricultural, gardening, urban sprawl control...)

Phase Connect and the Goals of the PGB.

SG_ *Space*	SG_ *Society*	SG_ *Economy*
Quality of Public Space and Urban Landscape	*Bidonvilles Reconciliation*	*Transition to Circular Development*
Creating Eco Boulevard, Identifying Potential Public Spaces	Awareness, Mapping, Pilot Sites (Ex: Community Center Dar Bouih: Pilot Site 1)	Identifying existing circular activities.

"The concept of Green Infrastructure has been introduced to upgrade urban green space systems as a coherent planning entity" (Sandström, 2002). It can be considered to comprise all natural, semi-natural and artificial networks of multifunctional ecological systems within, around and between urban areas, at all spatial scales.

Groupe al omrane — The Opposing Stakeholder

Agence Urbaine de Casablanca / ISOCARP Knowledge for Better Cities — Planning and Design

CASV ENAGEMENT / CASV TRANSPORTS SA — Implementation

CASA CIRCULAIRE SA — Create a new Implementation Tool

Policies and Recommendations

Regulation: Safe Mobility
- Restrictions of car access to the North part of Casablanca by limiting speed, adding more traffic lights and access time.
- Start the project by small tactical transformations.
- Promotion of other modes of Mobility (Change the perception of unsafety of soft mobility modes)

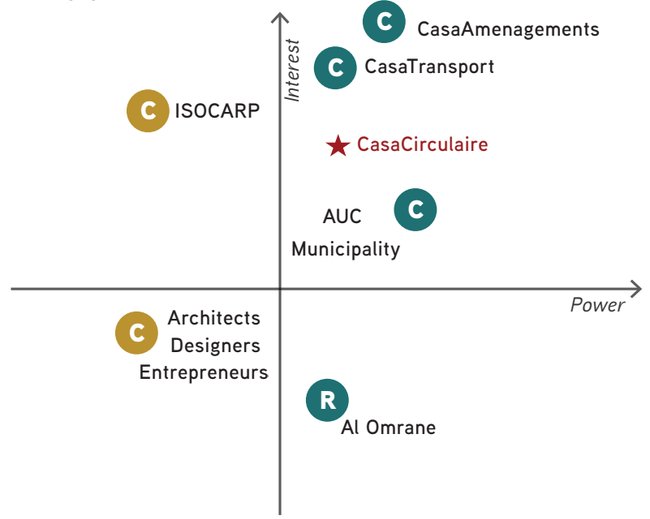
Facilitation: Vacant Land Use
- Empower the immanent potential of Vacant spaces for activating participation. Urban gaps gives citizens a chance to play a visible role in urban development process.
- Develop Vacancy Reuse Incentives through rental agreements for the privately owned spaces.

CASA CIRCULAIRE SA

CasaCirculaire SDL

In the Analysis Chapter, I introduce the SDLs *(p:53)*. They are Implementation Tool. to facilitate the operability of big city projects and a better governance tool in the management of local government services.
Following the same logic, CasaCirculaire is proposed as the main institutional body that will be responsible guiding the transition towards Circular Economy in Casablanca. This will translate positively on the how the city is orientating its development.

Stakeholder Engagement



PGB1_CONNECT

Zoom 1

Education
- Introducing circular activities in school that could also benefit the PGB like School Gardening.
- Circular Accessibility of school amenities in order to keep the areas active outside school hours. (Improving Safety throught the ecoboulevard)

Vacant Spaces
Empowering temporary users to activate empty space with activities that are in synergy with the adjacent neighborhoods and in the meantime with the PGB agenda.

Invest in Green Revitalisation
Activating and integrating this existing derelict park in the PGB. Introducing new qualities (Benches, Lights, walking routes...) in order to revive the abandoned green spaces and boost their reuse.

Tactical Bike Intervention
Main goal is to provide safer shared streets with minimal interventions. Like stencilling bike lines, putting bike sharing/renting spots along the boulevard and use tire cranes as line barries. The purpose is to start small and engage more population in the public debate on soft mobility. This may help putting more pressure on Transport authorities to invest in biking infrastructure.

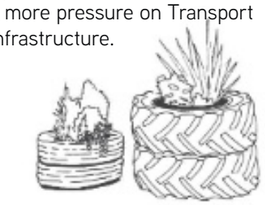


Fig 7.1: A cycling Activist painting bike sign on the side of the road in Sydney. Source: The Street Plan Collaborative (2018).

7.1

PGB1_CONNECT

Zoom 2

Bidonvilles Border Activation
Making use of the Dynamism of the bidonvilles borders in promoting productive activities to facilitate the integration to the PGB.

Invest in Green Revitalisation
Activating and integrating the existing derelict park in the PGB. Introducing new qualities (Weekly Markets, Outdoor Sports ...)

Vacant Spaces
Repurpose the empty industrial site to a temporary neighborhood facitity, pop-up cultural events that require or co-creation experiments.

PGB1_CONNECT
Impression

Current Situation

Bidonvilles Border Activation
This collage illustrates the spatial transformation possible through the Connect strategies.

Proposed Situation

0 2 km

N

GREEN BACKBONE
2- ATTRACT

1

The Transport Node

Bidonvilles
Residential Built-up
Industrial Built-up
Urban Green
Tram Lines
A3 Eco-Boulevard
Intersection Node

PGB2_ATTRACT
from Crosssings to Centralities

Main Objectives	Main Strategies
Enhance the existing activities by developing the productive identities.	Identify strategic and catalytic projects linked to the established strategic goals.
	Integrate specific activities (public space, markets, tram station, urban farming...) along the A3 eco-boulevard, especially in the intersecting nodes based on the potential existing functions.

Objectives Description

The phase Attract aims at activating the Transport Nodes by promoting soft mobility use in conjunction with the circular activities to initiate the PGB expansion.
These multi modal centralities aim to push people towards leaving their cars and experience the city by renting a bike or walking.

Strategies Description

CasaCirculaire should initiate a study that investigates both the activities and the plausible locations (prioritising the bidonvilles) for them to take place along the PGB.
This should be an interdisciplinary team with an expertise on local economic development and social inclusion.
This strategy would also require attracting communities and making them aware of the potential of circular activities. This will also would stir up financial agencies that could promote these circular activities.

Stakeholders Engagement Legend

- REGULATE (R)
- CONVINCE (C)
- EMPOWER (E)
- COLLABORATE (C)

Phase Attract and the Goals of the PGB.

SG_ *Space*
Quality of Public Space and Urban Landscape
Activating Transport Nodes.
Promoting Soft Mobility.
Multifunctional Nodes

SG_ *Society*
Bidonvilles Reconciliation
Bringing informal activities to formal contexts in the PGB.

SG_ *Economy*
Transition to Circular Development
Implementation of circular activities on the identified sites.

Policies and Recommendations

Communication: Raising awareness about the benefits and consequences of contribution and use of the PGB.
Through Education institues, campaigns, vocational institutions can be set up to train people to be involved in circular practices...)

Urban Management: Develop a marketing strategy that explains what does this flexibility of use of space means.
Also, Specific financial tools will be developed for each activity to engage and enable people to participate with set of clear guidelines.

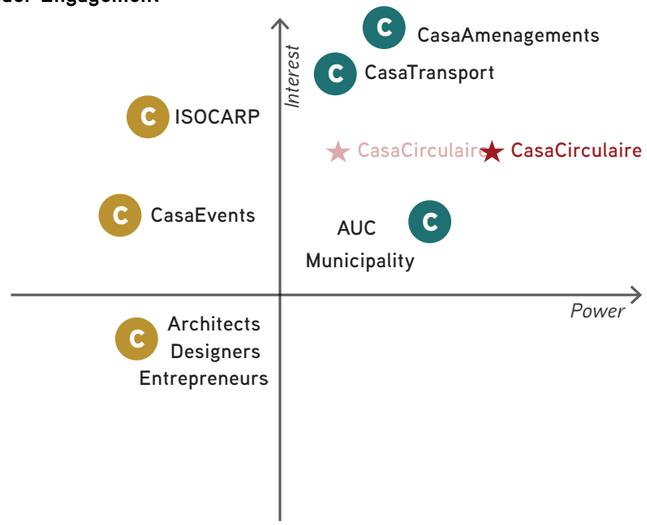
Agence Urbaine de Casablanca / ISOCARP (Knowledge for Better Cities) — Planning and Design

CASA MENAGEMENT / CASA TRANSPORTS SA — Implementation

CASA CIRCULAIRE SA — Create a new Implementation Tool

CASA blanca EVENTS — Awareness

Stakeholder Engagement



School Gardening
Outdor Sports
Compost Center
Circular Design Hub
Bike Rental
Transport Node
Play Ground
Community Garden
Boulevard PGB A3
Park
Temporary Market area

0 2 km

N

PRODUCTIVE GREEN BACKBONE

3- CREATE

1

2

Bidonvilles

Residential Built-up

Industrial Built-up

Urban Green

Tram Lines

A3 Eco-Boulevard

Intersection Node

PGB3_CREATE
towards a Circular Casablanca

Main Objectives

- Create and introduce productive activities along the PGB.
- Facilitate and promote creative grassroot and circular business models.

Main Strategies

→ Create new circular activities and upscale the existing ones along the PGB.

Objectives Description

The phase Create aims at boosting the circular transition and speeding the process. The PGB is covering more and more ground around the city and the bidonvilles that are participating in this process can start to be more of self-suficient neighborhoods promoting circular style of life rather than slums.

Strategies Description

CasaCirculaire is gaining Extension of Network, More involvement in Urban Decision-Making, Education and Awareness in Circular Development, Reaching out to International Funding Agencies.

Stakeholders Engagement Legend

- REGULATE (R)
- CONVINCE (C)
- EMPOWER (E)
- COLLABORATE (C)

Phase Create and the Goals of the PGB.

SG_ *Space*
Quality of Public Space and Urban Landscape

PGB network is covering and improving more areas of the city.

SG_ *Society*
Bidonvilles Reconciliation

The bidonvilles established their position as major players in the city economic development plan.

SG_ *Economy*
Transition to Circular Development

Expansion of circular activities along the PGB and identifying new potential sites.

Policies and Recommendations

Appropriate Regulations
Facilitate and promote innovative grassroot and circular business models.

- Implement competition for fair access.
- Recognises the benefits of mixed-land use in bidonvilles. especially in highly potential activities for example through appropriate relaxation of building codes and business registration regulations.
- Empower the vocational institutes that integrates workers in soft skills fields (Farming, Construction, Waste Valorisation ...)

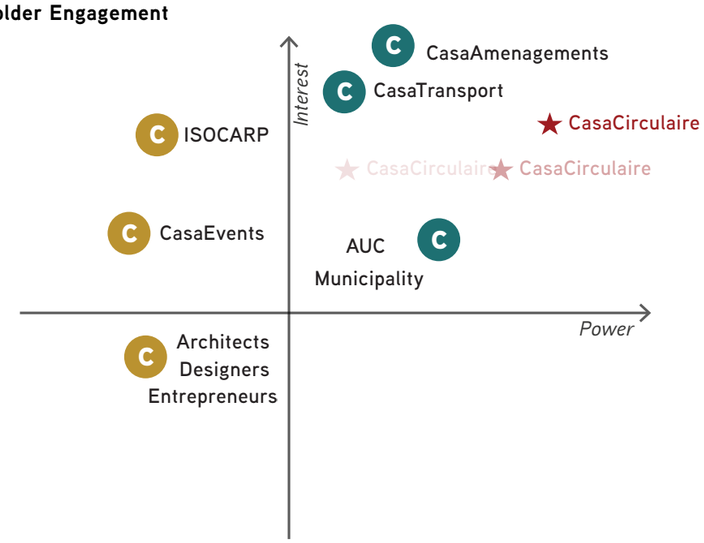
Agence Urbaine de Casablanca
ISOCARP Knowledge for Better Cities
Planning and Design

الدار البيضاء للتهيئة AMENAGEMENT
CASA TRANSPORTS SA
Implementation

CASA CIRCULAIRE SA

CASA blanca EVENTS
Awareness

Stakeholder Engagement



2

Pilot Site 1: Douar Bouih

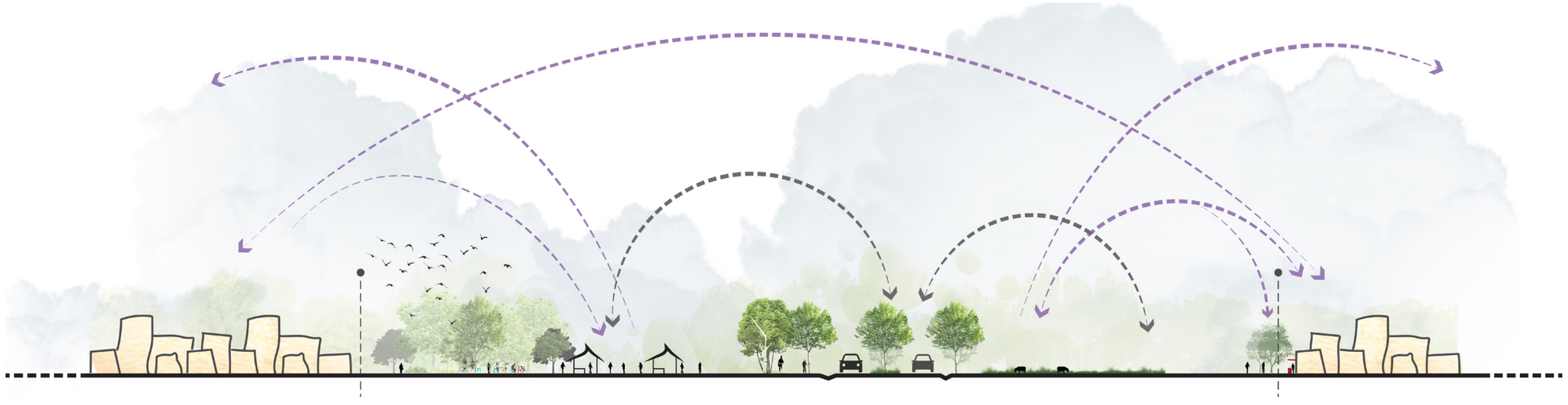
Border Revitalisation

Urban Regeneration Opportunity

Local Farmer Market

Linear Flea Market

Pilot Site 2: Douar Er-Rhamna



0 2 km

N

PRODUCTIVE GREEN BACKBONE

4- EXPAND ?

Bidonvilles
Residential Built-up
Industrial Built-up
Urban Green
Tram Lines
A3 Eco-Boulevard
Development Opportunity

Why Expand?

Expand is the phase of the unkown. Many variables depend on how the inhabitants and the stakeholders will respond to the precedent proposals. What is worth mentioning, is the possibility of a bigger expansion of the circular agenda that could take place on the industrial zones along the shore. This represents an opportunity to invest in affordable housing and circular land-use.

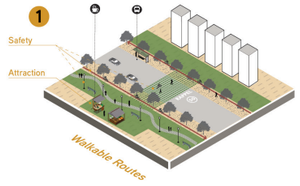
STRATEGIC TOOLBOX

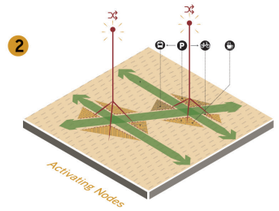
Connect

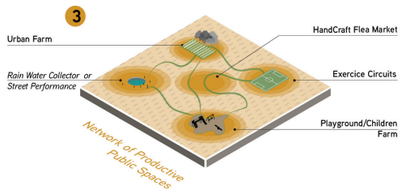
Attract

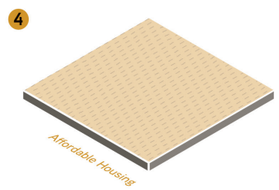
Create

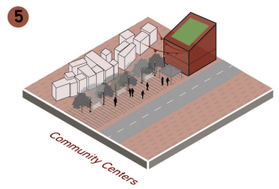
Expand

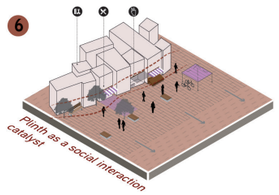


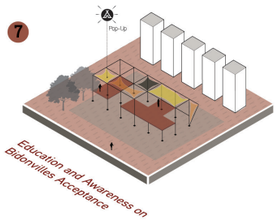


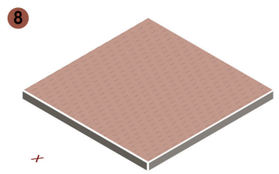


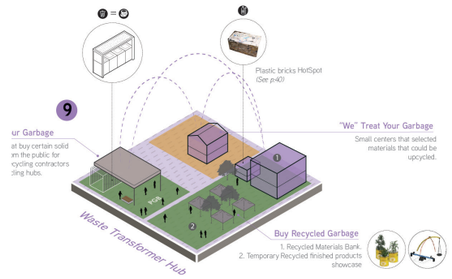


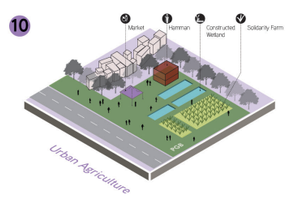


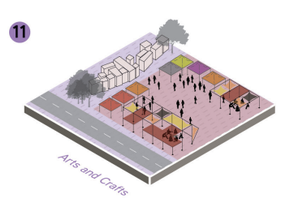


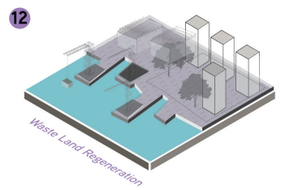












SG_ *Space*

Quality of Public Space and Urban Landscape

SG_ *Society*

Bidonvilles Reconciliation

SG_ *Economy*

Transition to Circular Economy Development

The Strategic Toolbox is a compilation of the strategies adopted throughout the chapter to achieve the spatial and socio-economic goals. It follows the same chronology of Connect + Adapt + Create, while Expand is still not clear how it will be shaped on spatial and social terms due to the uncertainty.

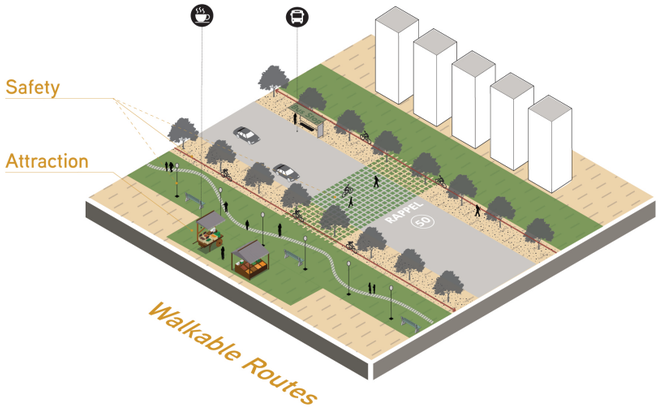
STRATEGIC ACTIONS
TOOLKT _*SPACE*

SG *Strategic Goal _ Space*

Quality of Public Space and Urban Landscape

Strategic Actions

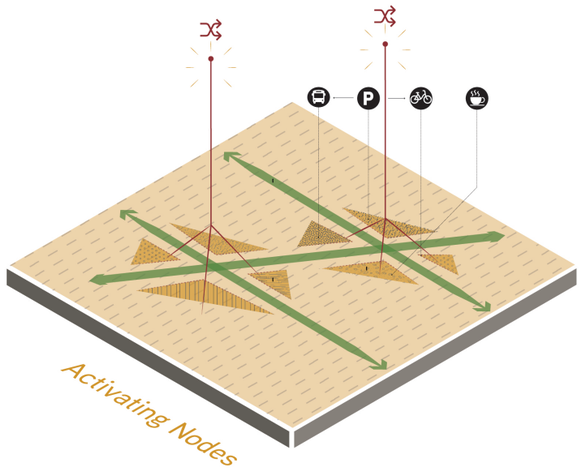
1 *Spatial*



Non- Spatial

Strategy 1 *to Connect!*
- Incentives to leave the car in the parking and swith to other mode of the
- Make it harder to and more expensive to park within the city.
- Prioritise safe and soft mobility.

2 *Spatial*

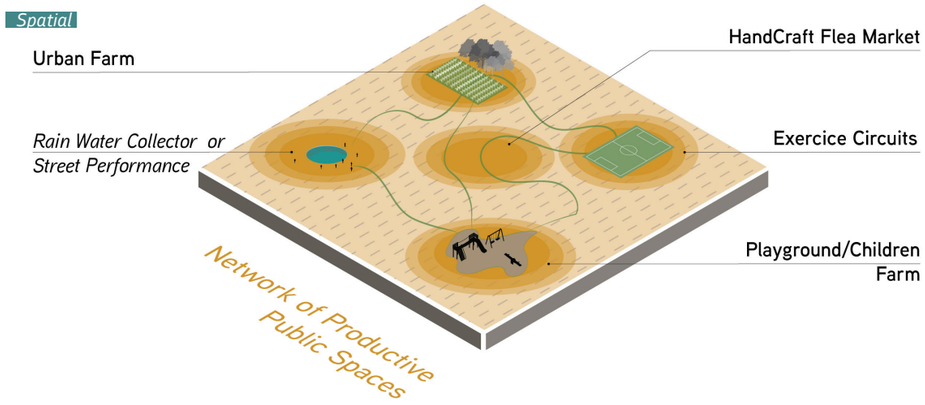


Non- Spatial

Strategy 2 *to Attract!*
- Empower the immanent potential of Vacant spaces for activating participation. Urban gaps gives citizens a chance to play a visible role in urban development process.
- Activate the Transport Nodes by promoting soft mobility use in conjunction with the circular activities.

Strategic Actions

3 *Spatial*



Non- Spatial

Strategy 3 *to Create!*
Create and introduce productive activities along the PGB to create a Network of productive public spaces.
Facilitate and promote creative grassroot and circular business models.

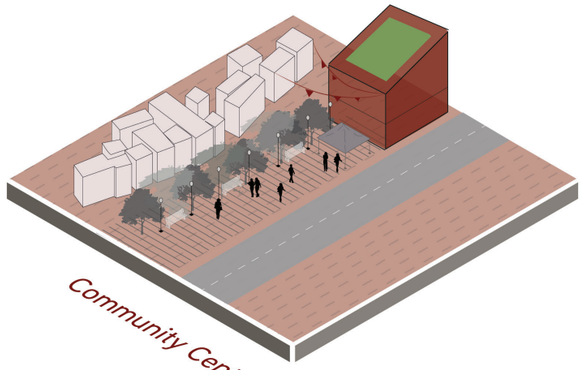
STRATEGIC ACTIONS
TOOLKT _*SOCIETY*

SG *Strategic Goal _ Society*

Bidonvilles Reconciliation

Strategic Actions

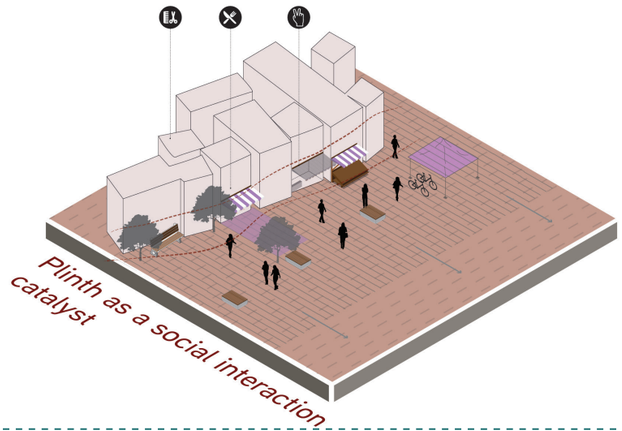
5 *Spatial*



Non-Spatial

Strategy 6 *to Connect!*
- Community Center as a social catalyst

6 *Spatial*

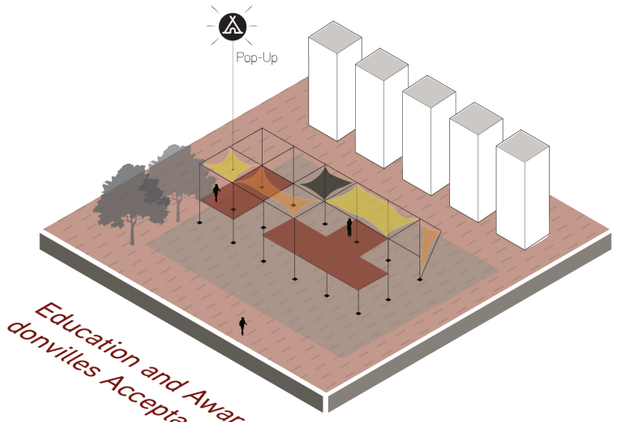


Non-Spatial

Strategy 6 *to Attract!*
- Dynamic Streets must offer economic and leisure activities to ensure continuous flow.

Strategic Actions

7 *Spatial*



Non-Spatial

Strategy 7 *to Connect!*
- Bringing out the activities and showcasing them through pop up events in formal settings.

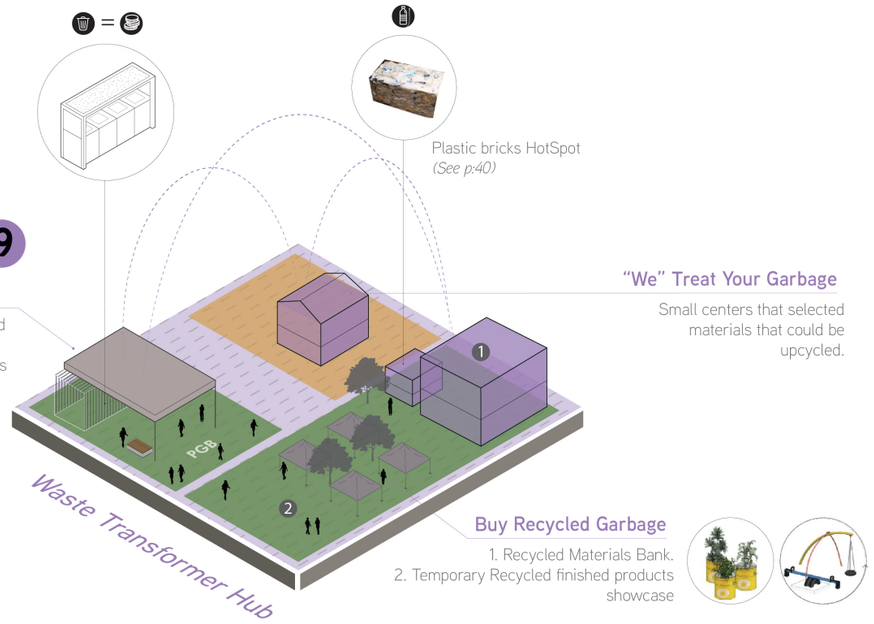
STRATEGIC ACTIONS TOOLKT _*ECONOMY*

SG *Strategic Goal _ Economy*

Transition to Circular Economy Development

Strategic Actions

9 Spatial

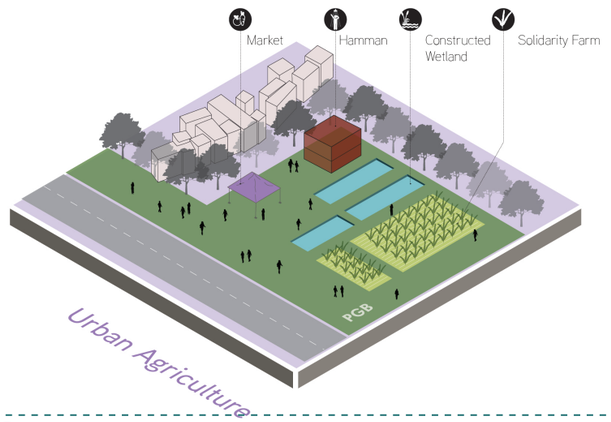


Non-Spatial

Strategy 9 *to Connect!*

- Waste management could be a profitable business. The informal sector already is tackling the waste issue and this presents an opportunity for Circular transition and improving life conditions for the bidonvilles dwellers and all the inhabitants.

2 Spatial



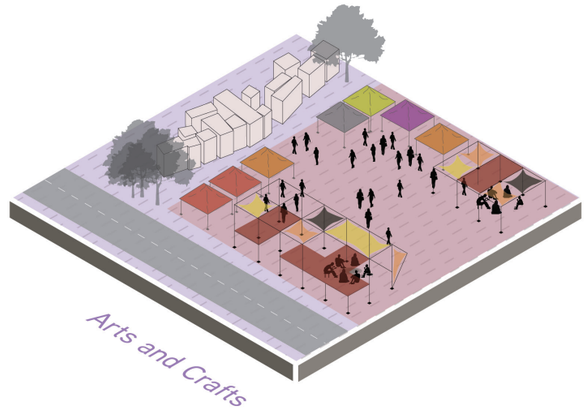
Non-Spatial

Strategy 2 *to Attract!*

- Urban Agriculture is an important integrating and productive activity for self-sustaining and income-generating neighborhoods.

Strategic Actions

3 Spatial

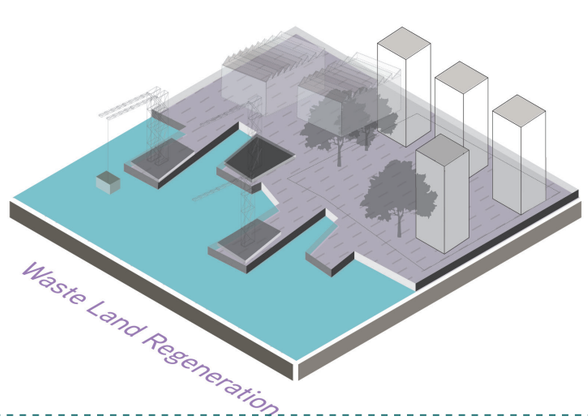


Non-Spatial

Strategy 3 *to Create!*

- Traditional Arts and Crafts provides attractive and high end products that could generate income for the bidonvilles dwellers and especially for women in weaving or leather alternatives manifacturing.

4 Spatial



Non-Spatial

Strategy 4 *to Expand!*

- Wastescapes and brownfield regenration for a city wide circular transition!

8. DESIGN: PILOT SITES

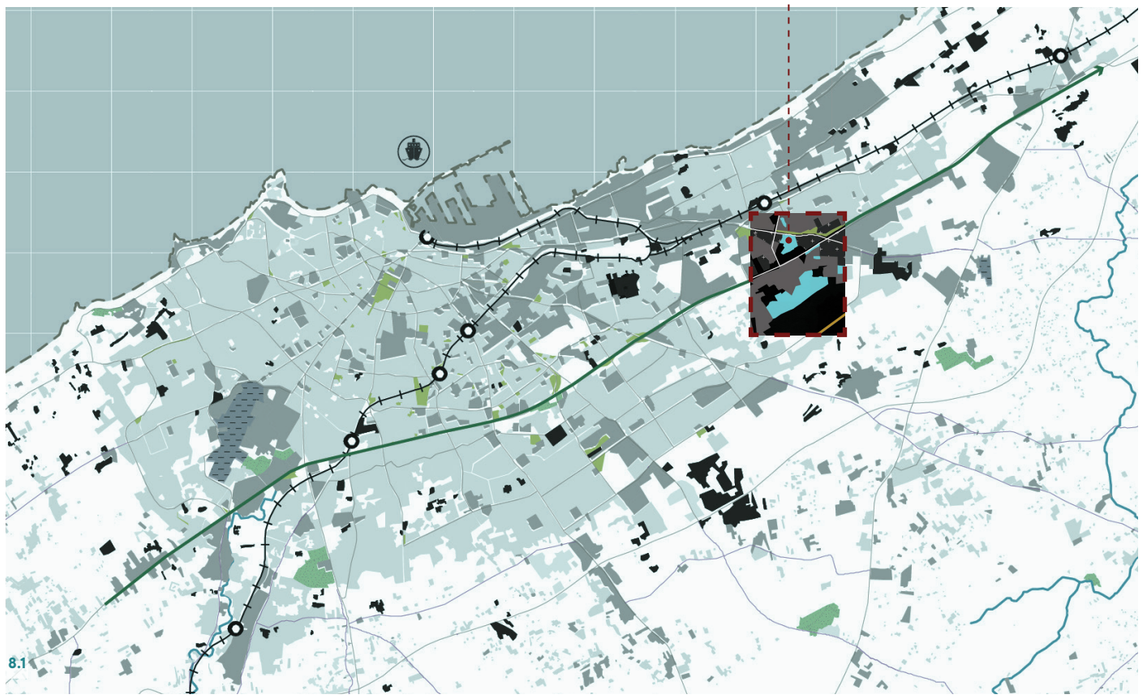
Illustration of life in the public space and possible interactions and activities. Source: Momentanement.

CHAPTER OVERVIEW

This chapter introduces the design strategies for setting the ground to circular development and more integrated bidonvilles within Casablanca. It shows the contextualisation and implementation of this toolbox in one bidonville that is selected in the Analysis chapter and an overview on the implementation process (fig8.1).

Sections:
8.1 Pilot Site: Douar Bouih

Pilot Site 1: Douar Bouih



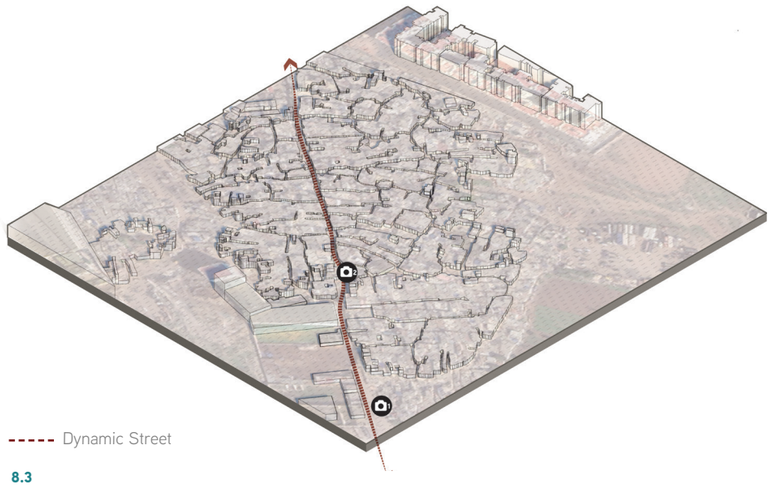
8.1

PILOT SITE 1:
DOUAR BOUIH

Douar Bouih is one of the oldest well-located bidonvilles in the city of Casablanca in Ain Sebaa disrict. The first settlements date back to the late 70's. Located at the edge of the A3, it has more than 1,600 barracks.

In this proposal, the investigation of the three steps Connect + Attract + Create will take place.

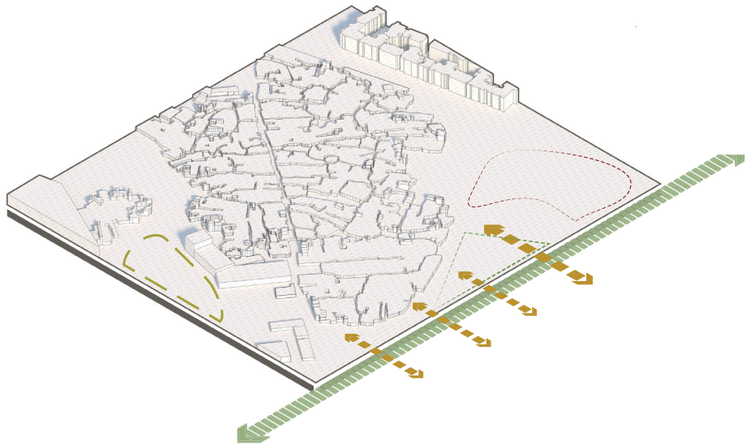
8.2



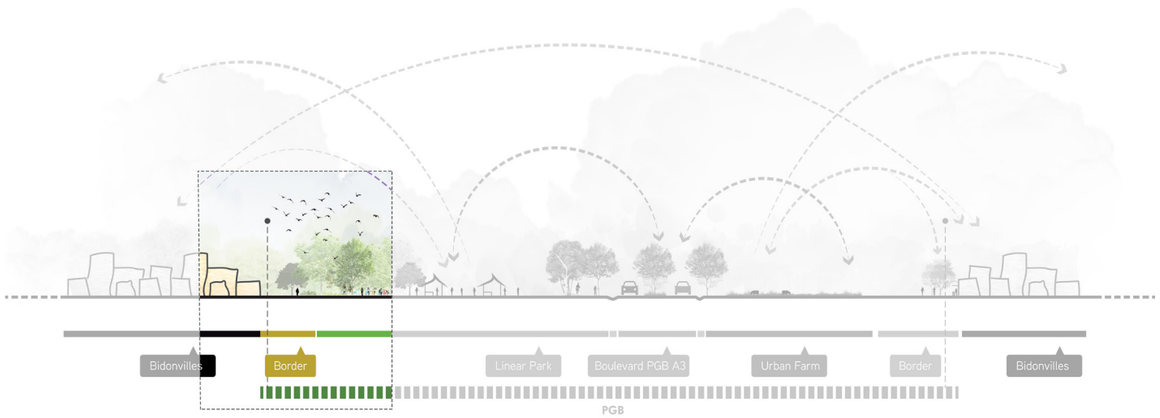
8.3

Fig 8.1: Birdview of Douar Bouih from 6th floor. By Author.
Fig 8.2: Location of the Site located on the PGB Zoom 2. By Author.
Fig 8.3: 3D tile of the bidonvilles Douar Bouih. By Author.

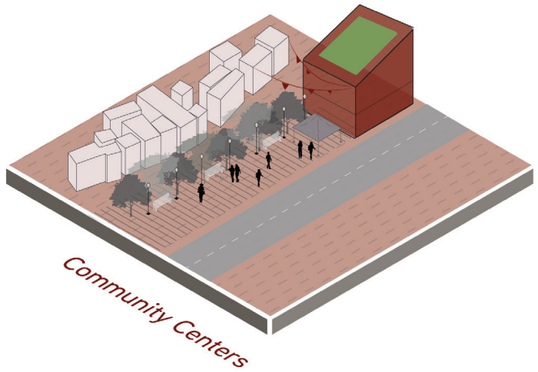
PILOT SITE 1:
DOUAR BOUIH _ *CONNECT*

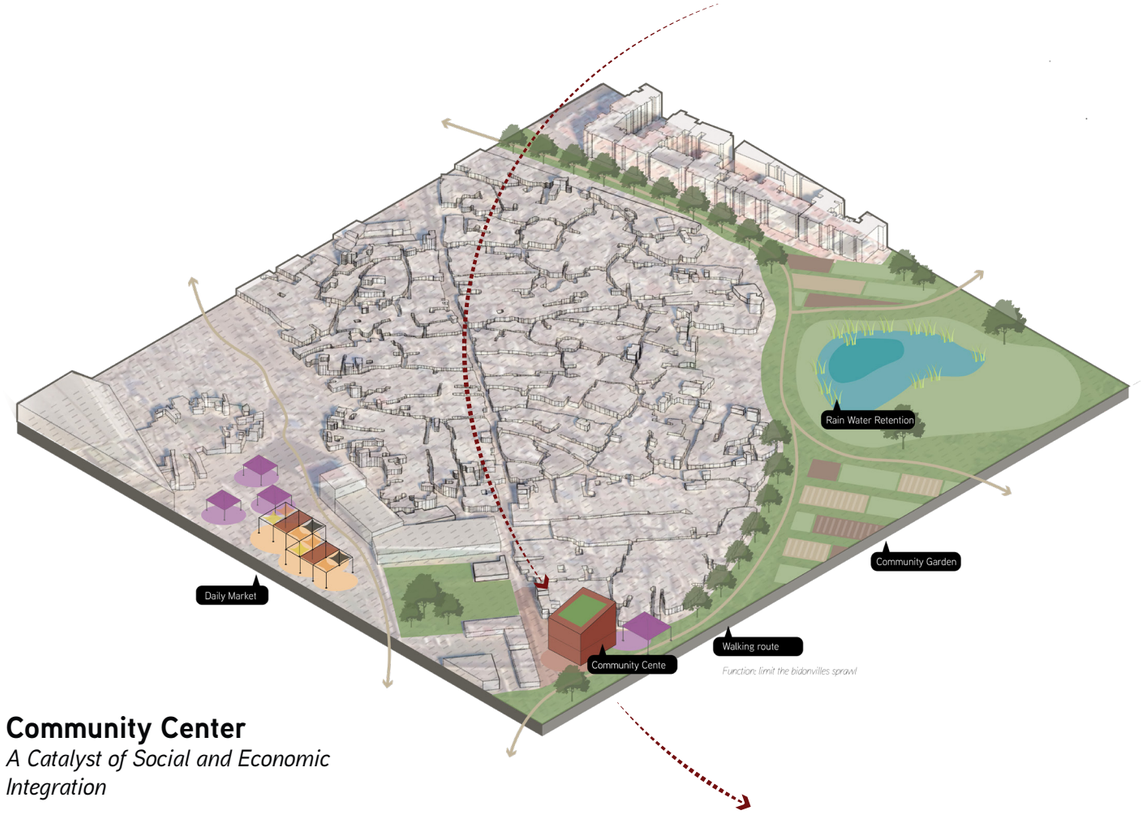


The phase Connect comes as a first attempt to explore what type of strategic interventions could help the PGB-bidonvilles consolidation proposals. Choosing the A3 as an experimenting ground in order to solve existing problems in the bidonville while investigating what can happen along the border.



The bidonville strength is its vibrant community. We can improve the image of the bidonville by reinforcing existing social structures and addressing everyday problems!

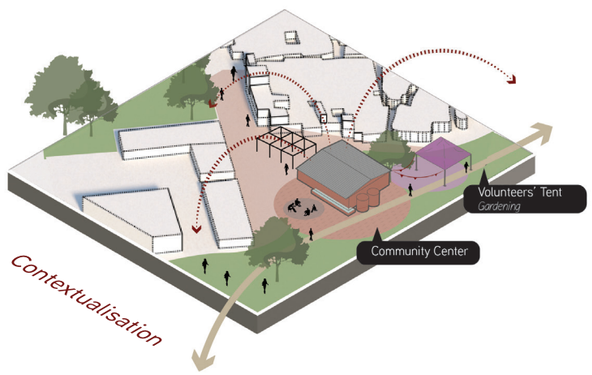




Community Center

A Catalyst of Social and Economic Integration

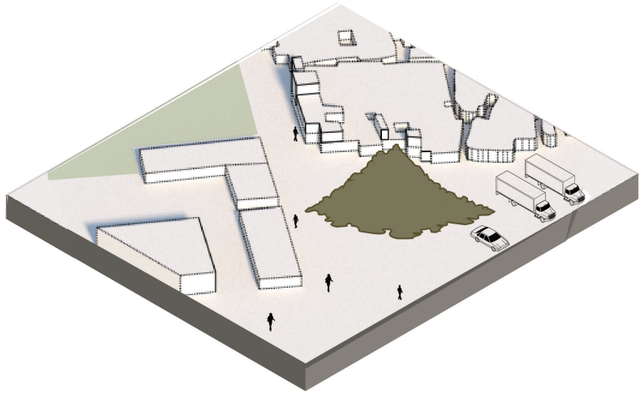
Dar Bouih Community Center is a technical and social infrastructure for Dar Bouih bidonville. It serves as an infrastructure hub providing urban services such as biogas, linked community toilets and as a business incubator promoting no-waste principles. Its purpose is to serve as a community empowerment tool and learning and knowledge sharing center.
It is a space to promote action among local actors and to elect a Community Development Commitee that would bridge the bidonvilles needs to the PGB by being the contact point with CasaCirculaire. It is also a showcase project for low cost circular construction.



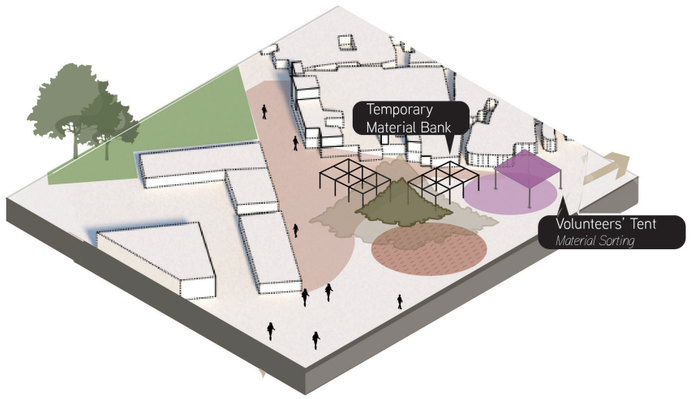
PILOT SITE 1:
DOUAR BOUIH _ *CONNECT*

Community Center_ Strategic Steps

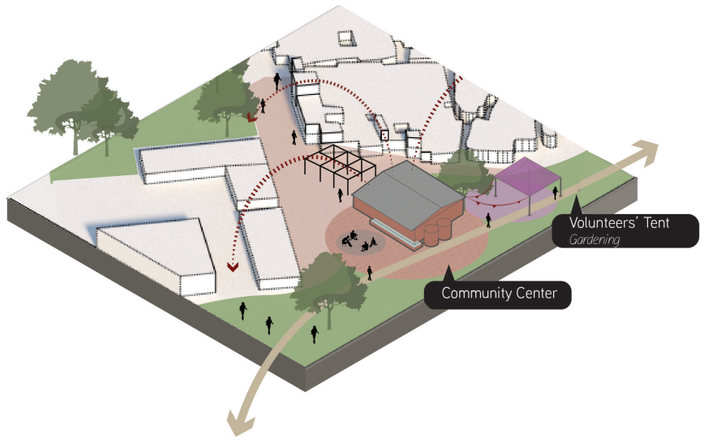
Step 1: The entrance and border of Douar Bouih represents an opportunity of connecting to the PGB. It can play an important role in catalysing and promoting activities that link the formal to the informal particulary with the already existing dynamic flow that crosses it evryday. However, the situation is quite unpleasant with a dump of used wood, tires and plastic as a first encounter.



Step 2: The idea here is to establish a first act of communal activity that consists of going through and sorting the materials that could have a second life for construction purposes or any other purpose in a form of a temporary Material Bank. While organising a design competition for the Community Center Design.



Step 3: The development of this community center and the creation of a multifunctional area in the frindge of the bidonvilles creates a clear connecting point and conveys the message of the new spatial and social features that this bidonville is striving for. It will be operated and maintened by social experts that connect CasaCirculaire and this bidonvilles.
This construction is a process of experimenting with co-creation with the community, Design students, with recycled materials.



2021

Connect_ 2025

Stakeholders Involved

Civil Society

Community

NGO's (Women and Children Rights Protection)

Volunteers

Public

Municipality
AUC
ADS

Private

Architects
Designer
Entrepreneurs

PPP

CasaCirculaire
Al Omrane
CasaEvents

Roles of CasaCirculaire

Key Stakeholder!

Inform local actors and residents on the importance of such an intervention and emphasise their contribution to the city's Circular Transition. Create an empowerment strategy for the bidonvilles dwellers to start changing their perception about themselves. Thus the importance of having strong social expertise within CasaCirculaire that can achieve such a task.
Explain that this Community Center is a 'test' for participatory planning.

Guide the Construction Process
Define architectural project requirements and pitch it to the EAC (Architecture School of Casablanca).
_Use of Recycled Materials.
_Include the Community in the design and construction expertise.

Upscale the Productive Identity
Investigate and communicate closely the economic activities that have the potential of improving the spatial, socio-economic conditions. Facilitate and help to implement them by sharing knowledge and help with funding.

Engagement Strategies

REGULATE R

Making use of top-down regulations and financial incentives to turn adversarial stakeholders into collaborative allies. It concerns mainly Al Omrane: the Real Estate company for Resettlement and Social Housing Development. Also, actors from the private sector interested in buying and developing valuable land need to be regulated and convinced of the public interests at stake.
Still, maintaining a good relation with these parties is important knowing how powerful they are. This can happen by recognising their objectives and find innovative ways to include them

CONVINCE C

Building a strong argumentation study to pitch to stakeholders that have the most power and might not be in the same line of thoughts

EMPOWER E

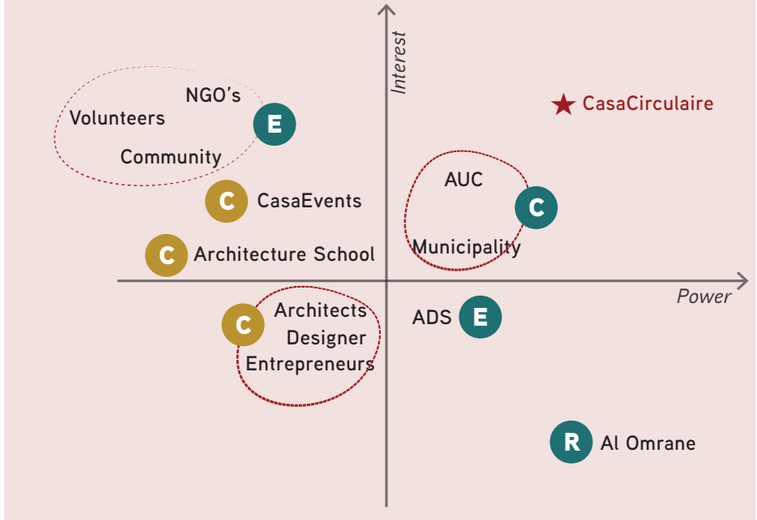
Make stakeholders that share the same values and that are willing to contribute, to gain substantial role and influence in the planning and decision-making process.

COLLABORATE C

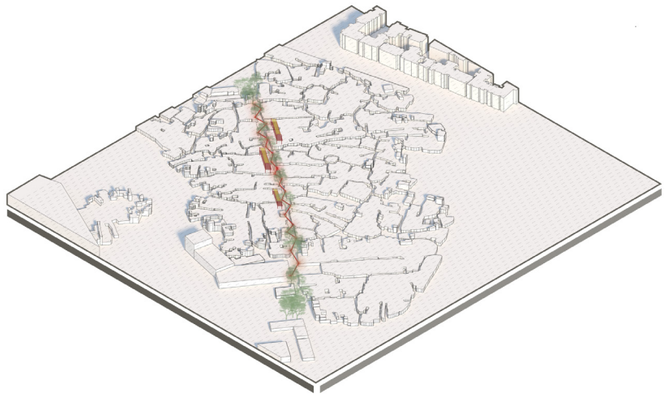
and reach out to innovators, designers, architects, start-ups, and the creative industry in order to find new smart ways of construction and upscaling the potential activities. Make them aware of their role in this transition process.

Actors	Interest	Ressources
	Community: Solving the bidonvilles challenges **NGO's:** Improve the urban landscape **Volunteers:** Improve social conditions of bidonvilles dwellers.	**Community:** Local Knowledge Skills and Capacities, strong Solidarity and Community relations **NGO's:** Humanitarian Purpose **Volunteers:** Manpower, time, free.
	Municipality: Solving the bidonvilles challenges **AUC:** Improve the urban landscape **ADS:** Social Development Agency Improve social conditions of a large population	**Municipality:** Construction Authorisations, Funding **AUC:** Access to Data, Funding **ADS:** Social Expertise and knowledge
	Architects: Introduction to new type of projects. **Designer:** Contribute to social humanitarian projects **Entrepreneurs:** New emerging circular economic opportunities. **Architecture School:** Curriculum Enrishment, Field Experience.	**Architects:** Building Knowledge, Operability... **Designer:** Creativity **Entrepreneurs:** New emerging circular economic opportunities. **Architecture School:** Curriculum Enrishment
	CasaCirculaire: Circular Economy Implementation **Al-Omrane:** New Opportunity for future industrial Development. **CasaEvents:** New City Branding	**CasaCirculaire:** Funding, Network, Power, Operational Tools **Al-Omrane:** Land **CasaEvents:** Social Media, Vast Marketing Network, Event Industry

Engagement Proposal

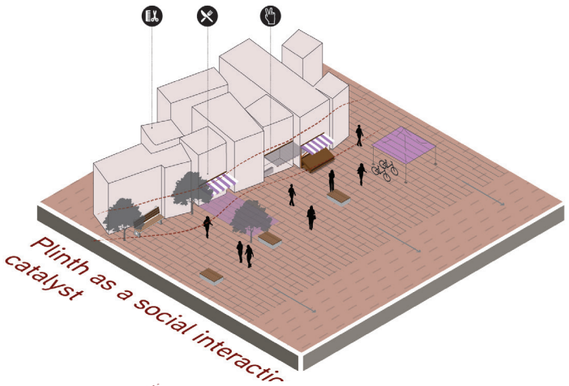


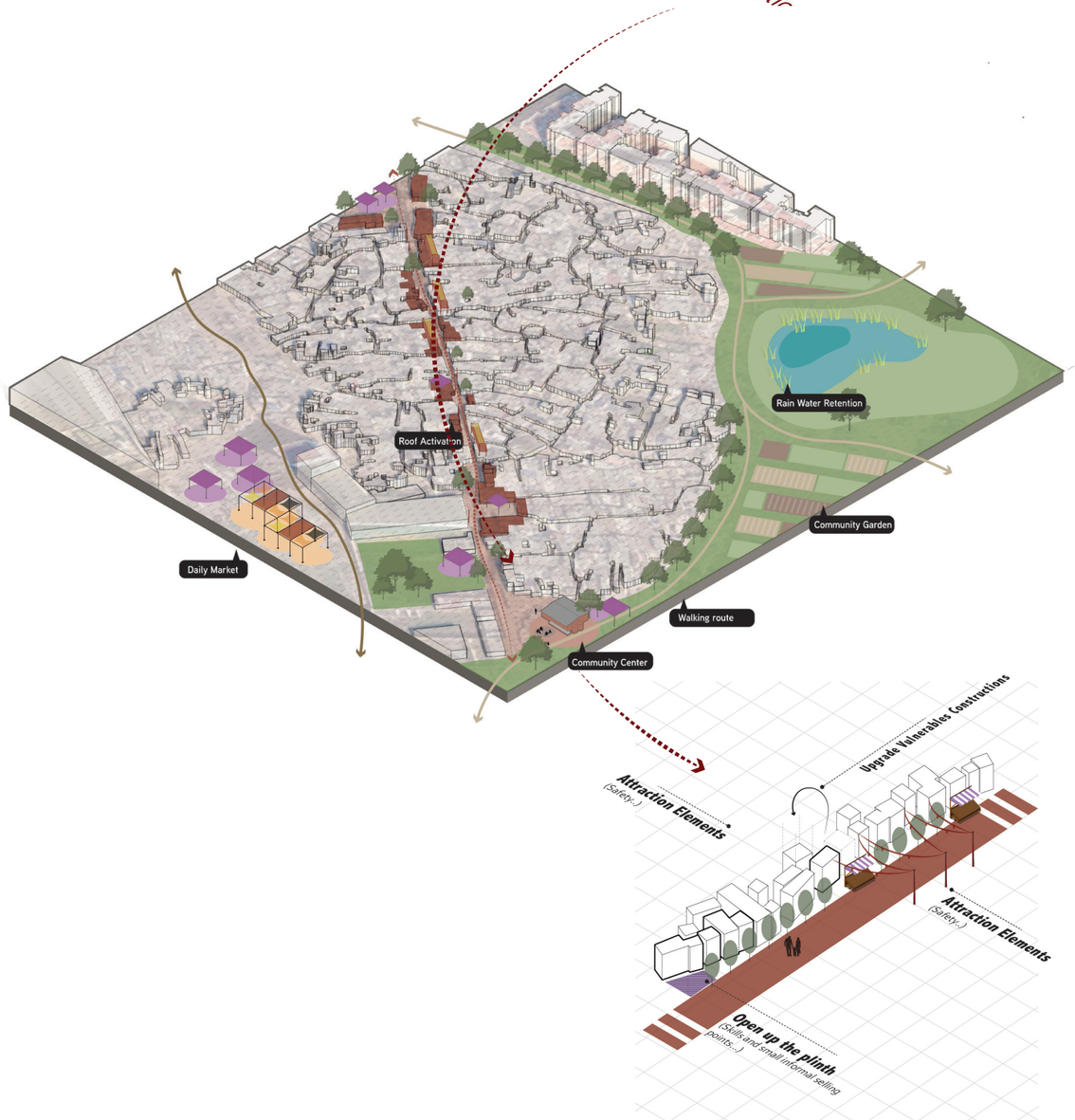
PILOT SITE 1:
DOUAR BOUIH _ *ATTRACT*



The phase Attract focuses on spatial improvements in order to attract more people to cross and shop along the street. The goal is to transform the street from being an easy crossing to a vibrant public space. This by opening up the plinth for commercial activities and using roofs for possible catering services or temporary exhibitions.

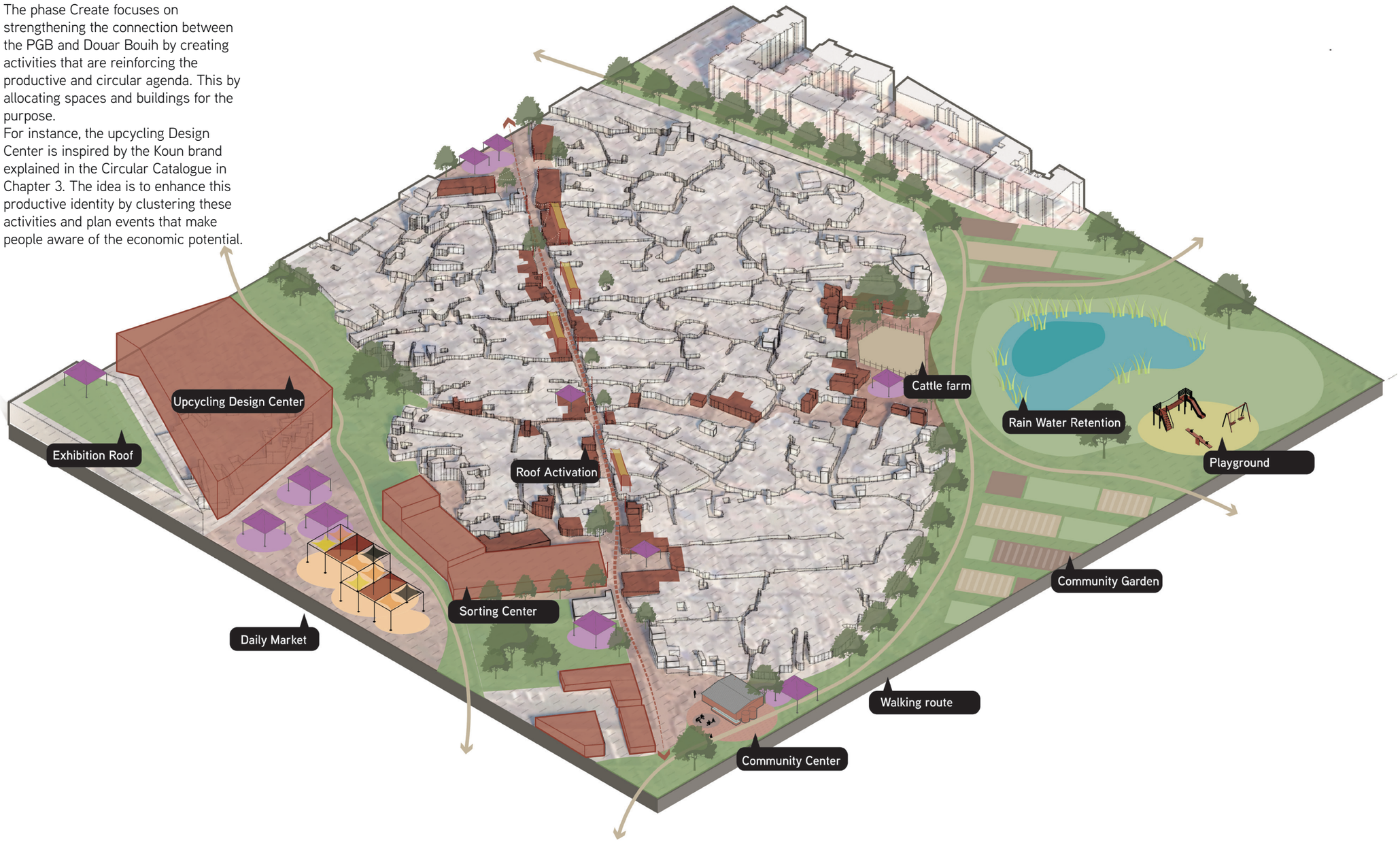
Fig 8.4: Photo showing an example of Roof activities in the traditional moroccan context. Retrieved from: https://www.standard.co.uk/lifestyle/travel/best-rooftop-restaurants-in-marrakech-a4032351.html





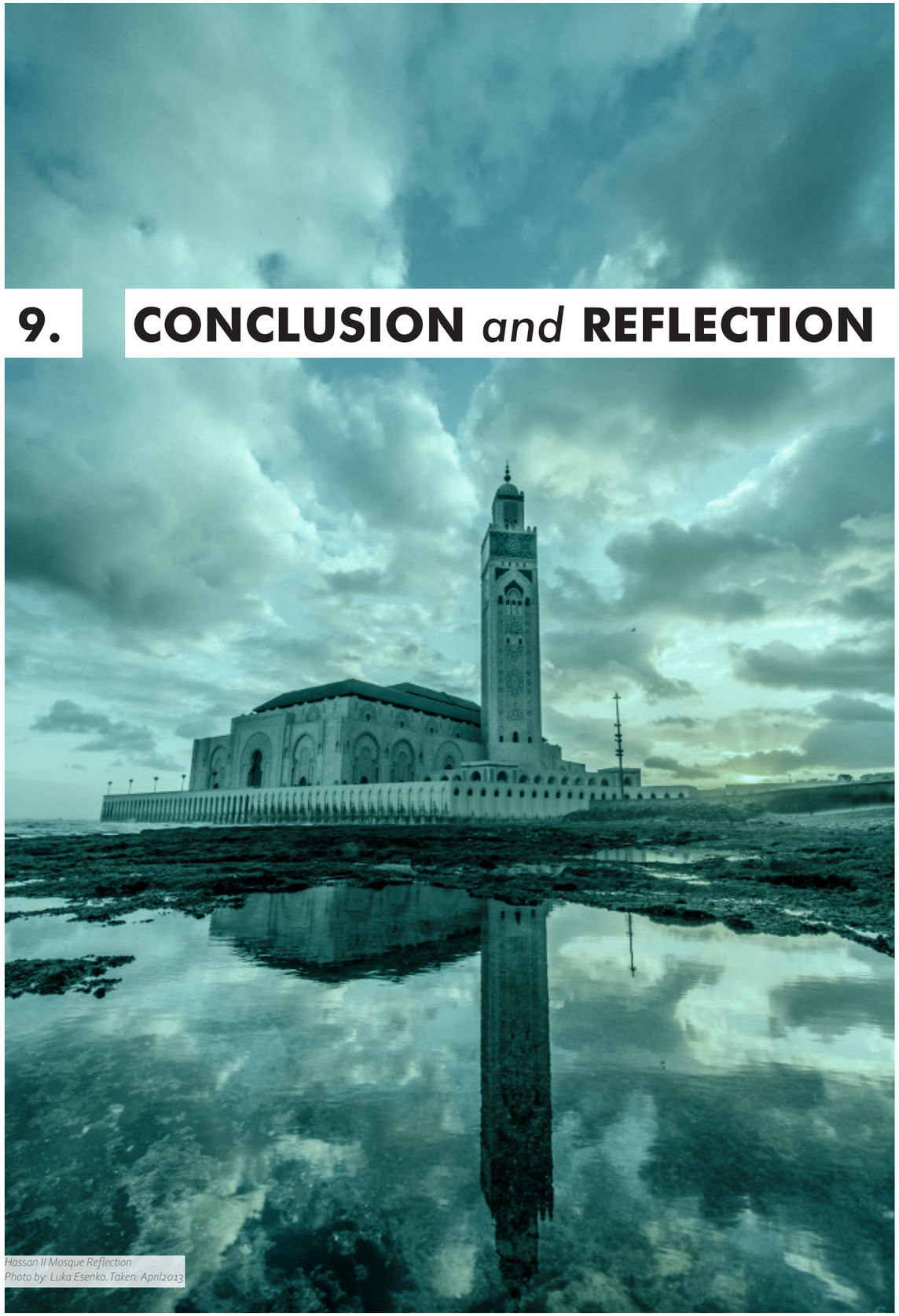
PILOT SITE 1:
DOUAR BOUIH _ *CREATE*

The phase Create focuses on strengthening the connection between the PGB and Douar Bouih by creating activities that are reinforcing the productive and circular agenda. This by allocating spaces and buildings for the purpose.
For instance, the upcycling Design Center is inspired by the Koun brand explained in the Circular Catalogue in Chapter 3. The idea is to enhance this productive identity by clustering these activities and plan events that make people aware of the economic potential.



This series of interventions will qualify the connection of the bidonville Douar Bouih with its surrounding area. Several points of interest need to be activated along the border zone and the Community Center will facilitate this process of revitalisation and activation.

9. CONCLUSION *and* REFLECTION



Hassan II Mosque Reflection
Photo by: Luka Esenko. Taken: April2013

CHAPTER OVERVIEW

The last chapter of this report aims to gather the findings of the research by evaluating and discussing the results and the limitations in the specific context of the project and in the larger societal and scientific context.
Starting by discussing answers to the research questions presented in chapter 3, then proposing a list of recommendations and requirements for further research. Afterwards, an adapted vision for the city of Casablanca is proposed. It takes under consideration the discussion and the evaluation mentioned above and reflects back immediately on the first vision proposal. Therefore, an important note is elaborated in order to clarify the critical issues in relation to Urban Governance in Casablanca and the question of Land Tenure.
The chapter concludes with a general reflection on the project (Role of Planning and Design), scientific relevance (Contextualised Circular Economy), societal relevance (Design for Social Destigmatisation), transferability, limitations and ethical considerations of the project and finally, a reflection on the Studio and the Course.

Sections:

9.1 Discussion: Research Questions
9.2 Recommendations and Requirements
9.3 Evaluation: Vision
9.4 Reflection

9.5.1 General Reflection: Role of Planning and Design
9.5.2 Scientific Relevance: Contextualised Circular Economy
9.5.3 Societal Relevance: Design for Social Destigmatisation
9.5.4 Transferability: Villes avec Ses Bidonvilles
9.5.5 Limitations and ethical considerations
9.5.6 Reflection on Studio and Course

DISCUSSION:
RESEARCH QUESTIONS

How could contextualised circular economy framework facilitate the integration of les bidonvilles within the city of Casablanca and act as a catalyst for inclusive development?

This is the main research question that this project attempts to answer to multiple sub-research questions were developed in order to understand and explore the findings.
A first step would be to give answers to these questions and then relate back to the main research question.
They are divided in four main phases: Pre-conditions, Methodology, Development and Evaluation.

1. How did the urban evolution of Casablanca influence the socio-spatial inequalities within the city? What can we learn from the past and actual attempts in dealing with les bidonvilles? Specifically the resistance towards eradication and resettlement initiatives? ***(Pre-Conditions)***

With industrialisation during colonial times, there was a demand for cheap labour which led to the influx of rural migrants seeking jobs in the rapidly growing cities. However the colonial administration was not willing to share the urban spaces and did not provide housing to this growing population which resulted in informal settlements housing this new population. Over the years this incapacity of the administration (before and after the independence) to provide affordable housing led to the emergence of more and more bidonvilles in the city of Casablanca.
After the french colonisation, the urban planning was guided by economic gains but only for a few.
The Municipality of Casablanca and the national government acquired the Bidonvilles for clearance and relocated their inhabitants to improve their poor living conditions.
However the reality was far from this: these lands were transformed into commercial centers or profit making projects while the relocated slum dwellers as shown by numerous studies lose their jobs, access to water and sanitation, access to facilities and opportunities in the city further deteriorating their health conditions. Rather than alleviating the gap, this led to the widening of the socio-economic inequalities.
This thesis proposed to improve the living conditions of les Bidonvilles by responding to the socio-economic needs of the people and attempts to alleviate poverty by investigating the existing economic opportunities.
All of this, under the disclaimer that Resettlement has extreme negative consequences and it is important to look for alternatives that amend the existing social order rather than create a new one somewhere in the middle of nowhere.

2. How can the bidonvilles be integrated in the city's economic, social and spatial systems? ***(Methodology)***

The project tried to answer this by setting a clear set of factors in relation to space, society and economy that are investigated throughout the whole process.
First through the analysis and bringing out the challenges and opportunities in the three systems.
Then proposing strategic goals to address them:
'Space': Improving the Quality of Public Space and Urban Landscape
'Society': Bidonvilles Reconciliation.
'Economy': Transitioning to a Circular Development
By clarifying these goals, a set of strategic actions, spatial and non-spatial, was proposed to investigate the possible routes to attend these goals.
An important element that was developed with the intention of providing an 'infrastructure of integration' for les bidonvilles is the PGB. Even though the role of the PGB surpasses the intention of this project, it was necessary for it to serve bigger emerging issues in order to be considered for implementation by the planning authorities.

3. By addressing the bidonvilles challenges from flows and activities perspective, how can the transition to circular economy affect the spatial dimension in the city and the bidonvilles? ***(Development)***

Activities and flows shape the cities we live in in general. They shaped the current spatial characteristics of the bidonvilles and made them what they are. And what makes them special and different in that sense, is that the people who built this did not look at what needs to be built first and then what materials that is needed to do so, it is the other way around. What materials are around and what can be done with that.
Improving the spatial conditions of these areas should also follow the same path, and bring out what is existing around to connect, attract and create. Connecting to the existing opportunities, attracting by phasing out gradually the flows or activities negatively impacting the general conditions and creating new ones that fit the agenda and help the development process. **The conclusion is that Circular Economy principles in the case of the bidonvilles can help understand these processes and offer room for experimenting.**
For example, creating businesses that benefit from all these flows and connect them together to improve the living conditions thus the spatial aspect (food and water supply). It is not only about recycling a path but also about paving a new lifestyle.

4. What has to be introduced and strengthened in the existing Governance system in order to facilitate the transition towards a more sustainable inclusive Casablanca? ***(Development)***

Citizens as the protagonists of urban transformation:
In order for this project to achieve its goals, many interventions have to take place on the local level. Creating and strengthening a planning framework that enables a guided contribution and a platform of knowledge and expertise sharing, is crucial.
A proposal was that the UAC (urban agency of casablanca) creates a cellule or commission of transdisciplinary members with a heavy focus on the social expertise, that can be the first contact point. It will be responsible for determining the local projects that can have the highest chance of success and reaction from the public. It can define the studies that need to be done and designate appropriate operators.
The development of this organisation can grow and adopt a status of SDL (company of local developments) (see analysis p:61) that would be called CasaCirculaire so it can have enough capacity, knowledge and a legal status that enables it to develop a vision and implementation tools to instaure Circular Economy in a wider scale.
The name CasaCirculaire relates to the existing nine companies that guide the general city development (CasaTransport, CasaAmenagements, CasaEvents...)

5. Can Circular Economy principles help to alleviate poverty and address the challenges of the bidonvilles? ***(Evaluation)***

The incorporation and promotion of circular economic principles within the economic system of the City of Casablanca would generate a large number of job prospects which could benefit the inhabitants of the bidonvilles.
Especially if the emergence of this new development comes from the already existing circular behaviours that are driven by necessity. **Once upscaled and consolidated, these circular economic practices present an opportunity for spatial transformations which could help in improving the living environment. Not only for the inhabitants of les bidonvilles, but for the entire city of Casablanca.**

EVALUATION: VISION

The research outcomes guided the evaluation of the vision drafted in chapter 6. Many conclusions were made based on the strategic development and how the local scale proposals relate back to the city scale. Thus it is important to re-evaluate the vision.

The uncertainty of the future of the bidonvilles still remains.Will the circular upgrading agenda, combined with the social impact, be able to convince the planning authorities to eliminate programs like cities without slums and help alleviate poverty?

The updated vision takes under consideration all these factors and proposes an aspired future in the form of a defined infrastructure proposal: Productive Green Backbone.(PGB)

1. Fixed element of the vision: PGB

The PGB is an infrastructure activation project that attempts to resolve the several problems that Casablanca suffers from and presents an opportunity to integrate and upgrade the bidonvilles in this process. It also follows the city's existing development plans. This vision points out possibilities of extension:
- Towards the North-east by playing the role of a catalyst as an urban regeneration project.
- Towards the South by connecting to the PGB through a network of forests, agriculture lands, farms and recreational parks.
- At the Center: Along the public transport system.

2. Open question: The future of the bidonvilles. Should they stay or should they go?

This thesis still argues that a resettlement project that is forced and takes place outside the city resulting in constructing new dormitory cities on the expense of valuable land, should be avoided in any case.

The proposed scenarios are:

IN-SITU CIRCULAR UPGRADING

The selected sites that this scenario should be applied to are the ones that present a strong potential of integration based on the following characteristics:
- Their productive identity: Prioritise the ones that could/are included in the economic and functional services of the city and their adjacent neighborhoods.
- Present strong opportunities to connect and contribute to the Productive Green Backbone.
- Communities that are highly integrated in their location and their immediate neighborhood. The older the bidonvilles, the more likely they have these types of characteristics.

RELOCATION WITHIN

Casablanca suffers from strong housing shortage. The question of affordable housing is prominent. The industrial polluted sites are spread for many hectares along the eastern coast line. It is a huge opportunity of development for the city that fits the circular development agenda.

Thus the proposal of redevelopment of this Eastern coastal area requires setting up requirements for affordable housing that needs to be planned in this area before other development follows. This allows for a new "smooth" resettlement that avoids urban sprawl and the destruction of valuable agricultural land while keeping intact the population within the city and their sources of income.

In order for these scenarios to provide fair results and an accurate selection, there should be a study that analyses all the bidonvilles of Casablanca and responds to the requirements mentioned above. Furthermore, accomplishing this study represents a first step towards acceptance of les bidonvilles and destigmatisation.

0 2 km

N

IN–SITU CIRCULAR UPGRADING

Bidonvilles
Residential Built-up
Industrial Built-up
Urban Green
Tram Lines
PGB Expansion Proposal

0 2 km

N

RELOCATION WITHIN

Bidonvilles
Residential Built-up
Industrial Built-up
Urban Green
Tram Lines
PGB Expansion Proposal

0 2 km

N

EXPAND!

Bidonvilles
Residential Built-up
Industrial Built-up
Urban Green
Tram Lines
PGB Expansion Proposal

REFLECTION

Contextualised Circur Economy and Slum Upgrading Alternatives
Scientific Relevance

This project sheds light on a new application of Circular Economy in the context of slum development.

When it comes to CE literature, the social and spatial dimension have been largely ignored in urban studies of transitioning to Circular Economy (Fratini et al., 2019; Moreau et al. 2017; Korhonen et al., 2018).

Circular transition experiments in the context of this project consist of the identification and the implementation of strategically located circular economic activities that aim to alleviate poverty. The main goal is to integrate it in the city system rather than to close the loops of flows.
A survey of literature shows that there is little research on the intersection of slum upgrading and local economic development (UN-Habitat, 2018, p:25). Thus this proposal highlights the potential of relatively low-tech solutions, based on traditional crafts or necessity-driven entrepreneurialism.
In other words, it demonstrates that many potential synergies exist between CE activities and existing slum activities. In the design and implementation of urban planning strategies for developing countries contexts, CE seems to be able to provide new tools for the practical slum upgrading mechanisms.

To conclude, the scientific contribution of this project is first: positioning the project in the intersection of Circular Economy and slum upgradation by itself. Second, defining the Contextualised Circular Economy Concept as a more comprehensive approach that investigates existing economic practices (Productive identities), connects them to the urgent social needs in order to improve the spatial conditions.
Lastly, the project argues that a city wide transition to CE can emerge from promoting bottom-up strategies that could be co-opted to new circular development strategies. In other words, developing countries striving towards more inclusive sustainable development should devise solutions emerging from their own potentials and challenges. rather than following the path of western/european circular transition that is more of a Top-down approach requiring more complex institutional and financial instruments.

Design for social Destigmatisation
Societal Relevance

The elaboration of alternative slum development approaches requires a shift in the common negative perception of slums. Thus, an important element to mention is the destigmatisation processes that are essential for the social integration throughout the scales.
Designing for plinth activation, small urban scale interventions in opportunistic locations can play a big role in how the place is perceived. The Societal part of the strategic toolbox is a chronological proposition for that. Establishing a community center in the entrance of a slum conveys a message of solidarity and organisation infrastructure.
Bringing out to the formal city all of these informal activities in attractive settings is also a step towards Destigmatisation.

However, it is important that this process should be consolidated by the government. In other words, Villes Sans Bidonvilles slogans should be banned and replaced with more accepting and empowering messages. A first step would be to map these areas and not assume that they are already gone in the official documents.

Limitations and Ethical Considerations

Exposing the vulnerable inhabitants of les bidonvilles to notions of circularity and sustainability could be a challenge because most of this population is analphabet or with very basic education. Implementing and discussing change in planning methods will require a lot of time and effort. Adapting to the new ways of thinking resources is going to be challenging. But on the other hand, it will develop new opportunities of economic development.

Data Collection, Problems and Compensation methods represent the most important limitaion
The empirical material is collected through a combination of methods: stakeholder interviews, spatial analysis and mapping, site observation of (circular) socio-economic activities and spatial conditions and explorative spatial design. On that basis, the project identifies the key opportunities and barriers for harnessing local assets for a contextualised circular economy as a means for integration of les bidonvilles into the socio-economic systems of the city. This is done by proposing a circular slum integration design that takes the local scale as a starting point to inform the vision on the city scale.

The data and the particular focus group (slum dwellers), need a very clear assortment in situ, so this can be a limitation that needs to be considered. Also the capacities at the implementation of circular strategies need some culturally based recognitions. The fieldwork personal observations' were the argumentation behind many design strategies decisions and some theoretical conclusions. This represents a compensation method that is biased and should be considered as a limitation. In parallel it demonstrates the lack of research and data on les bidonvilles.

REFLECTION

Transferability

Developing a toolkit called ***Villes avec ses bidonvilles: Circular Upgrading ToolBox*** that presents a list of steps and recommendations to alternative slum development proposals on different scales. The purpose is to help guiding the process of upgradation in a more comprehensive way by taking spatial, social and economic dimensions under consideration.

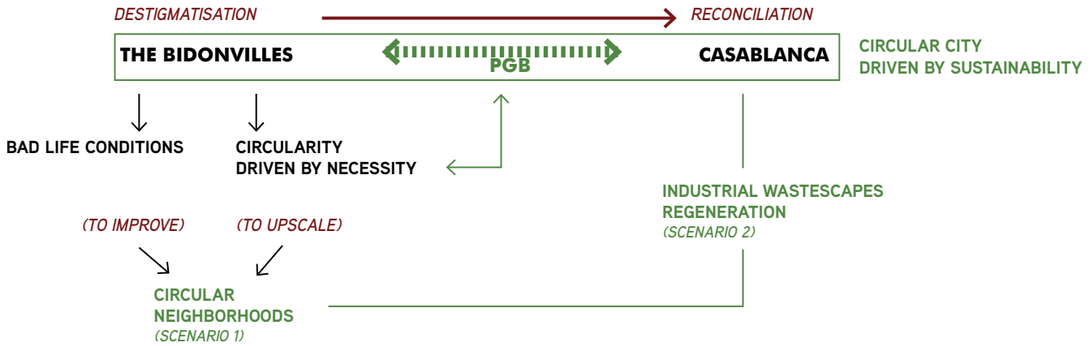
Another transferable element of this thesis is the concept of Contextualised Circular Economy that is shaping new paths towards Circular Economy transition coming from bottom-up initiatives.

Reflecting on the course and the Studio

This graduation project falls under the Complex Cities studio of the Urbanism Master track. It addresses the topics of Slums and Circular Economy: in other words, it explores alternative slum development through the lens of circular economy (CE) principles. This being said, the studio has an expertise in spatial planning, territorial governance and informality. These provided the main set of knowledge and research topics needed to conduct and guide the thesis elaboration process.
The starting point that made the Complex Cities studio an appealing choice was the aspiration to contribute to the Action Plan of the Union for the Mediterranean Project. The first area of action of this plan is taking Informal settlements and deprived neighbourhoods as focus points for the creation of inclusive cities and regions of the mediterranean. My project location is in Casablanca, Morocco. The location and the agenda of my project correspond to one of the main components of the mediterranean project which gives it another extra dimension/possibility of operability.

Additionally, the continuous critical discussion about the role and realm of intervention of spatial planners that characterises the graduation studio, is quite relevant to my project: as interventions on slums on a city scale were often seen as part of a political action instead of design and planning tasks in the context of my country. The approach provided by the Complex Cities research group helps shape this notion and role of the planner. It involves a combination of theoretical, spatial and policy analysis in a holistic manner as an attempt to unravel the complexity of informal urban systems that are imperative to understand such contexts and be able to come up with different proposals on multiple levels and scales and most importantly, position oneself and clarify the contribution to this complex urban phenomenon.

On the other hand, the possible contribution of this project to the studio involves the recognition and exploration of alternative developments approaches in cities of the Global South. Therefore, the research adds to the repertoire through the exploration of topics such as spatial implications of CE in the Global South and Slum Upgrading under a Cotextualised CE framework.



CONTEXTUALISED CIRCULAR ECONOMY

A concept that follows the CE principles by investigating existing **economic** practices (Productive Identities), connects them to the urgent **social** issues in order to improve the **spatial** conditions.

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The Slums phenomenon is a global and ethical challenge that hinders the well-being of cities. The vast majority of these areas are located in and around cities of the Global South because of the fast urbanisation and globalisation trends that have been met with insufficient employment, infrastructure and housing opportunities.

This graduation project will explore new slum development alternatives through the lens of circular economy principles. The main focus is to elaborate holistic proposals and strategies that reject eviction and resettlement processes and aim for social, spatial and economic integration.

Taking the case of Casablanca, Morocco, the project takes as a starting point the existing assets of les bidonvilles* which potentially, will lead to better approaches for tackling the challenge of slums at the local and metropolitan scales while developing contextualised circular economy guidelines.