

Syracuse University

**SURFACE**

---

Architecture Senior Theses

School of Architecture Dissertations and  
Theses

---

Spring 2010

## The Architecture of Resistance: Pivoting the Informal Economy

Michael Langone

Follow this and additional works at: [https://surface.syr.edu/architecture\\_theses](https://surface.syr.edu/architecture_theses)



Part of the [Urban, Community and Regional Planning Commons](#)

---

### Recommended Citation

Langone, Michael, "The Architecture of Resistance: Pivoting the Informal Economy" (2010). *Architecture Senior Theses*. 119.

[https://surface.syr.edu/architecture\\_theses/119](https://surface.syr.edu/architecture_theses/119)

This Thesis, Senior is brought to you for free and open access by the School of Architecture Dissertations and Theses at SURFACE. It has been accepted for inclusion in Architecture Senior Theses by an authorized administrator of SURFACE. For more information, please contact [surface@syr.edu](mailto:surface@syr.edu).



**the architecture of resistance**  
pivoting the informal economy

michael langone

professors yutaka sho, kevin lair  
2010

thesis submitted toward completion of a bachelor of architecture degree

# table of contents

<b>introduction</b>	
rewriting the city - the power of the informal	4
synopsis : thesis statement and intentions	6
context overview	8
<b>the informal space of commerce</b>	
introduction : incoherence, uncertainty, instability, and discontinuity	10
<i>roque santeiro</i> and the beer standard	16
<b>tactics of the informal economy</b>	
introduction	30
players: guardians of goods	
"the nomad"	32
"the chameleon"	34
"the opportunist"	36
"the trafficker"	38
"the bank"	40
players: suppliers of services	
"the robot"	42
"the driver"	44
"the mover"	46
"the buyer"	47
section summary	48
<b>provisional architecture : luanda's informal settlements</b>	
introduction : musseques	50
old musseque	54
organized musseque	56
transitional musseque	58
peripheral musseque	60
section summary : problems of acquiescence : strategies for resistance	64

<b>defensive architecture : luanda's formal sector</b>	
introduction	66
miramar, the fortress	68
downtown, the streetfront	70
condominium, the suburb	72
tactics	
"taking the high ground"	74
"the wall"	76
section summary: nailing jelly to the wall	80
<b>pivoting the informal economy</b>	
introduction	82
pivot points	84
preliminary charette : pivoting the wall	88
<b>precedents</b>	
recetas urbanas	96
nakasero market	98
whitecross street market	100
games	102
<b>situating architecture in a changing climate : potential for an architecture of resistance</b>	
introduction : the next step	104
site strategy	110
parallel programs	116
setting the trap	118
<b>thesis proposal</b>	121
<b>appendix</b>	166
annotated bibliography	

**the informal city**

The 'informal' city is not 'lacking form,' – it has a system of rules, processes, and procedures that govern and direct its functions.<sup>2</sup> It has economic infrastructure and public space. It has schools, hospitals, and a network of services operating with unrivaled efficiency and unbridled ambition. **And it has architecture.**

The proliferation of 'anarchic' development tactics "illustrates the large-scale efficacy of systems and agents considered marginal, liminal, informal, or illegal according to traditional understandings of the city," and demands "a redefinition of ideas such as carrying capacity, stability, and even order."<sup>3</sup>



**conflict**

The urban realm is the meeting place and battleground of conflicting worlds. The boundaries between authority and impotence, affluence and poverty, and core and periphery are the front lines in a constant struggle for growth.<sup>4</sup> Each side has its tactics – the core expands outward, following the path of least resistance, while the periphery counters by way of redistribution, increasing density or facilitating relocation. The war is fought with concrete walls, corrugated metal shields, and paved roads - it is a conflict between the permanent and the ephemeral, the formal and the informal, the host and the parasite.

**pivoting the informal**

The ephemeral nature of informal speculation makes it a master of responsive design, but at a price. Much of the architecture of the urban informal sector is in a constant state of retreat. Materials and methods of construction contribute to an impermanence of commerce – a fly-by-night “tent” architecture epitomizes the uncertainty of an extra-legal existence. This highly specialized and adaptable architecture must operate in a fleeting and surreptitious manner to avoid detection. By virtue of its clandestine mode of operation, the informal economy has the capacity to adapt and respond organically to both threats and opportunities presented to it.

**In the struggle for growth, the architecture of informal commerce is complicit in the perpetuation of an impermanent and uncertain existence that favors acquiescence over resistance. More is required of it.**

**an architectural intervention can provide pivot points upon which to direct the flow of unregulated commerce and subvert state-sponsored efforts to peripheralize it.**

### program

The relationship between informal and formal is largely parasitic; informal settlements colonize the periphery of the city, strategically tapping municipal electric and water connections in order to position themselves for growth.<sup>5</sup> Vendors in the informal sector are well attuned to patterns of activity, adjusting their wares to suit a specific vending location and time of day in an effort to serve the flow generated from a specific type of program. Even the breadth and location of a major market space can shift dramatically in a matter of minutes as the flow of commerce waxes and ebbs. The informal space of commerce, no matter the scale, is in constant flux. This being said, architecture cannot effectively provide a static space of exchange for the informal sector. Instead, an analysis of the tactics of informal players skilled in bypassing formal defenses can be undertaken to understand how degrees of overlap, intersection, and connection can indirectly facilitate exchange. Establishing a set of architectural criteria that can garner state support while setting the stage for subversion can position the informal economy to resist peripheralization.

### context

The most pronounced bifurcation between the permanent and the ephemeral is manifest in a “boomtown” scenario, where a massive influx of spectators quickly follows an infusion of capital, severely stressing existing infrastructure and creating conflict between what fast become socially polarized worlds.<sup>6</sup> Nowhere is this type of conflict more apparent than in Luanda, Angola, where wealth generated from petro-diamond capitalism has driven the coastal city into a frenzy of construction and outward expansion.<sup>7</sup> The widening economic and social chasm between Luanda’s oil and diamond economy and those displaced by its massive wealth is quite literally visible in aerial photographs of the city. The divide between largely state-sponsored growth and that fueled by the sum of individual ambition is evident not simply from above as a transition from the city block as we know it to “haphazard” and densely-packed informal urbanism. Rather, the gap is unmistakable as an intersection of conflicting tactics; a progression from aggressive expansion to eventual peripheralization, and in some cases, **a silent resistance through infiltration and subversion.**



### the informal economy

The informal economy is a subset of the informal sector. Taking place in and emanating from informal settlements and spaces of commerce, activity in the informal economy can be described as “any component of production, processing, distribution, or consumption which wholly or partially eludes inclusion in the information system upon which polity managers base calculations relevant to present and future public policy.”<sup>9</sup>

Although the informal economy continually waxes and wanes as a barometer of the effectiveness of regulatory policy, it is by no means a “short-term” phenomenon.<sup>10</sup> As the city is seen more and more as the hub of growth and global integration, migration to urban centers will continue unabated. The city as refuge, as the infinitely-accommodating vehicle capable of sustaining the hopes, dreams, and opportunities of its millions, is severely tested with each incursion of its borders. Simply put, the city is incapable of providing for the needs of all of its inhabitants. Some must fend for themselves.

“the series of operations  
in and through which people  
weave their existence  
in in-coherence, Un-

CertainTy,  
in-  
stability, and  
dis-  
continuity.”<sup>11</sup>

### the informal space of commerce

“in producing a certain ideological order, the Angolan State created a certain practical disorder. The law, therefore, has played a contradictory role, as it has created a social space, defined as the condition of the institutionalization of the second economy, by excluding certain activities from the official economy.”<sup>12</sup>



Nowhere is this more salient than in sub-Saharan Africa, where budget surplus, if it exists, is very rarely directed to the perpetuation of circumstances that would lead to degradation of the rural agricultural sector and overpopulation of urban centers. State-sanctioned flows of goods and services, as well as the infrastructure required to facilitate their movement, are thus insufficient to support continual urban growth. But the city grows nonetheless, contributing further to a lack of sufficient urban infrastructure, which undoubtedly results in acute poverty, poor sanitation, and generally unhealthy living conditions. Although these problems clearly require further study and attention, the focus of this investigation is instead the resultant commercial space of the city built, operated, and defended through "the series of operations in and through which people weave their existence in incoherence, uncertainty, instability, and discontinuity."<sup>14</sup>

the informal space of commerce | introduction



Angola: unequal population distribution



dollar value of angolan imports : 1990-2008

As oil revenues, accrued in US dollars, constitute a larger and larger percentage of Angola's GDP, the state's brimming stock of foreign exchange makes importation of necessary goods and services less expensive than resuscitating war-torn networks of production and supply outside of Luanda. Their replacement with high-priced imports unavailable to the lower classes is credited as a catalyst for the proliferation of informal production and distribution networks.<sup>17</sup>



dollar value of angolan exports : 1990-2008



The story of the informal economy is not by nature one of poverty and survival tactics. **While the emergence of the informal economy may occur as a parasitical condition, its operation outside of official systems of regulation and infrastructure necessitates the invention of new variations on these systems.** These variations may passively supplement systems already in place in the formal economy, such as the use of a city taxi service to ferry goods to a point of sale, or they may actively resist or evade a system of regulation and control, such as vendor taxation or registration.

Relationships of production, distribution, employment, and consumption “tend to fall at some point on a continuum between pure ‘formal’ relations (regulated and protected) and pure ‘informal’ relations (unregulated and unprotected), with many categories in between.”<sup>18</sup> Depending on circumstances, movements along this continuum or simultaneous occupation of multiple points across its length are possible. There are many cases in workers seek employment in the informal economy on a per-piece basis as a more profitable alternative to formal employment on a per-hour basis.<sup>19</sup> Luanda’s garbage, for example, “is carried away these days by a German-owned firm, run by Swiss managers, that imports everything from trucks to garbage bins.”<sup>20</sup> As it turns out, recycling is a profitable business, provided one avoids the garbage-collection system altogether.

#### section endnotes

- <sup>1</sup> Lopes, Carlos. *Roque Santeiro: Entre a Ficcao e a Realidade*. S. Joao do Estoril: Principia, 2007, 241.
- <sup>2</sup> Davis, Mike. *Planet of Slums*. London: Verso, 2006, 4.
- <sup>3</sup> Koolhaas, Rem et.al. *Mutations*. Barcelona: Actar, 2000, 652.
- <sup>4</sup> Under Seige: Four African Cities. Goethe Institute Lagos, Platform 4 Documenta 11. 2002, 7.
- <sup>5</sup> “Land Access in Peri-urban Angola: Informal Urban Land Survey and Analysis, Luanda and Huambo.” Center for Environment and Urban Settlements (2005) 17.
- <sup>6</sup> Malamud, Gary. *Boomtown Communities*. New York: Van Nostrand Reinhold, 1984, 3.
- <sup>7</sup> “Black Market Based on Beer Standard Flourishes in Marxist Angola.” *Chicago Sun Times*, 5 February 1989.
- <sup>8</sup> Clark, Gracia. *Traders Versus the State: Anthropological Approaches to Unofficial Economies*. London: Westview Press, 1988, 193.
- <sup>9</sup> Chen, Martha Alter. “Rethinking the Informal Economy: Linkages with the Formal Economy and the Formal Regulatory Environment.” United Nations Department of Economic and Social Affairs. 2007, 5.
- <sup>10</sup> Chen 17.
- <sup>11</sup> Under Seige, 8.
- <sup>12</sup> Los, Maria. *The Second Economy in Marxist States*. New York: St. Martin’s Press, 1990, 172.
- <sup>13</sup> “Mercado Lobito.” Photo. Panoramio. 9 November 2009.
- <sup>14</sup> Under Seige, 8.
- <sup>15</sup> “Top Products Imported by Angola.” Bridgeat.com. October 2008. Web. November 2009.
- <sup>16</sup> Bridgeat.com
- <sup>17</sup> Los 174.
- <sup>18</sup> Chen 2.
- <sup>19</sup> *Chicago Sun Times*.
- <sup>20</sup> “Land Access in Peri-urban Angola: Informal Urban Land Survey and Analysis, Luanda and Huambo.” Center for Environment and Urban Settlements (2005), 55.

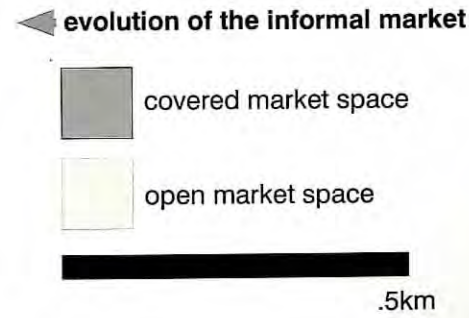


### roque santeiro and the beer standard

Pulsing like a prohibition-era saloon, the atmosphere in Roque Santeiro, Africa's largest open-air market, is "festive and nervous."<sup>2</sup> The year is 1989, and over 20,000 vendors crowd 4 km<sup>2</sup> of space in a sea of tents and colorful wares. Officially, none of it is legal. Following the collapse of the Angolan economy after the country's independence from Portugal in 1975, the government adopted Marxist ideologies, fixing exchange rates and setting prices for certain "strategic" commodities such as oil and diamonds.<sup>3</sup> In 1987, this informal market arose from a pungent garbage dump as the antithesis of, and resistance to dominant Marxist thinking. This relentless informal onslaught, dominated by Roque Santeiro, began to undermine strictly-enforced government policy, and soon, Cuban soldiers and high-ranking Angolan officials were seen browsing the market stalls, looking for items the state could not provide.<sup>5</sup> Indeed, the disparity between official and informal exchange rates eventually resulted in what was termed the "beer standard."<sup>6</sup>

Because government employees were paid the official rate, fixed at 30 kwanzas per dollar, and the unofficial exchange rate was closer to 2000 kwanzas per dollar, government workers would require the equivalent of multi-million dollar salaries to survive in the city. Instead, the government offered coupons to government shops, which enabled employees to purchase cases of beer at the official rate of exchange, which were then traded with street vendors informally, thereby multiplying employees' salaries to an 'appropriate' level.



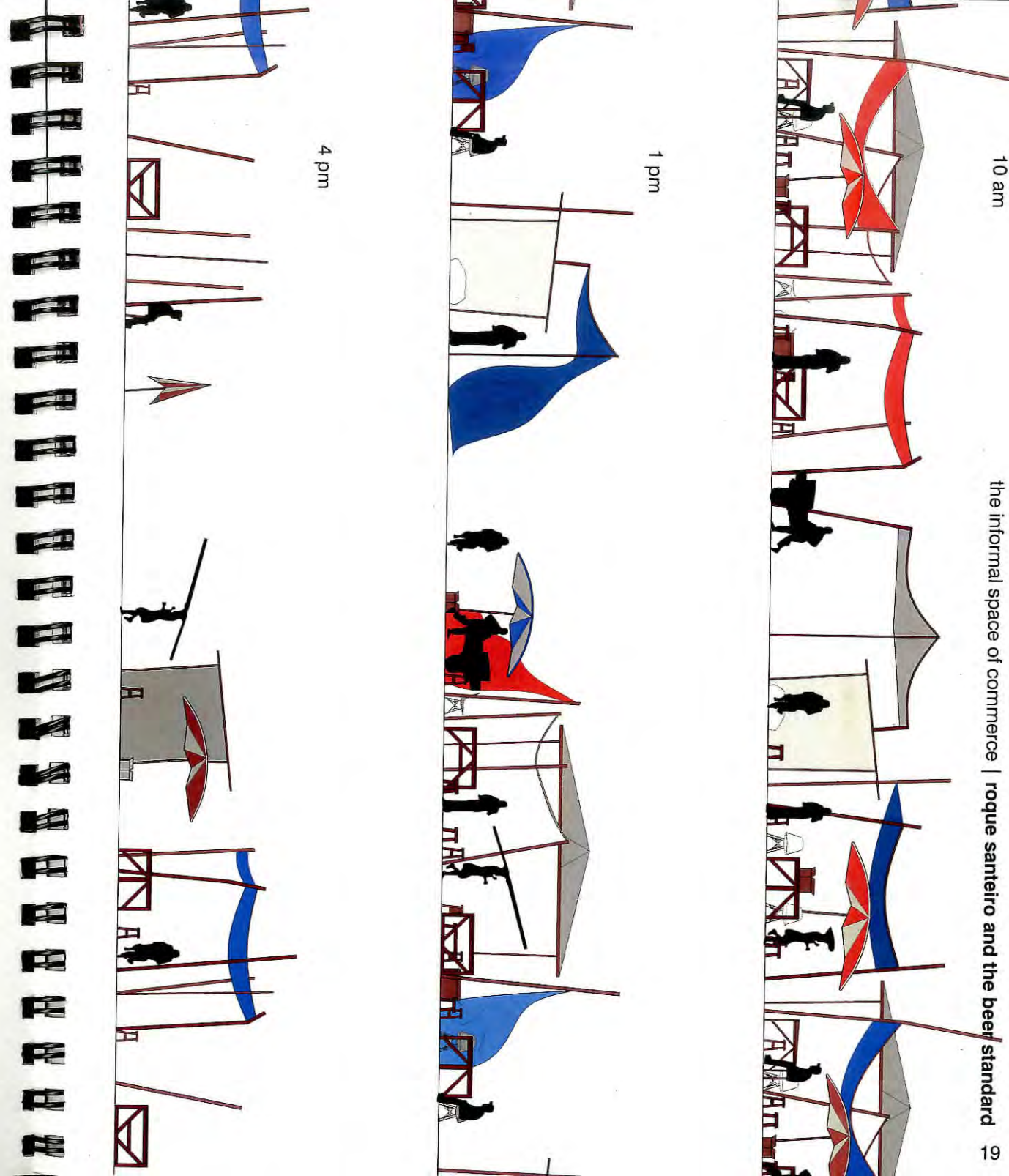


Today, despite a greater extent of free-market capitalism, Roque Santeiro and Luanda's informal economy continue to function as providers of goods and services that the mechanisms of the state cannot provide. The informal economy does duty as a resisting or righting force providing goods and services, often with infrastructure of its own invention, to a population operating outside of but in connection to the city of Luanda. **Elements of the parasite become its host.**

Despite its pervasive role in the functioning of the city, the informal economy has no fixed location, no distinct set of users, and no established timetable. The ephemeral nature of this free-floating sector is evident in its architecture - a highly portable medley of blue tarps, sharpened sticks, and cardboard boxes are unpacked and assembled in mere seconds to become viable micro-enterprises. The resultant space produced by this node of activity is highly volatile, becoming non-existent on a daily basis as vendors pack their wares to return home.

**At the end of the day, the hard-won space of informal commerce is surrendered without dispute. ▶**

"Everything passes twice a day over the one road that connects Sambizanga with downtown Luanda. Only the most courageous and armed vendors dare to stay with their goods in the marketplace overnight."



### the point and the line

The supermarket has become a ubiquitous symbol of foreign investment fueling downtown Luanda. The largest and most popular stores, called "Jumbos," were imported by a Dutch company. Along with Shoprite, Esco, Fina, Casa dos Fresco, Martal, and Intermarket, Jumbo supermarkets are commonly found at the intersection of commercial and residential districts.<sup>9</sup> Imported from abroad, goods arrive in the Port of Luanda and make a beeline to their preordained point of sale. By contrast, informal markets play host to a number of distribution networks which facilitate incidental commerce along a chosen path.

- informal market
- supermarket

informal market <sup>10</sup>	#staff	#regulators	#vendors
Asa Branca	11	36	3800
Augusto N'gangula	2	4	100
BCA		5	530
Hoji ya Henda	1	9	730
Sucupira	1	8	350
Kapa Kapa			
Palanca 2	12	16	860
Ana Ngola		5	270
Imbordeiro		1	
Vidrul		3	
Panguila		1	
Kifangondo		1	
Feira dos Trapalhoes	3	1	370
Feira F. A. Cruzes			21
Calembe			154
Tourada			
Cassenda	1		160
Tunga Ngo	5	15	1400
Chapada	3	6	200
Pica-Pau			
Samba	5	5	
Biatu Salu	7	5	234
Roque Santeiro	19	90	4184

the informal space of commerce | roque santeiro and the beer standard

the informal space of commerce | roque santeiro and the beer standard

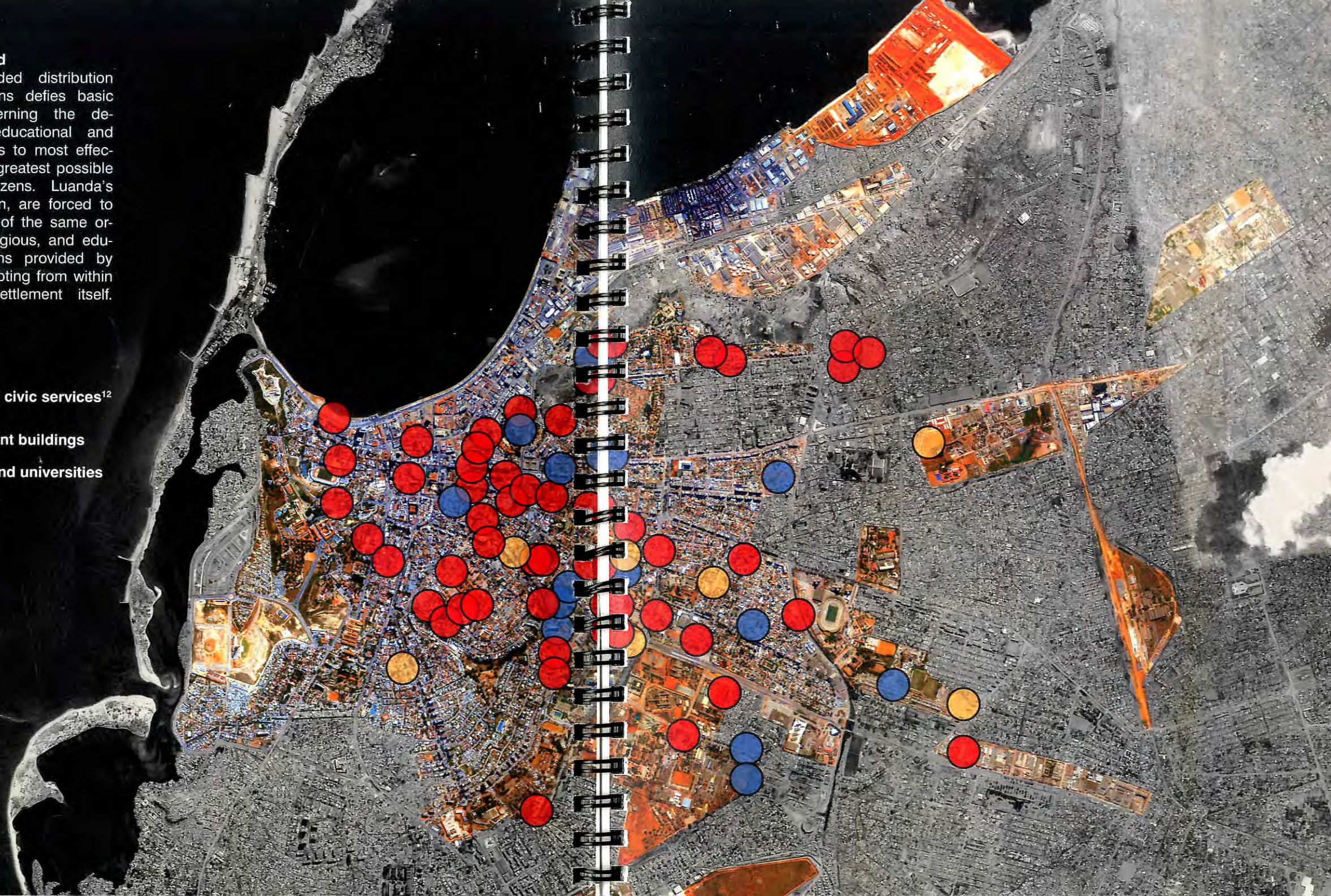


### the greater good

Luanda's lopsided distribution of civic functions defies basic precepts concerning the deployment of educational and religious facilities to most effectively serve the greatest possible number of citizens. Luanda's musseques, then, are forced to duplicate many of the same organizational, religious, and educational functions provided by the state, all pivoting from within the informal settlement itself.

#### distribution of civic services<sup>12</sup>

- government buildings
- schools and universities
- churches



the informal space of commerce | roque santeiro and the beer standard



the flour pyramid<sup>13</sup>  
informal networks of distribution

by the container  
port

2x



by the cartload  
wholesale warehouse

4x



by the sack  
roque santeiro  
wholesale district

20x



by the cup  
roque santeiro

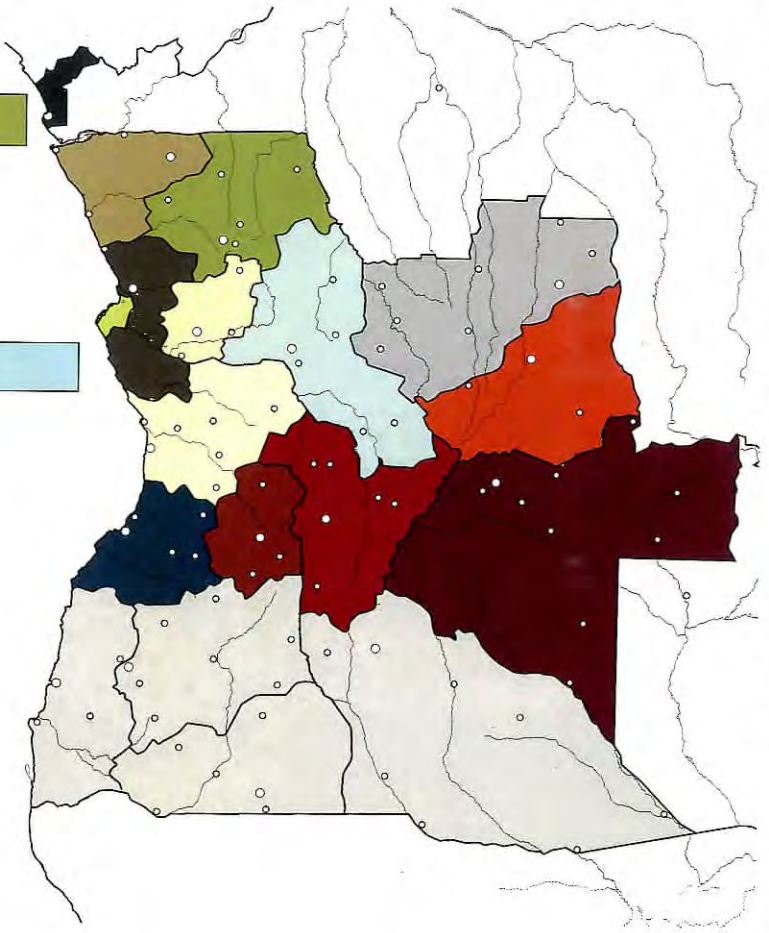
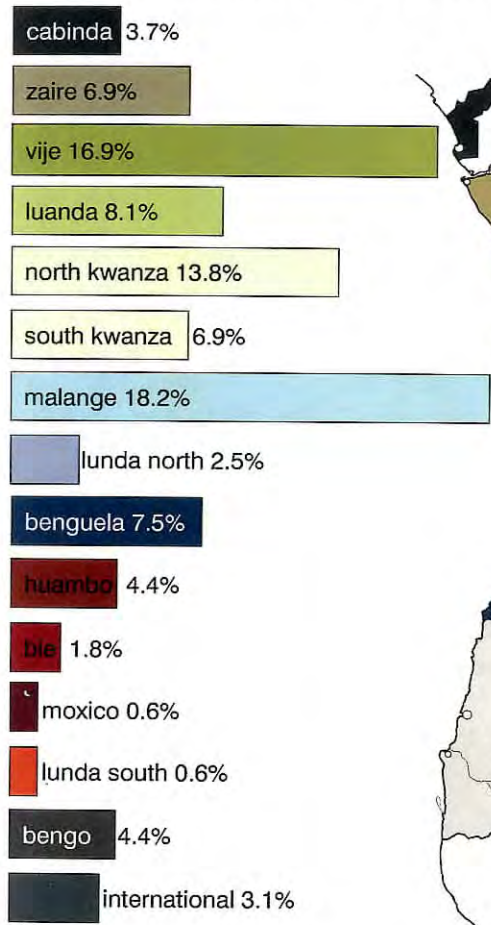
2000x



reasons for selling at roque santeiro<sup>15</sup>



composition of roque santeiro vendors<sup>16</sup>



the informal space of commerce | roque santeiro and the beer standard

**taxi as system of physical exchange**

If the informal market is a space of flow, then the taxi is its lifeline, providing for a nearly continuous inbound and outbound stream of goods and customers. By contrast, the devoted space of retail serves devoted consumers of retail goods. The static nature of the retail space can be seen in its position at arm's length from the city where customers, if they are willing, can easily drive and park to access a cache of goods inside. The informal market is positioned strategically to capture a mobile flow of customers by way of hickacking the city's system of public transportation as a means to facilitate unregulated commerce.

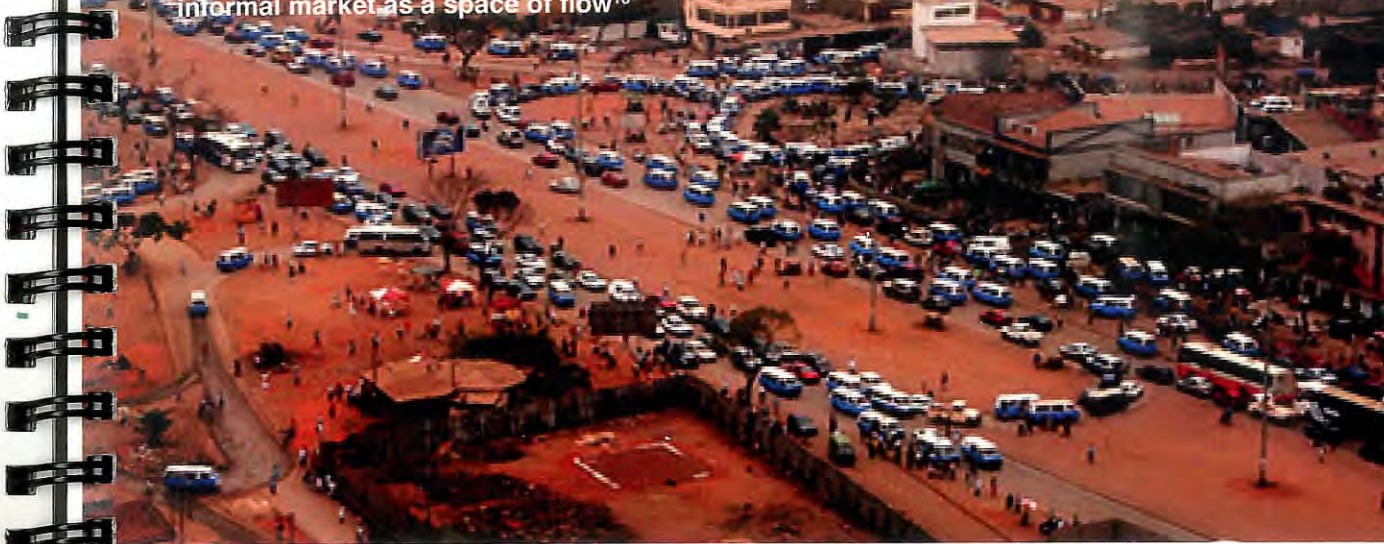
17

the informal space of commerce | roque santeiro and the beer standard



26

**informal market as a space of flow<sup>18</sup>**

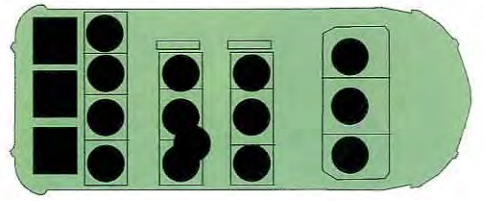
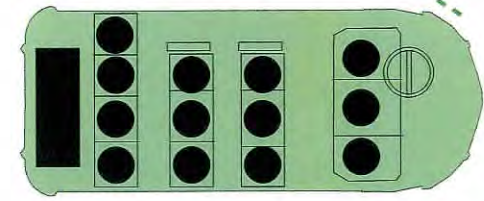


arrival → departure  
 4 passengers



stationary vehicles  
 moving vehicles

arrival → departure  
 13 passengers, 50kg cargo



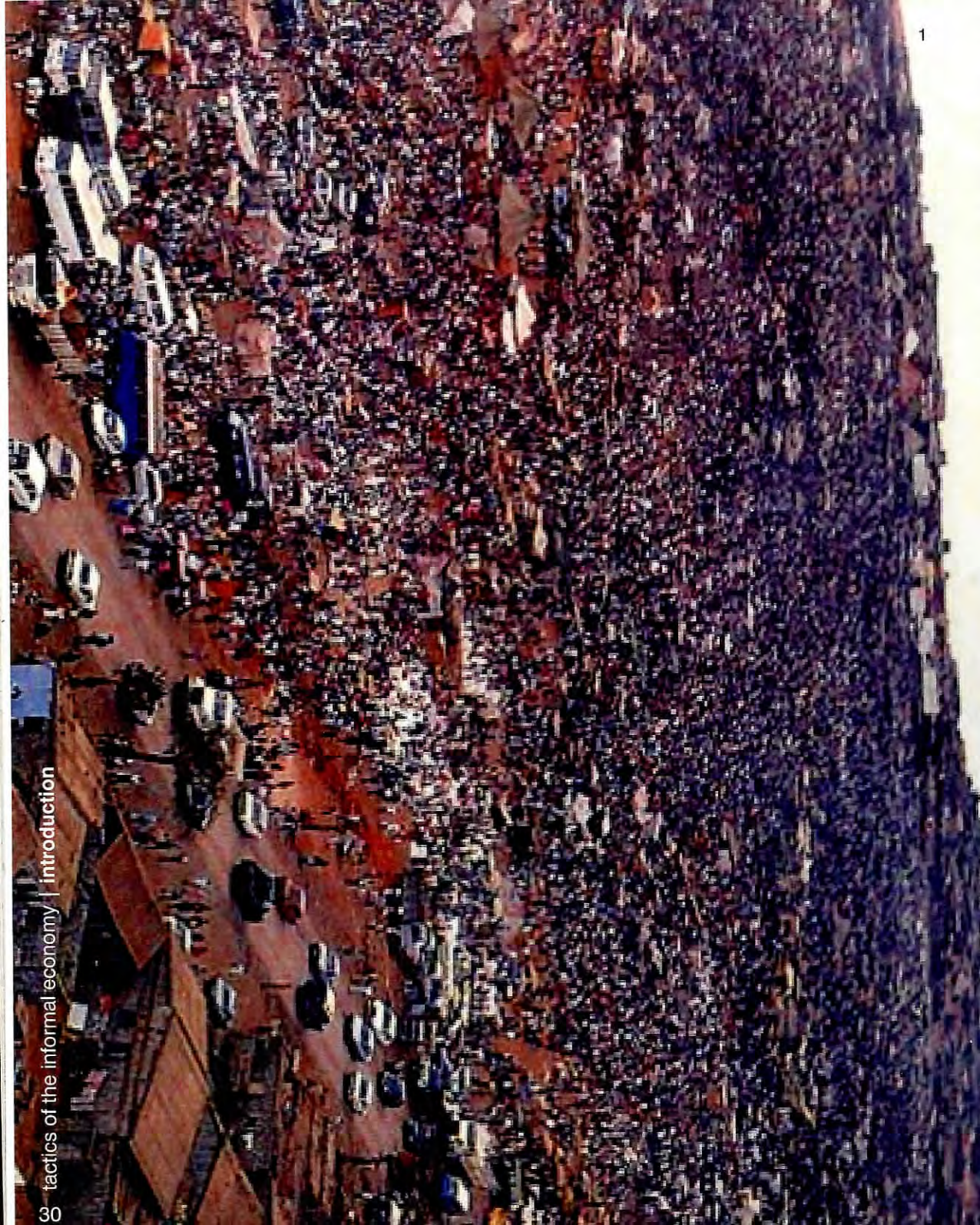
the informal space of commerce | roque santeiro and the beer standard

27

- <sup>1</sup> "Compras para o Fim de Semana." Photo. Ante & Post. 9 November 2009.
- <sup>2</sup> "Black Market Based on Beer Standard Flourishes in Marxist Angola." Chicago Sun Times, 5 February 1989.
- <sup>3</sup> Tvedten, Inge. Angola: Struggle for Peace and Reconstruction. Boulder: Westview Press, 1997, 77.
- <sup>4</sup> "Market Rains and Merry Go-Round Financing." Video. Youtube.com. March 2009. Web. November 2009.
- <sup>5</sup> George, Edward. *The Cuban Intervention in Angola, 1965-1991: from Che Guevara to Cuito Cuanavale*. Washington: Taylor & Francis, 2004, 151.
- <sup>6</sup> Chicago Sun Times.
- <sup>7</sup> Base images courtesy of Google Earth Historical Imagery.
- <sup>8</sup> Image courtesy of Google Earth.
- <sup>9</sup> "Homepage - Jumbo Supermarkten." Jumbo Supermarkten.nl. December 2009. Web. November 2009.
- <sup>10</sup> Lopes, Carlos. *Roque Santeiro: Entre a Ficcao e a Realidade*. S. Joao do Estoril: Principia, 2007, 228-9.
- <sup>11</sup> Base image courtesy of Google Earth.
- <sup>12</sup> Lopes 37-42.
- <sup>13</sup> van der Winden, Bob. *A Family of the Musseque*. Oxford: Worldview Publishing, 1996, 57-58.
- <sup>14</sup> Base image courtesy of Google Earth.
- <sup>15</sup> Lopes 229.
- <sup>16</sup> Lopes 52-3.
- <sup>17</sup> Base images courtesy of Google Earth.
- <sup>18</sup> "Cadongueiros." Photo. Angola. 9 November 2009.
- <sup>19</sup> van der Winden 166.







## tactics of the informal economy behind (enemy?) lines

The agents of the informal economy are its human resistance. Unlike licensed shopkeepers in the formal sector whose employees market goods and services to passersby from fixed locations, informal micro-enterprise, in large part, pursues its own customers, regularly hijacking formal municipal infrastructure and formal program to do so. Through their resistance to peripheralization, agents of informal commerce facilitate the intersection, overlap, connection and exchange of formal and informal program and modes of circulation, threatening to undermine the very foundations of legitimate commercial activity.

Each player presented is a liaison to a particular mode of informal commerce, representing a certain tactic operating in a distinct type of space.

“An informal sector enterprise is like a giraffe; it’s hard to describe but you know one when you see one.”<sup>2</sup>

predominantly individual enterprise



predominantly group enterprise



catering to pedestrian traffic



catering to vehicular traffic



fixed point of sale



no fixed point of operation

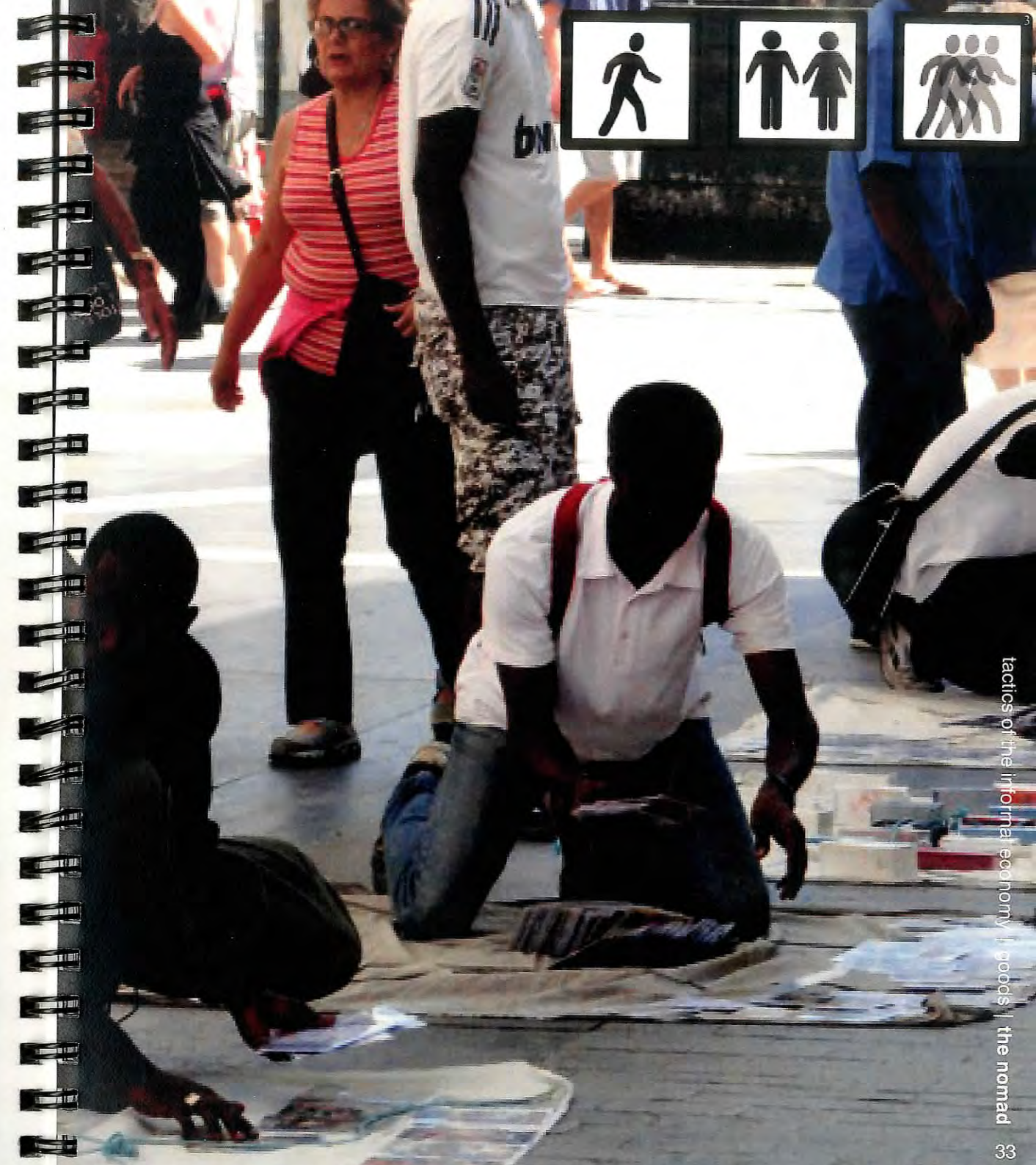
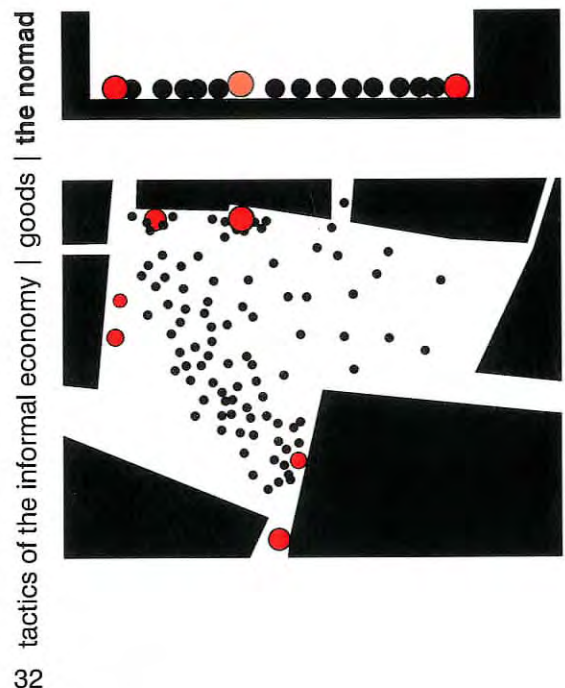


illegal activity



“the nomad.”  
 Market space in public space – Florence, Italy

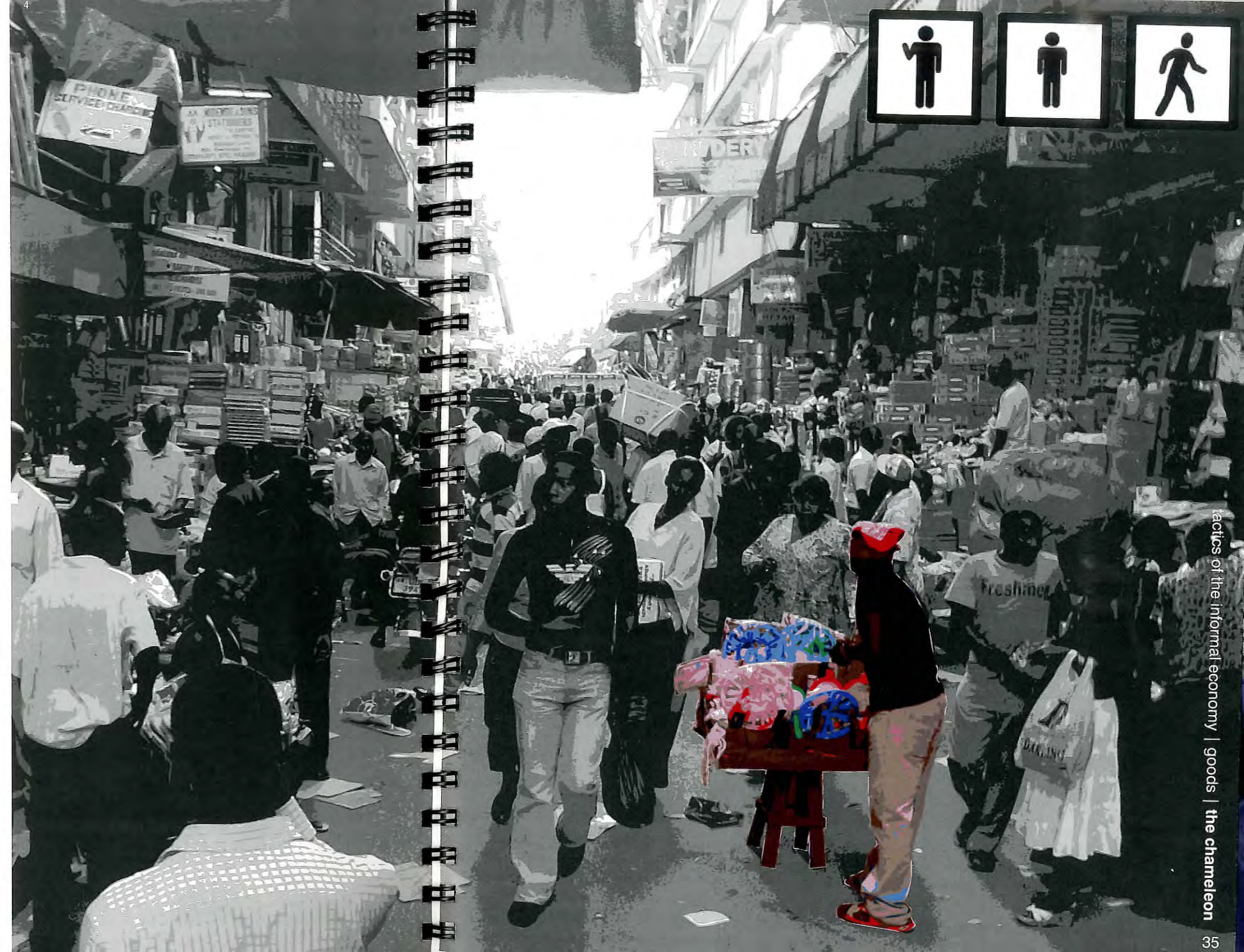
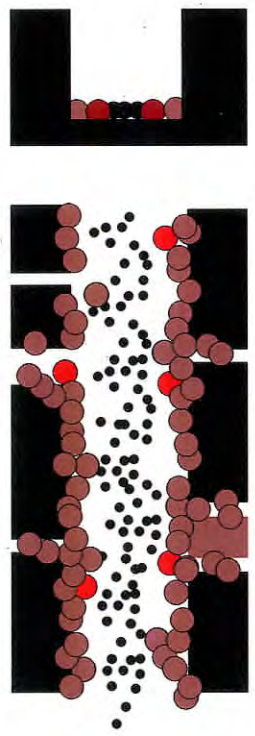
Easily recognizable by his or her large sack or box of goods, the nomad is constantly on the move, wares in hand. A white sheet acts as a highly-mobile backdrop to display merchandise in pedestrian-heavy zones, often in bustling public plazas. Nomads typically work in groups, employing between them one or more designated watchmen to alert traders to a potential encounter with the law. At the first sign of trouble, the nomads mobilize, lifting their sheets by drawstrings in each corner and hoisting bundles of merchandise to their shoulders. They remain dormant in alleys and doorways until the threat has passed. Due to tight government regulation prohibiting street vending, the number of competing traders operating in public space is minimal, and as such yields a substantial profit for those adept at avoiding detection.



“the chameleon.”  
Market space nested in market space :  
Kampala, Uganda

Unlike the nomad, whose conspicuous presence as a *non sequitur* is critical to attract potential customers, the chameleon appears at home in his surroundings. The chameleon takes advantage of existing spaces of commerce to establish his own offshoot business by undercutting the prices of his suppliers, directly outside their doors. Much to the chagrin of legitimate vendors nearby, a lack of overhead costs ensure a hefty profit for the chameleon.

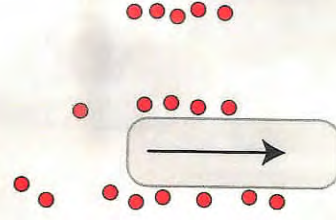
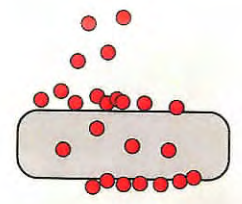
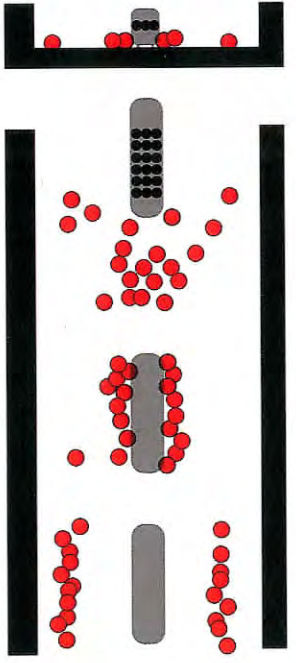
So long as his operation remains hidden from his legitimate competitors, the chameleon can easily supply and hold a large stock of items to sell to the highest bidder. Despite this potential, his greatest risk is being spotted by those from whom he is stealing business, who may confiscate his items or alert local authorities.

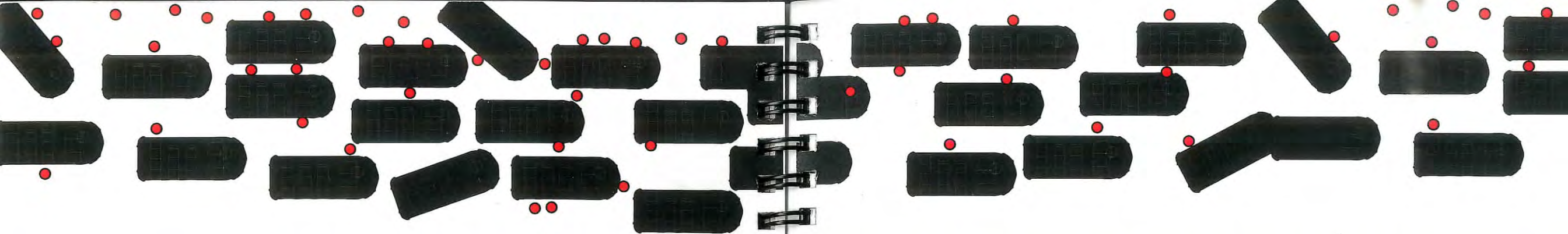


“the opportunist”

Mobile market in a space of flow – Dar es Salaam, Tanzania

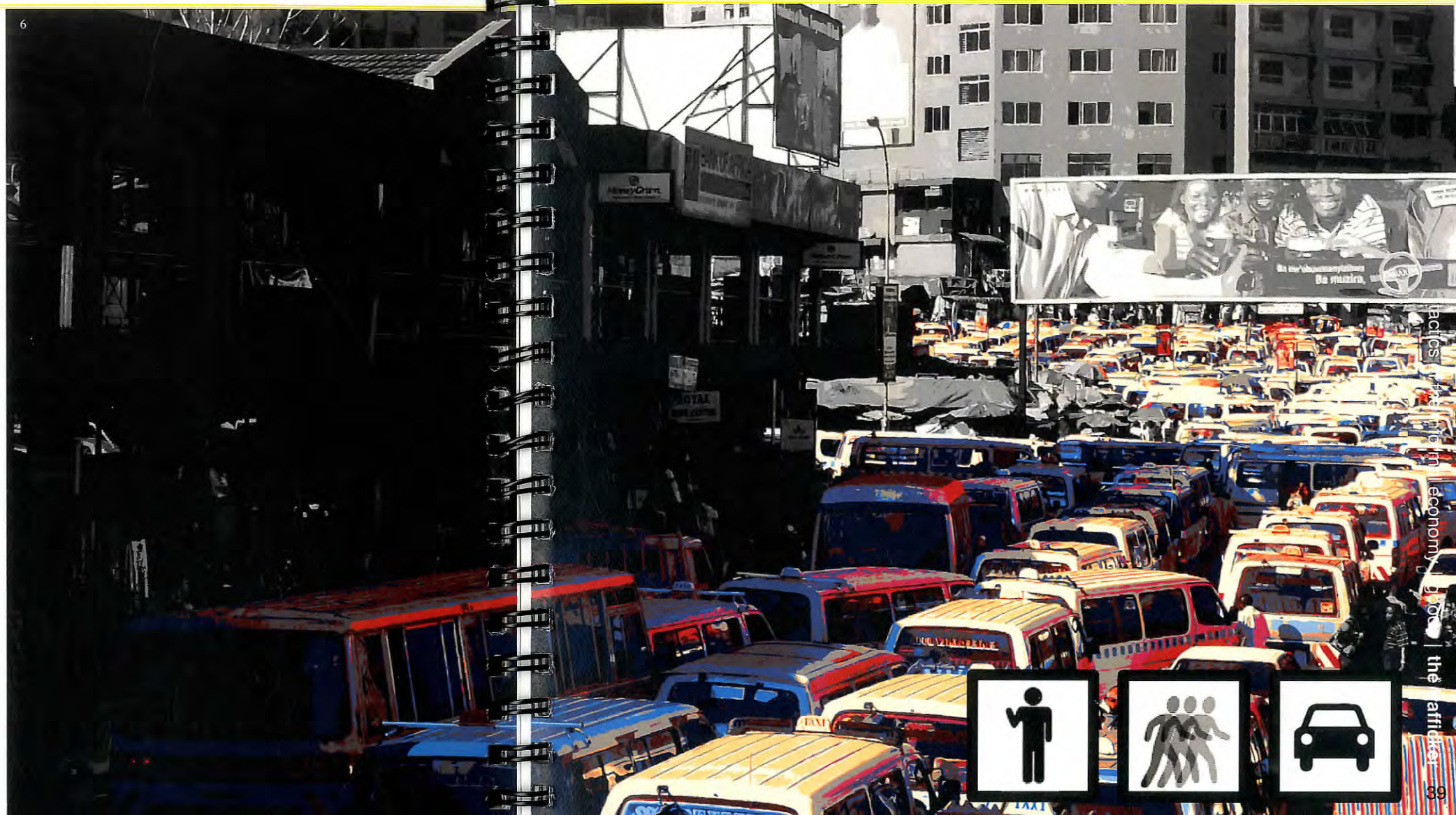
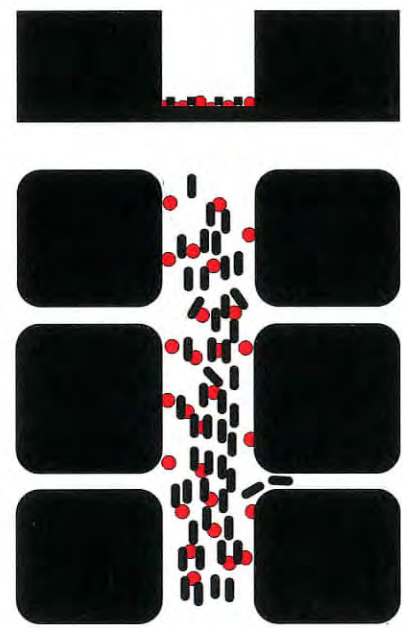
The opportunist actively pursues his or her clients with a highly mobile set of goods, most often food, beverages, and other small, inexpensive items. He or she is practiced at recognizing patterns of flow and activity, and uses this knowledge to prey on travelers and passers-by to turn a maximum amount of profit in the shortest possible amount of time. Although exposure to a high number of potential customers increases profits, the opportunist’s stock is limited to what he or she can efficiently carry and secure.





**“the trafficker.”**  
 Market in the space of congestion - Nakasero Taxi Park, Kampala, Uganda

High-traffic taxi routes generate predictable zones of congestion ripe for commercial exploitation. As a highly-mobile unit, the trafficker tailors his location and his wares to suit a particular brand of congestion unique to the time and day of the week. During peak times, traffickers face intense competition to fit in the smallest interstices between moving (or not) vehicles.

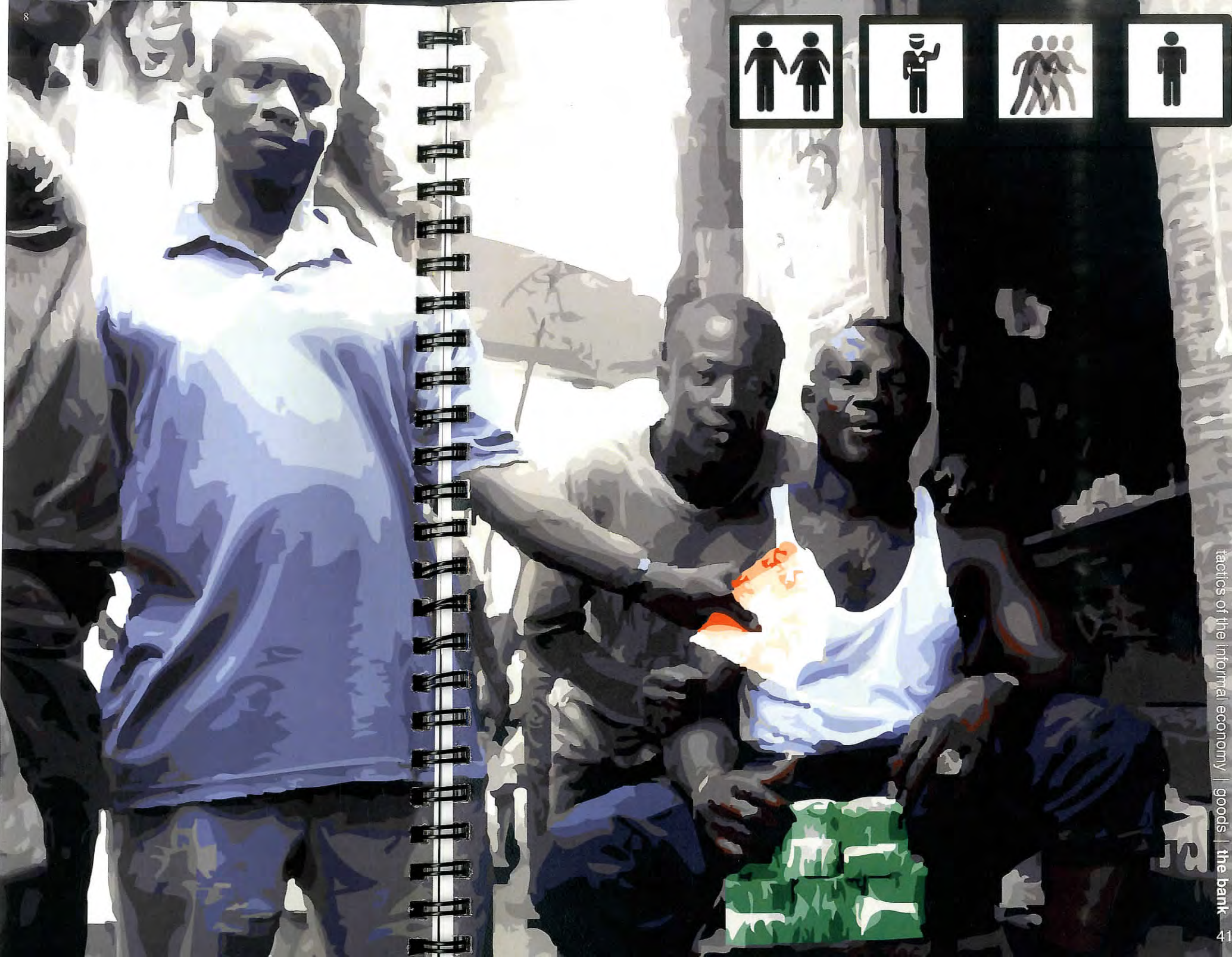


**"the bank."**

Space of global exchange in market space -  
Roque Santeiro Market, Luanda, Angola

Operating illegally, the bank can be found  
outside major state and private currency re-  
serves, where he slightly undercuts fixed ex-  
change rates. Owing to intense competition,  
the bank is almost exclusively self-employed.

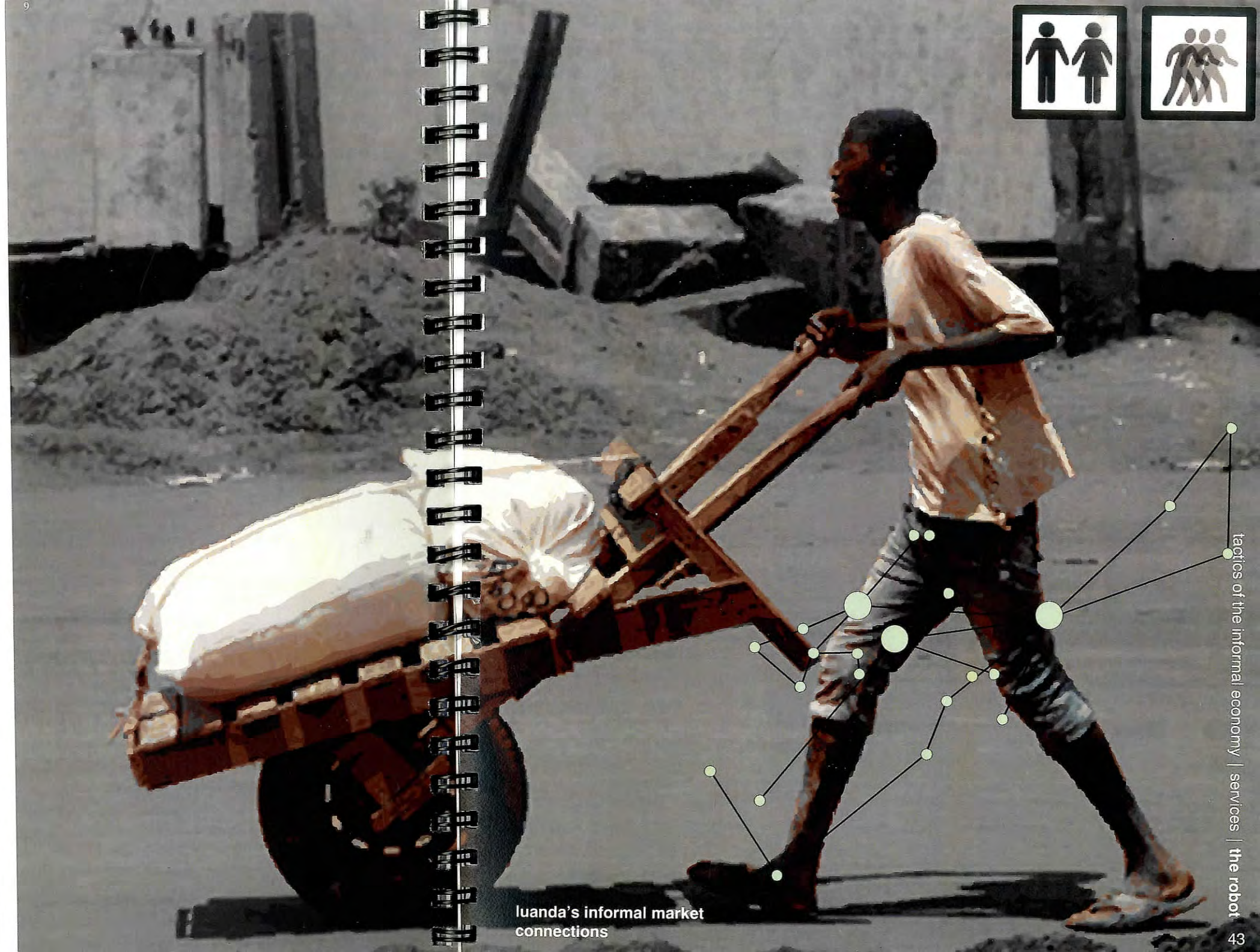
Much of the bank's foreign currency re-  
serves originate from illegal interna-  
tional diamond smuggling operations.



“the robot.”  
Supply & Demand Equalizer - Local scale

The robot is the front line in supply. Responding organically on a per-order basis to rectify inequities in supply allocation, the robot moves quickly between markets to ensure vendors are adequately stocked for the day’s activity. Robots transport goods “between points of sale and wholesale suppliers.”

tactics of the informal economy | services | the robot



luanda's informal market connections

tactics of the informal economy | services | the robot

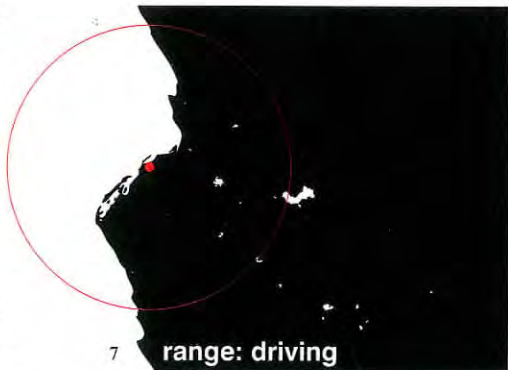
“the driver.”

Market supply for hire - Urban scale

The ubiquitous taxi has been hijacked by the informal sector, commandeered to facilitate the flow of customers and goods to and from the informal market. Major taxi routes converge on central market spaces, rotate passengers and goods, and continue to the next stop. Informal taxi operators transport an estimated 480,000 people each day.



nakasero taxi park : taxis grouped in market areas

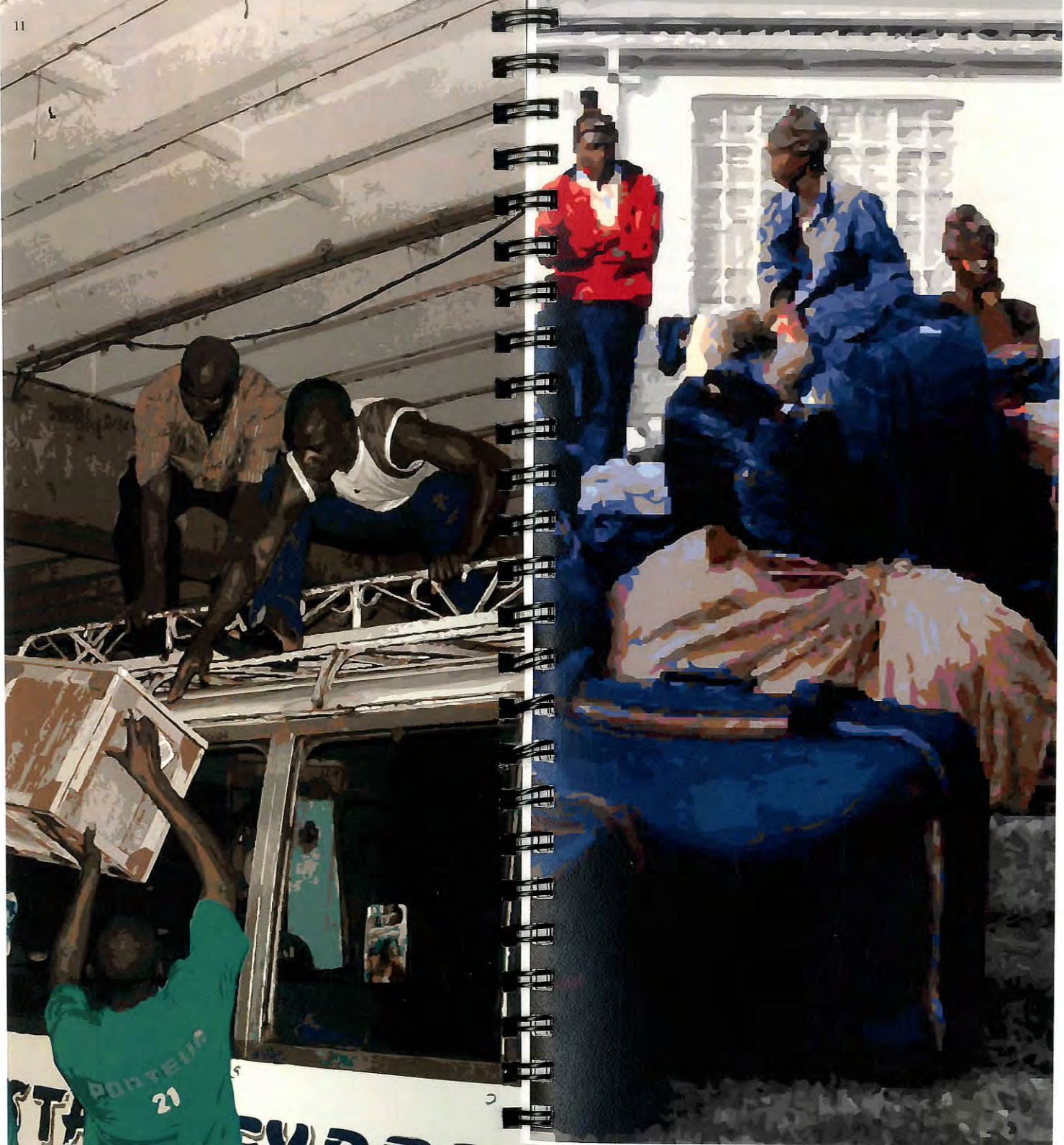




**"the mover."**  
 Medium-range overland transport - Regional scale

Traveling by bus rather than truck, the mover personally accompanies his goods on long cross-border journeys, often making use of beneficial exchange rates to turn a profit merely by moving merchandise from one market to another.

tactics of the informal economy | services | **the mover**



11

**"the buyer."**  
 Long-range air transport - Global scale

Routinely seen sporting an inordinate amount of baggage, the buyer frequently pays thousands of dollars in overage fees on trips to Dubai, Brazil, and South Africa to bring his merchandise to market.



range: flying

tactics of the informal economy | services | **the buyer**



46

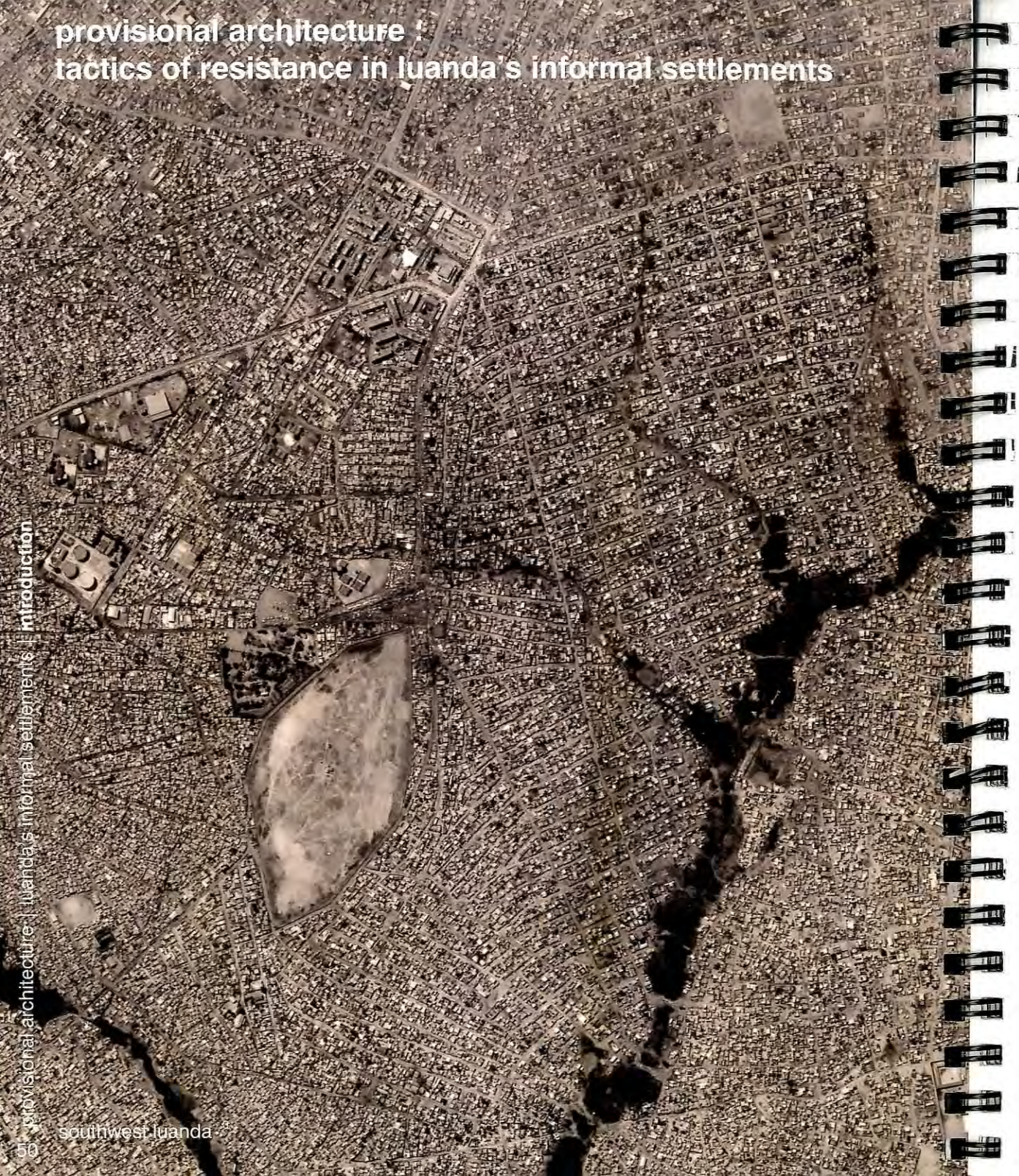
range: bussing

47

# provisional architecture tactics of resistance in luanda's informal settlements

provisional architecture | luanda's informal settlements | introduction

southwest luanda



## the informal city

The forms and program of the informal city are every bit as specific and necessary as those employed by its formal host, but their definition is infinitely more elusive.<sup>1</sup> And therein lies the power of the informal – elusion redefines the set of rules, the set of forms, and the set of activities to favor the sneaky, the clever, and the ambitious. Informal activity has no location, no distinct set of users, and no timetable. It exists here, even in the “socially acceptable” acts of ‘moonlighting,’ individual or corporate tax evasion involving downright fiddling of account books, undeclared ‘gifts’ obtained for ‘cooperating’ or ‘helping someone out,’ and hidden barter exchange of goods and services.”<sup>2</sup> For the purposes of this investigation, aspects of ‘the informal’ will be considered in an urban setting, centered on the meeting place of social dichotomies.

Urban informal settlements can be classified using the following formal criteria:

**infrastructure:** A lack of or deterioration in municipal infrastructure, including transportation, electricity, and water.

**rate of change:** “Anarchic” and continuous construction, which infringes upon the land ownership of others and threatens to engulf residual public space.

**population density:** Extremely high population density relative to average building height.

**materials:** The use of locally-available, low-cost, and seemingly temporary construction materials and tactics.

provisional architecture | luanda's informal settlements | introduction 15

### musseques

In Kimbundu, the language of the Ambundu tribe, the word *musseque* refers to the red, sandy soil common to Angola's interior, away from the coast and river valleys. Its first written appearance was on an 1862 Luanda city map, where the word was used by Portuguese settlers to denote indigenous settlements situated away from the nexus of colonial trade, the coast.<sup>4</sup> Until recently, residents of Luanda's musseques have occupied marginal land without significant contestation. Lately, the value of informally-occupied land has increased dramatically as oil-driven investment propels the city upwards and outwards at a whimsical pace.

### fight or flight?

As the urban core stands poised for a "turf war" with the informal city at its periphery, residents of Luanda's informal musseques stand in a precarious position with a difficult decision to make: **the choice between acquiescence and resistance.**

Luanda's musseques can be classified into four major types, each with its unique formal lineage and respective patterns of growth and expansion. Too, each musseque employs its own tactics of resistance in pursuit of stasis.



collage of settlement types



**old musseque  
val saroca**  
density: 5,200 units per km<sup>2</sup>

Lying immediately outside the city center, old musseques are characterized by extremely high density “an-archic” development, most of which dates to the pre-independence period. Some state-provided infrastructure remains intact, but has deteriorated to a point of near-uselessness.

Houses are built primarily using cement block, with scrap zinc or asbestos roofs, although some are constructed with wattle and daub or timber. Nearly all buildings are left unfinished.<sup>5</sup>



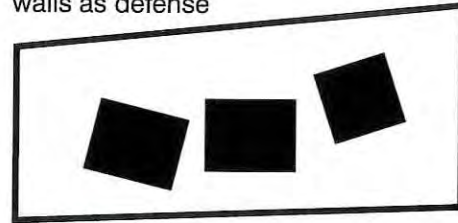
**val saroca - 2001**  
density as resistance to peripheralization



**val saroca - 2006<sup>8</sup>**  
Some settlements of this type have survived for more than 30 years, and until recently, existing public spaces were well-maintained and respected, being used “not only by their own residents, but residents of other neighborhoods as well.” Newly increased density has narrowed streets and infilled public squares and alleys. Too, conflicts over land rights have emerged as once-hazily demarcated property lines begin to be more strictly enforced. One resident noted that “the bairro used to be very good, with houses built according to standards, but today there is no control. People build their houses anyhow without respecting the other residents.”

Residents of this district have acknowledged and exploited elements of the very problem they face to ensure sustainability and security within a quickly-changing urban landscape. What less-dense settlements erect as a compound wall becomes in a crowded setting a manned gateway to an urban courtyard, surrounded by houses.<sup>7</sup>

**compound**  
walls as defense



**courtyard**  
building as defense



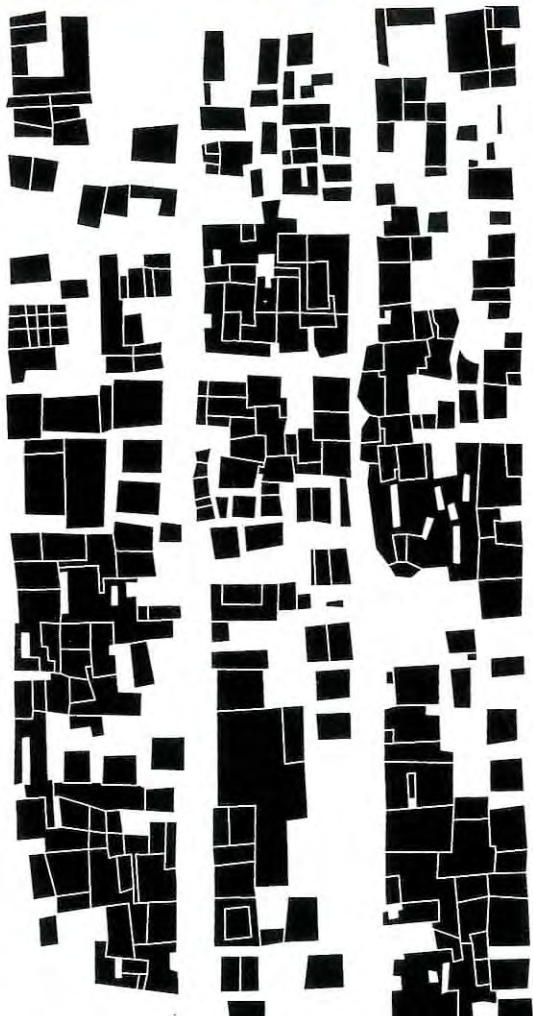
sources of employment

informal market	formal market	public sector	self-employment within settlement	unemployed
-----------------	---------------	---------------	-----------------------------------	------------



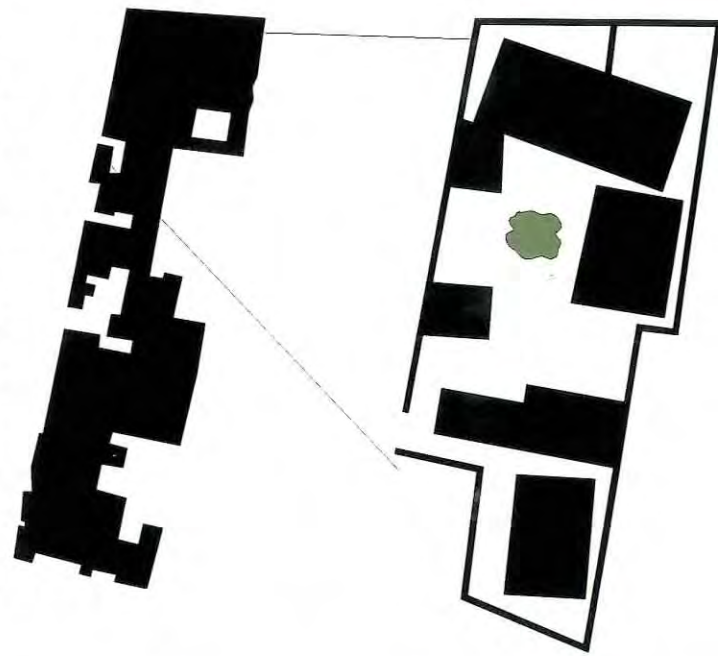
**organized musseque  
mabor malhas**  
density: 1,200 units per km<sup>2</sup>

Farther from the city center, most of organized musseques were settled in the period after independence, and further densified as refugees fled the war-torn countryside for Luanda. While the organized musseque shares a similar average block size with the transitional musseque type, the use of land is almost entirely residential, with single-story construction with unpainted cement block the norm. Constructed piecemeal on a predetermined grid, the block is highly permeable, with spaces left unbuilt between houses often used as gathering spaces for extended families or places to cook during the dry season.<sup>10</sup>



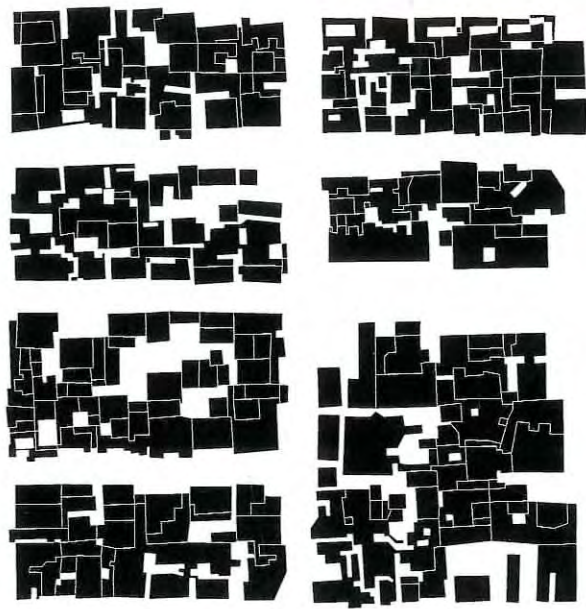
wall as resistance

Because the high level of permeability translates for some into a security issue, some groups of landowners have come together to build walls around their houses. While construction of the wall is primarily a means by which to secure a compound from intruders, it also serves to solidify and demarcate what are undoubtedly hazily understood land boundaries. This tactic can also be understood as a way to seize new land from those without the means to defend from this aggression, or who may not have proper title to the land on which their dwelling is built. As Koolhaas suggests of Lagos, "property lines are continually being reassessed and renegotiated in accordance with intersecting land laws, taxes, claims, and interests...one's right to reside and work in the city is flexible and mutable."

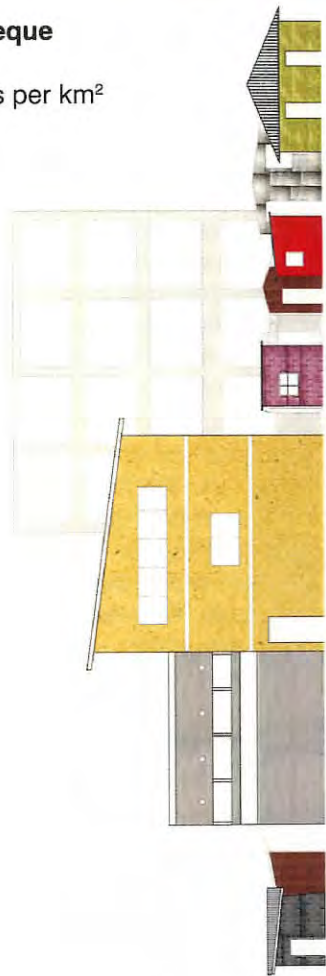


sources of employment

informal market	formal market	public sector	self-employment within settlement
-----------------	---------------	---------------	-----------------------------------



**transitional musseque**  
**bairro operario**  
 density: 1,040 units per km<sup>2</sup>



The transitional musseque hybridizes organizational strategies of both the formal and informal sectors through proximity and adjacency, incorporating multi-story commercial structures and single-story residences into a gridded system. The quality of infrastructure in these districts varies dramatically, depending both on proximity to the urban core and the need to facilitate access through the musseque to wealthy neighborhoods beyond.



Multi-story building height and a generous street width, which in many cases includes space for parking, renders the transitional musseque noticeably less permeable than older settlements. Rather, a smaller average block size requires residents and businesses to devote attention outward to the street, which becomes a rallying point for residents and users of this district. Proximity to Luanda's formal core gives transitional districts a higher standard of living, which is reflected in the materials chosen to construct their buildings. Poured concrete is often used for multi-story construction, single-story residences built from concrete block.<sup>12</sup>

pockets of resistance

sources of employment

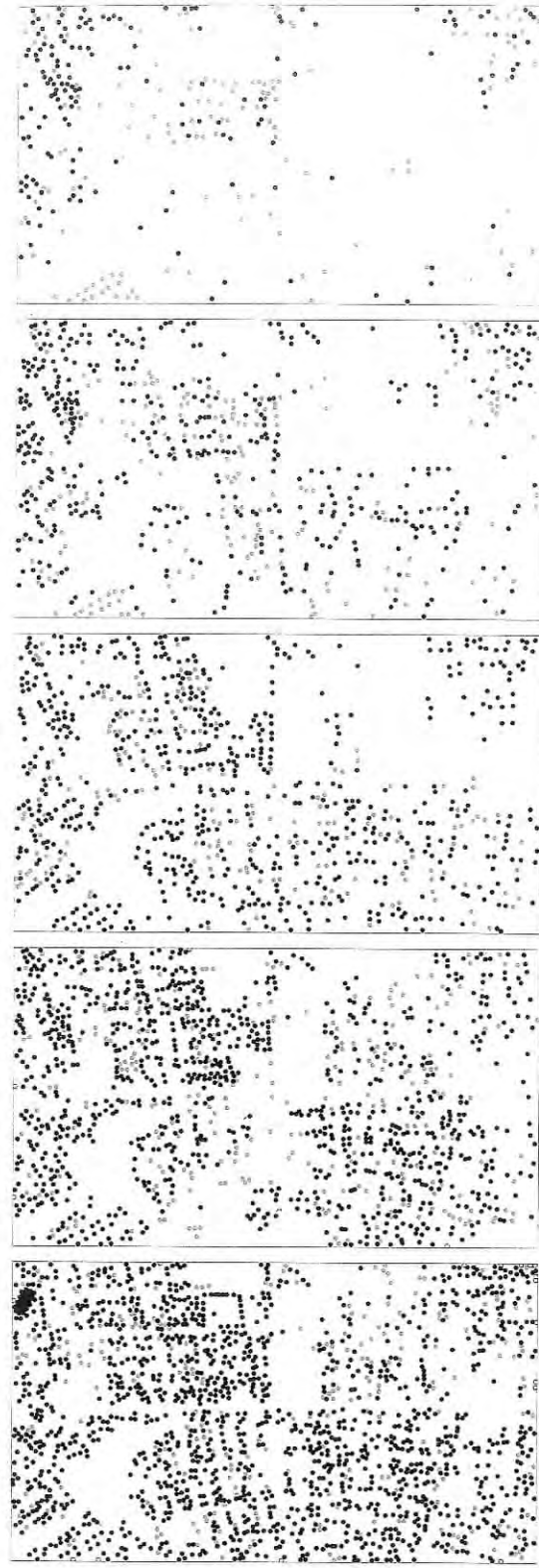
informal market	formal market	public sector	self-employment within settlement
-----------------	---------------	---------------	-----------------------------------



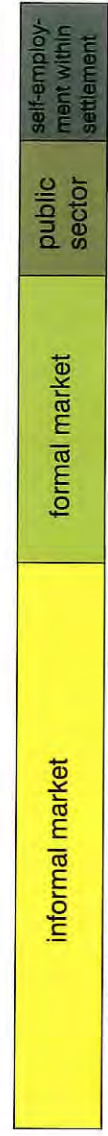
**peripheral musseque  
augusto n'gangula**  
density: 1,800 units per km<sup>2</sup>

Peripheral musseques exhibit a “tapestry of community settlement patterns.” Located beyond the farthest reaches of the city, these widely-scattered settlements are beyond the range of Luanda’s infrastructure, and are hence completely without access to piped water, electricity, or a defined system of roads. Despite the increased availability (and lower price) of land at the periphery of the city, peripheral musseques have the smallest dwelling type of those examined. Residents of this area are among the city’s poorest, and often use both bedroom and living room to sleep. Luanda’s peripheral musseques were settled mostly after 1983, primarily by residents of other city districts who could not afford to rent in more central locations.<sup>14</sup>

“This was an abandoned farm and I occupied it. I did not contact the local administration, because by then they were not concerned about land issues.”  
-resident of peripheral musseque



2001  
2002  
2003  
2004  
2005



sources of employment

1km

finished buildings  
buildings under construction

viral expansion as  
aggressive resistance  
Aggressive patterns of settlement in Luanda’s fringes echo the difficulties faced in opposition to rising land prices and an increasingly adversarial relationship between host and parasite. But those who race to claim “free land” at the city’s periphery are unwittingly engaging in their own form of resistance – flying the flag of the informal city in an area destined to be peppered by formal infrastructure anticipates future development and ensures a role in profiting by i

transitional musseque

informal market	formal market	public sector	self-employment within settlement
-----------------	---------------	---------------	-----------------------------------

organized musseque

informal market	formal market	public sector	self-employment within settlement
-----------------	---------------	---------------	-----------------------------------

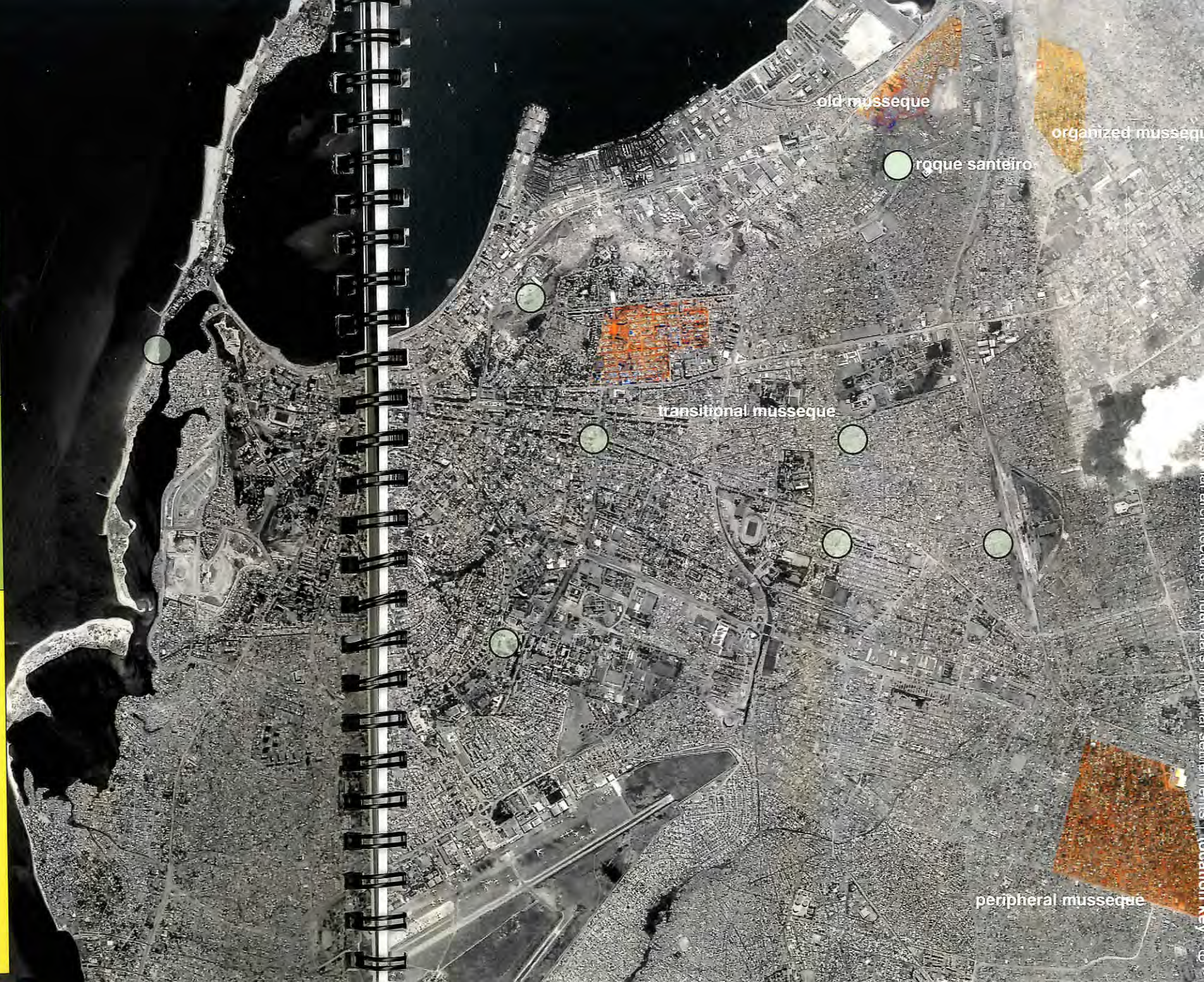
old musseque

informal market	formal market	public sector	self-employment within settlement
-----------------	---------------	---------------	-----------------------------------

peripheral musseque

informal market	formal market	public sector	self-employment within settlement
-----------------	---------------	---------------	-----------------------------------

● informal market





defensive | legitimate | unchanging  
provisional | uncertain | responsive

### issues of acquiescence, strategies of resistance

The relationship between host and parasite is disrupted by patterns of resistance in Luanda's informal settlements. Close to the city center, density has become an obstacle to expansion, and each subsequent annexation of informal territory compounds the very problem. The conflation of residential, commercial, and industrial program provides both a staging ground for infiltration of the formal sector and a kind of economic autonomy from it. Despite their dangerous proximity to the formal sector, it is perhaps these musseques that have the greatest staying power in the imminent turf war by virtue of their density.<sup>17</sup>

At the city's periphery, viral development anticipates the infrastructure needed to support it. In the interim, peripheral musseques rely on their own networks of water distribution, electricity generation, and a productive economic relationship with both the city of Luanda and its hinterlands.<sup>18</sup>

The forms and materials of the informal sector, perceived by officials as unkempt and unsightly shacks "built in a disorderly fashion," contribute to an impulse to activate the mechanisms of the law in pursuit of their destruction. While it is true that the precarious nature of the "cement city,"<sup>19</sup> built primarily from unmortared concrete blocks and zinc metal sheets, raises health and sanitation issues that often help to legitimize mass evictions, its sheer manipulability ensures its continuity. Sure, a mansion is less likely to be slated for demolition, but its permanence also limits the opportunity to reconfigure to avert a total loss.



20

### section endnotes

- <sup>1</sup> Davis, Mike. *Planet of Slums*. London: Verso, 2006, 5.
- <sup>2</sup> Clark, Gracia. *Traders Versus the State: Anthropological Approaches to Unofficial Economies*. London: Westview Press, 1988, 192.
- <sup>3</sup> Image courtesy of Google Earth.
- <sup>4</sup> Jenkins, Paul, Robson, Paul, and Allan Cain. "Luanda City Profile." *Cities* 19.2 (2002) 143.
- <sup>5</sup> "Land Access in Peri-urban Angola: Informal Urban Land Survey and Analysis, Luanda and Huambo." Center for Environment and Urban Settlements (2005). 20.
- <sup>6</sup> "Arena." Photo. Panoramio. 9 November 2009.
- <sup>7</sup> Center for Environment and Urban Settlements 22.
- <sup>8</sup> Images courtesy of Google Earth.
- <sup>9</sup> Unnamed Photo. Panoramio. 9 November 2009.
- <sup>10</sup> Center for Environment and Urban Settlements 32.
- <sup>11</sup> "Operario." Photo. Panoramio. 9 November 2009.
- <sup>12</sup> Center for Environment and Urban Settlements 28.
- <sup>13</sup> Unnamed Photo. Panoramio. 9 November 2009.
- <sup>14</sup> Center for Environment and Urban Settlements 30.
- <sup>15</sup> Unnamed Photo. Panoramio. 9 November 2009.
- <sup>16</sup> Base images courtesy of Google Earth.
- <sup>17</sup> Center for Environment and Urban Settlements 17.
- <sup>18</sup> Center for Environment and Urban Settlements 30.
- <sup>19</sup> Center for Environment and Urban Settlements 32.
- <sup>20</sup> "Soccer Field." Photo. Flickr. 9 November 2009.

# defensive architecture : luanda's formal sector

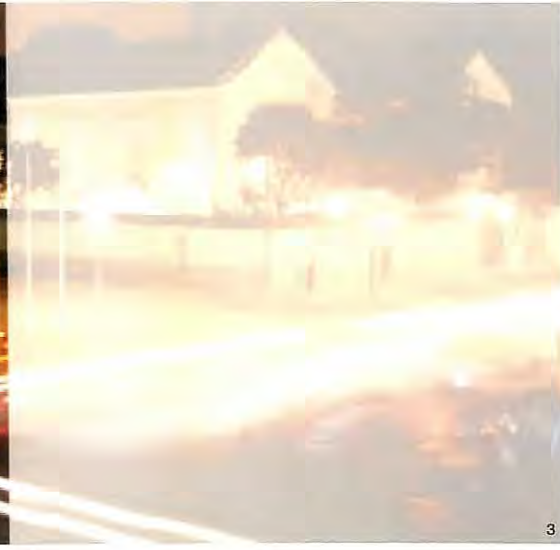
If the informal city promotes architecture by accretion, design in the formal sector is enacted through annexation, occupation, and, when hostility erupts, the implementation of defensive maneuvers. The inviolability of Luanda's formal sector is enforced by a range of aggressive architectural tactics sanctioned by the state.

"It is not clear which comes first, the rather extravagant and perhaps greedy delimiting of land in order to exclude and construct one's own 'interior' world, or the density of street life."  
-Rem Koolhaas, *Mutation*



defensive architecture | luanda's formal sector | introduction

luanda's formal sector | introduction



3

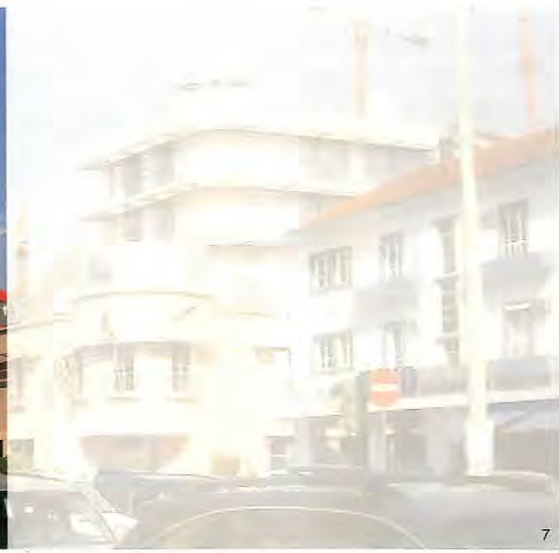
"There is a Sonangol gas station within walking distance when we need to buy diesel for the generator. There is also an Afri Belg grocery store within walking distance. It's just past the Land Rover dealer on the other side of the main road."<sup>4</sup>  
- foreign oil company employee, miramar

**miramar - "the fortress."**

As the Angolan saying goes, the best way to fix a pothole in Luanda is to buy a Land Rover. In Luanda's most exclusive high-roller residential district, you can do just that. Bearing an eerie resemblance to the Portuguese stronghold west of the city, Miramar is a commanding presence on the city's skyline. Home to foreign diplomats and oil company executives, the half-round neighborhood is among the city's most expensive, with low-end rentals starting at \$250,000 per year. Although the development boasts incredible sunset views, the real pearl of the complex is its brand new BMW / Land Rover dealership, built in 2005.<sup>6</sup>



5

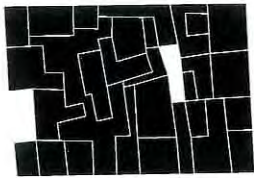


7

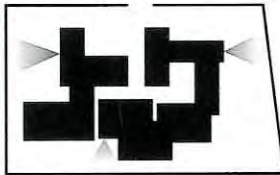
**downtown - "the streetfront."**

Like many vertically-dense urban centers, downtown Luanda makes a clear distinction between private and public space. It does so by controlling the streetfront, using a barely-permeable layer of built fabric to distinguish between interior and exterior, privileged and ordinary.

The compound wall common in informal settlements mimics this distinction in an effort to compensate for a lesser degree of permeability.



**streetfront control  
enhancing visibility**



**+ mimicking density  
- impeding visibility**



9

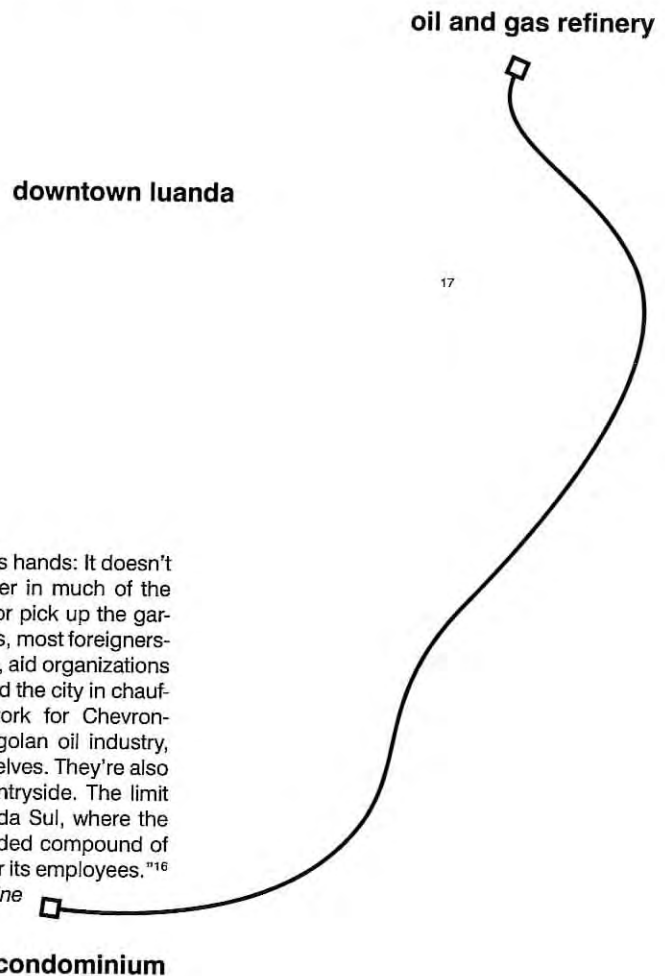


10



11

**dalia condominium - "the suburb."**  
 Almost 10 kilometers from the city center, the Dalia Condominium project houses almost exclusively employees working in Angola's oil and natural gas industries.<sup>14</sup> Developments such as these function as Luanda's suburbs, catering to middle and upper class Luandans who operate almost independently from the city proper. Shuttling between nearby oil refineries in Luanda Sul and their gated compounds, spatial circumstances at least partially-prescribed by their employers allow those expatriates living in "Southern California-style homes"<sup>15</sup> to extricate themselves from the harsh realities of the surrounding social climate.



"The government has thrown up its hands: It doesn't provide electricity or running water in much of the city, let alone maintain the roads or pick up the garbage. To avoid this unpleasantness, most foreigners-whether working for oil companies, aid organizations or the United Nations- travel around the city in chauffeur-driven SUVs. Those who work for Chevron-Texaco, which dominates the Angolan oil industry, aren't even allowed to drive themselves. They're also forbidden to venture into the countryside. The limit is the golf course in nearby Luanda Sul, where the company maintains a gated, guarded compound of Southern California-style homes for its employees."<sup>16</sup>  
*Daphne Eviatar, The Nation Magazine*

**“taking the high ground.”**  
Miramar heightens exclusivity and security through its dominant sectional relationship with the surrounding slums.

defensive architecture | luanda's formal sector | tactics | taking the high ground

miramar

defensive architecture | luanda's formal sector | tactics | taking the high ground

boa vista slum

**"the wall."**

A means of controlling access and view which can be extended, expanded, or strengthened at will to accommodate for growth or an increased need for security.

Cine Miramar is an outdoor performance venue which tailors its audience's view, directing it upwards from the slums and away from "unsightly" informal settlements to the east and west.

blind spot

cine miramar

blind spot

**a fair deal?**

Formal policies toward the informal sector usually land in one of two camps: those which attempt to eliminate it, or those which turn a 'blind eye' to its existence.<sup>20</sup> The most commonly discussed tactic to eliminate the informal sector is to "formalize" its operation - to bring informal entrepreneurs under regulatory gaze, requiring them to incur the costs of licensing, registration, and taxation in exchange for acknowledged legality of business and relative security.<sup>21</sup>

But 'formalization' does not consider that perhaps, more than the costs of doing business in the formal sector, those working extra-legally choose to do so out of the opportunities it affords, despite the increased risks. Indeed, there are very tangible costs to doing business within the informal sector as well, often requiring traders to pay hefty bribes and "security fees" to avoid harassment or eviction.

Two groups of texts were run through a text analysis program to determine the number of times each word was used. The first, in black, is text from street vendor unions and organizations. In orange, text is taken from official government policy toward street trading. The rhetoric is telling of their relationship with one another.

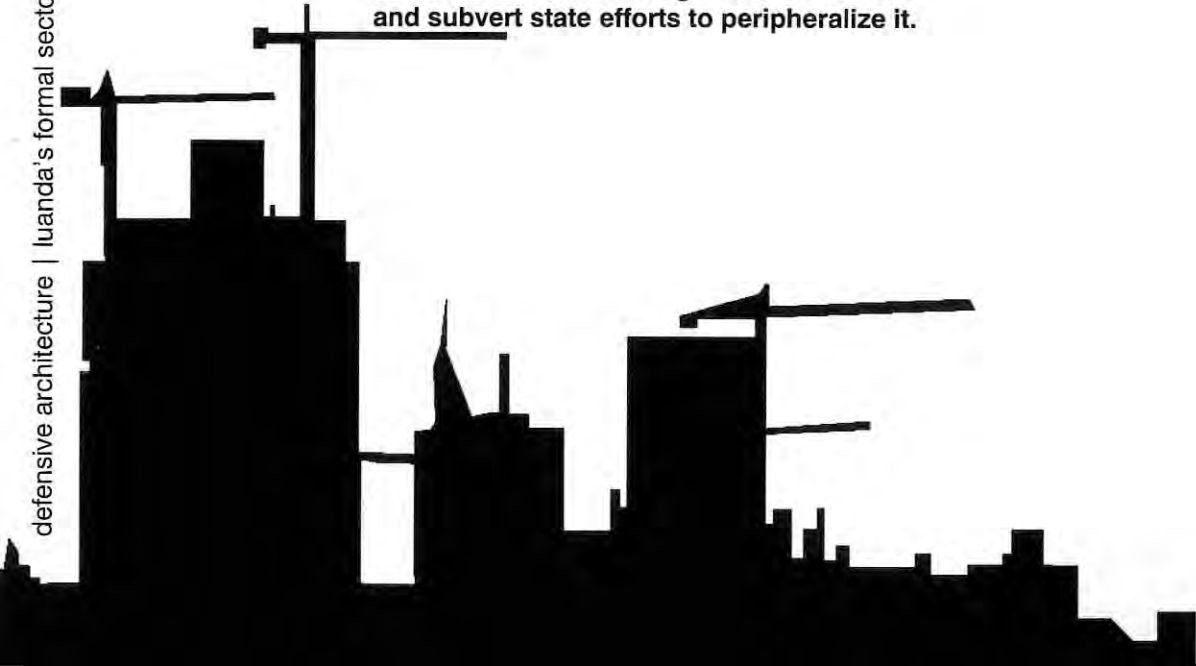




**nailing jelly to the wall**

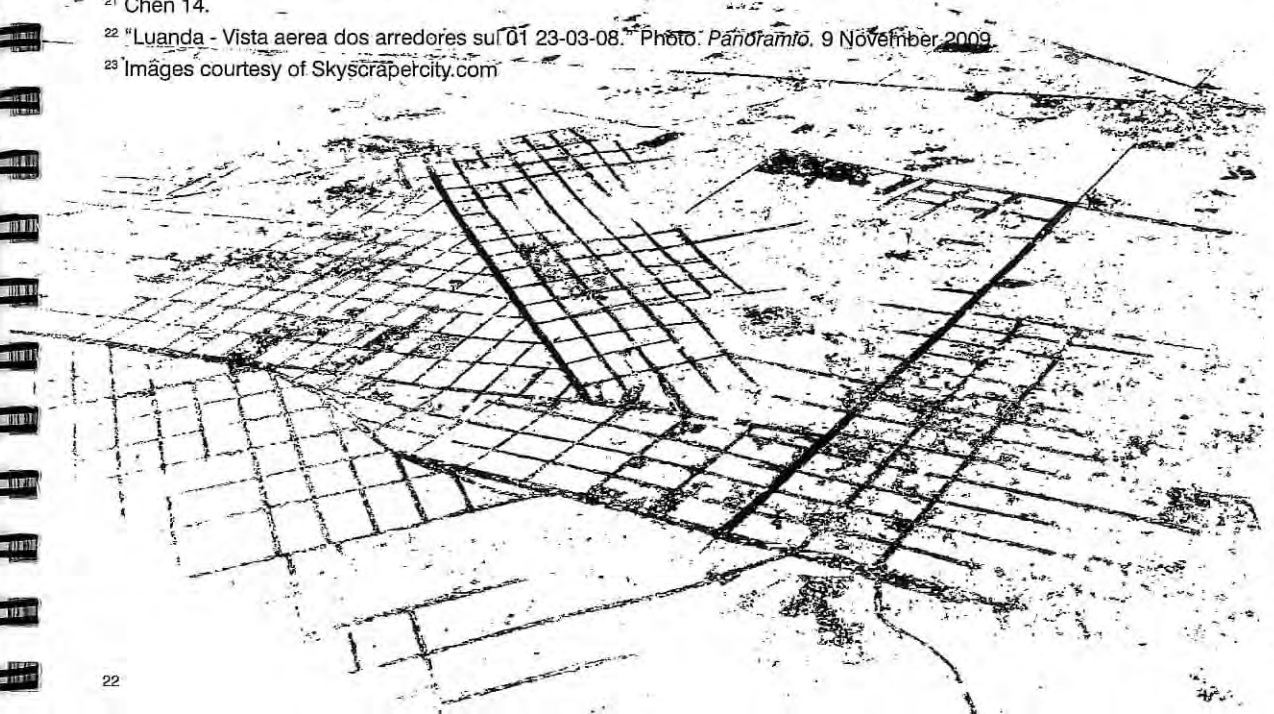
Any attempt to wield regulations, be it via legislation or in built form, on a system that intentionally eludes and resists even the most intensive efforts at definition, is a bit like nailing jelly to a wall. Any architectural intervention in pursuit of such an aim (a regulated market, for example) would at the outset appear effective, but in the long term what such an architecture would consider "the problem" of the informal economy would likely not be solved, but rather would re-emerge elsewhere, no worse for the wear.

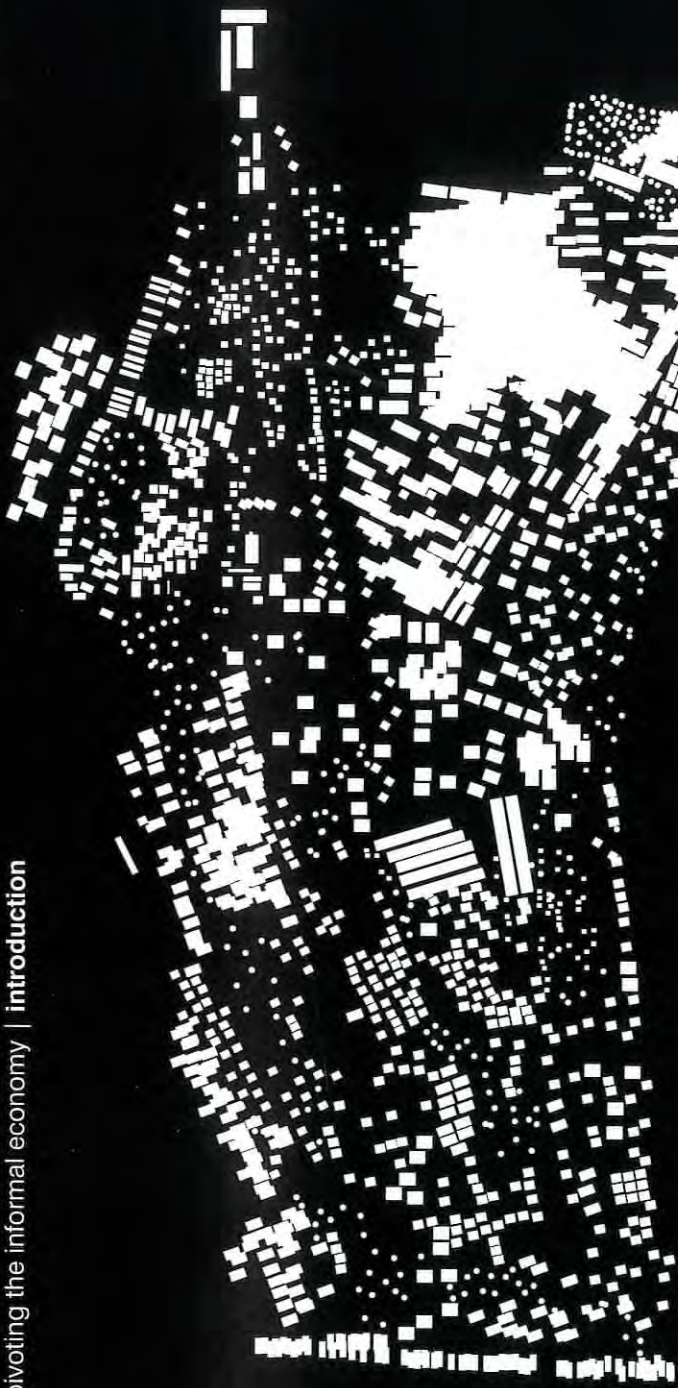
Therefore it is *not* the contention of this thesis that architecture can, or should, 'formalize' the informal economy through the 'grounding' of the informal space of commerce in built form. Pursuit of that end would be to privilege cost over opportunity as a justification for restructuring the space of informal sector. **Architecture should, however, respond to the needs of those who have sought opportunity in informal employment by providing an anchor or 'pivot point' upon which to direct the flow of unregulated commerce and subvert state efforts to peripheralize it.**



**section endnotes**

- <sup>1</sup> Koolhaas 663.
- <sup>2</sup> Images courtesy of Skyscrapercity.com.
- <sup>3</sup> "Miramar." Photo. Angola do Agoramente. 9 November 2009.
- <sup>4</sup> "Residency in Miramar." 7 December 2008. Web. 9 November 2009.
- <sup>5</sup> Base images courtesy of Google Earth.
- <sup>6</sup> Smith, Alex Duval. "It's Party Time for Luanda's Elite as Angola Grows Rich on Oil and Gems." The Guardian, 31 August 2008. Web.
- <sup>7</sup> Unnamed Photo. Panoramio. 9 November 2009.
- <sup>8</sup> Base image courtesy of Google Earth.
- <sup>9</sup> "Baia a Noite." Photo. Panoramio. 9 November 2009.
- <sup>10</sup> Unnamed Photo. Panoramio. 9 November 2009.
- <sup>11</sup> Base image courtesy of Google Earth.
- <sup>12</sup> Image courtesy of Google Earth
- <sup>13</sup> Base image courtesy of Google Earth.
- <sup>14</sup> Eviatar, Daphne. "Africa's Oil Tycoons." *The Nation Magazine*. 12 April 2004.
- <sup>15</sup> Eviatar 1.
- <sup>16</sup> Eviatar 1.
- <sup>17</sup> Base image courtesy of Google Earth.
- <sup>18</sup> Unnamed Photo. Panoramio. 9 November 2009.
- <sup>19</sup> "Cinema ao Ar Livre." Photo. Panoramio. 9 November 2009.
- <sup>20</sup> Chen, Martha Alter. "Rethinking the Informal Economy: Linkages with the Formal Economy and the Formal Regulatory Environment." United Nations Department of Economic and Social Affairs. 2007, 12.
- <sup>21</sup> Chen 14.
- <sup>22</sup> "Luanda - Vista aerea dos arredores sul 01 23-03-08." Photo. Panoramio. 9 November 2009.
- <sup>23</sup> Images courtesy of Skyscrapercity.com





3. - QUINQUILHARIA:-  
 a) - Terrado, pavimento  
 tro quadrado

4. - TERRAÇO:-  
 Para escolher predios  
 quadrados, taxa de

5. - BANCA COMUM:-  
 Cada vendedor, taxa

6. - DIVERSOS:  
 a) - Bancas e lugares  
 b) - Terrado, pavimento  
 quadrado, . . . . .

II. - Merçados Permanentes  
 I. - Hortaliças, Frutas  
 a) - Bancas e lugares  
 b) - Terrado, pavimento  
 quadrado, . . . . .

2. - PESCADO:  
 Bancas e lugares

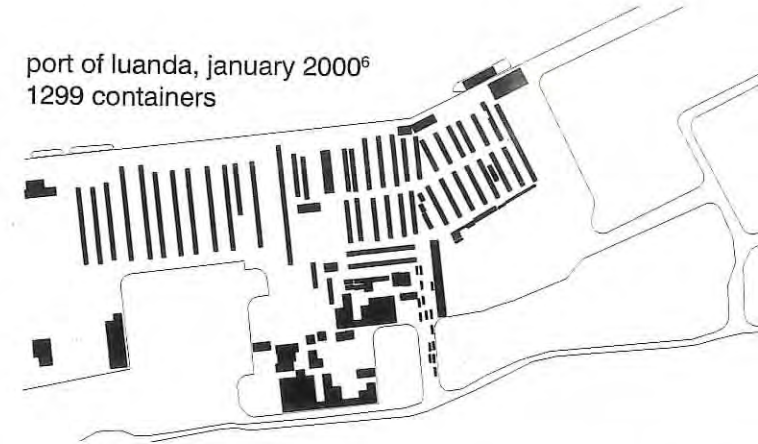
3. - BANCA COMUM:-  
 Cada vendedor

4. - DIVERSOS:  
 a) - Banca e lugares  
 b) - Terrado, pavimento  
 quadrado, . . . . .

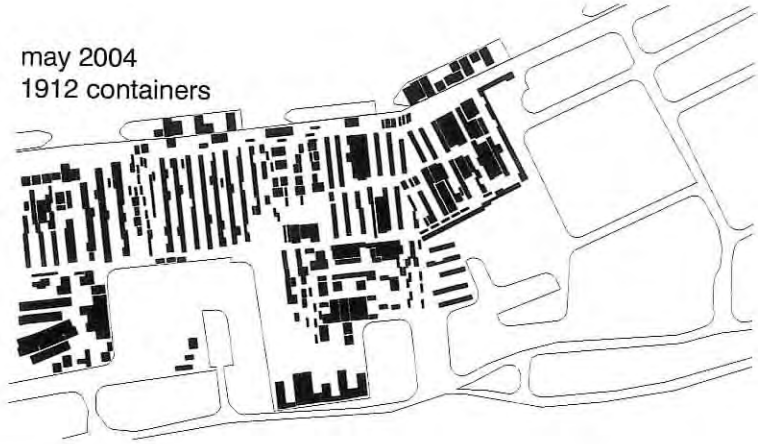
**change is the only constant**  
 The city can by no means be considered a static input for the generation of architecture. Particularly in developing countries, rapidly growing and migrating populations push and pull at the boundaries of the plot, the block, and the district, ultimately threatening or reaffirming the existence of the city and its component parts. **Nothing is unaffected.** By attempting to specify what is fixed and what is most likely to change, infrastructure can be "architecturally precise yet programmatically open,"<sup>3</sup> acknowledging motivations for change and anticipating its effects.

The city of Luanda has seen rapid economic and population growth from the end of the Angolan civil war in 2002. Even now, the city's population grows over 4% each year, with the Angolan economy growing annually by an average of 17% as oil exports continue to increase.<sup>4</sup> Hundreds of infrastructural and private projects dot the city's skyline, and many more await sufficient skilled labor necessary to construct them.<sup>5</sup> With physical and capital pressures mounting in the capital, the city is poised for expansion. **Situating an architectural intervention amidst Luanda's exaggerated condition of variability must privilege circumstances of intersection and overlap as potential 'pivot points' for negotiating response to changing flows of goods and people.**

port of luanda, january 2000<sup>6</sup>  
 1299 containers



may 2004  
 1912 containers



may 2009  
 2013 containers



programmatic pivot +

Simultaneity of function. A programmatic pivot point defies classification within any typical zoning structure (residential, commercial) by virtue of the overlap of function at even the smallest scale.



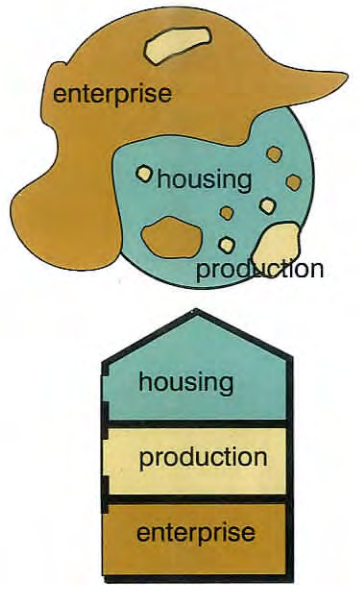
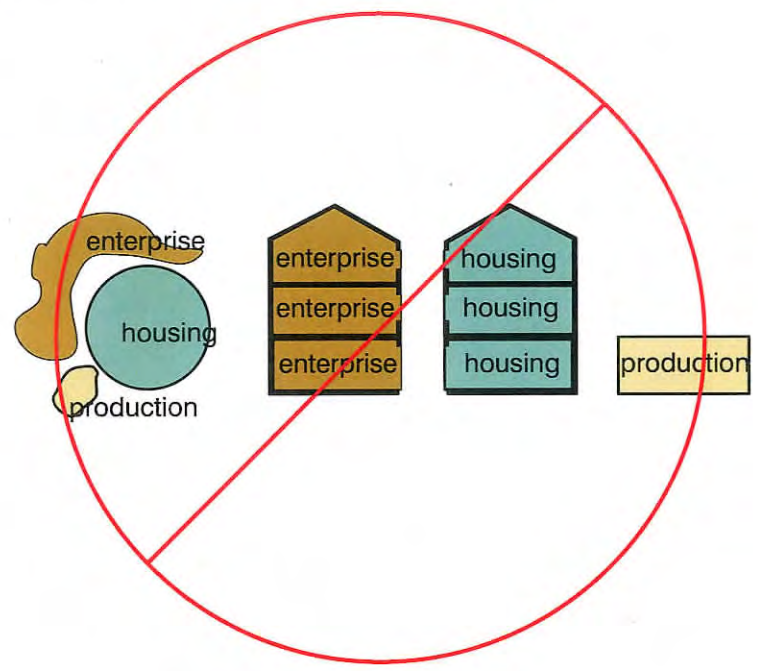
circulation pivot +

Intersection of circulation systems. Proliferation of street trading in zones of congestion creates a hybrid condition in which vehicular traffic pivots into and through resultant pedestrian circulation. When traffic conditions favor the "no-go," the circulation pivot becomes a nexus of trade.

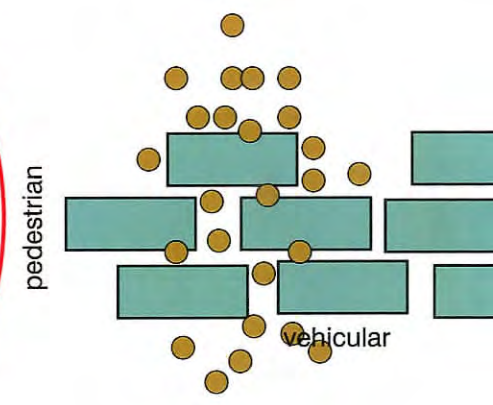
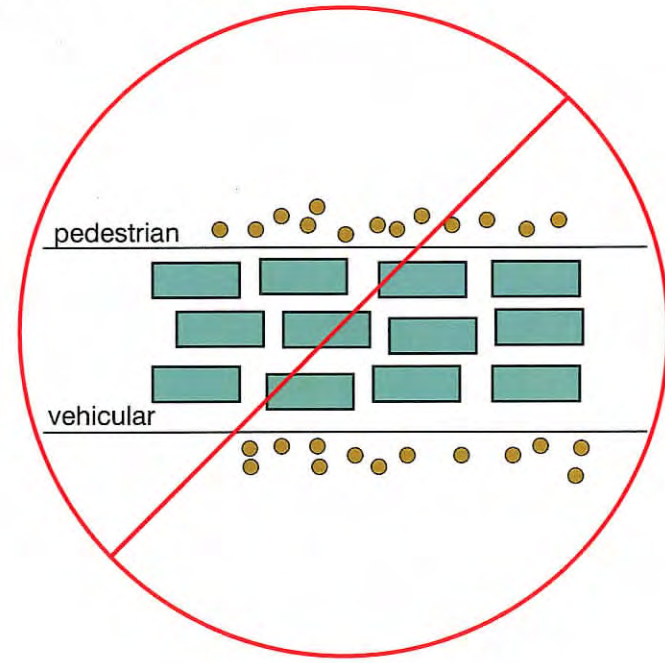


84 pivoting the informal economy | pivot points

programmatic conditions  
potential for overlap



circulation patterns  
potential for intersection



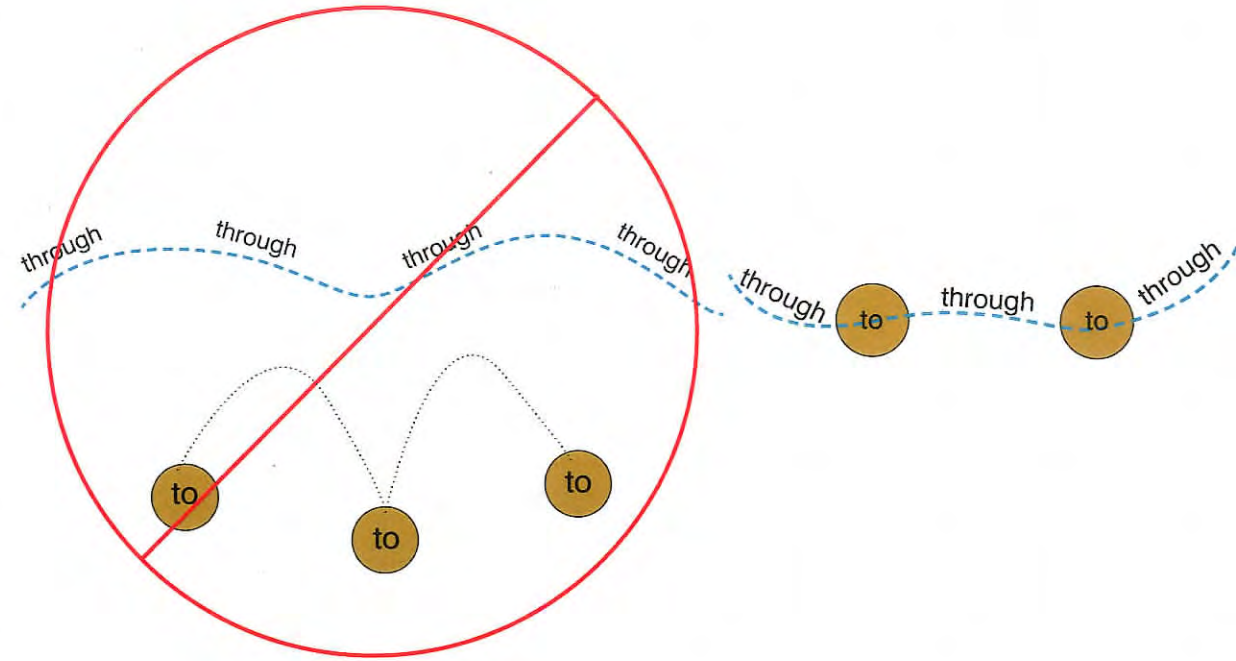
# "point of sale" pivot +

Intersection of economic flows. Streams of goods may fluidly pivot either from one location to another, where the point of sale has been specified prior to transport, or **through** a zone where commerce occurs incidentally. In plan, the economic pivot is the intersection of "points of sale" and "lines of sale."



10

economic flows  
potential for connection



# = duration pivot

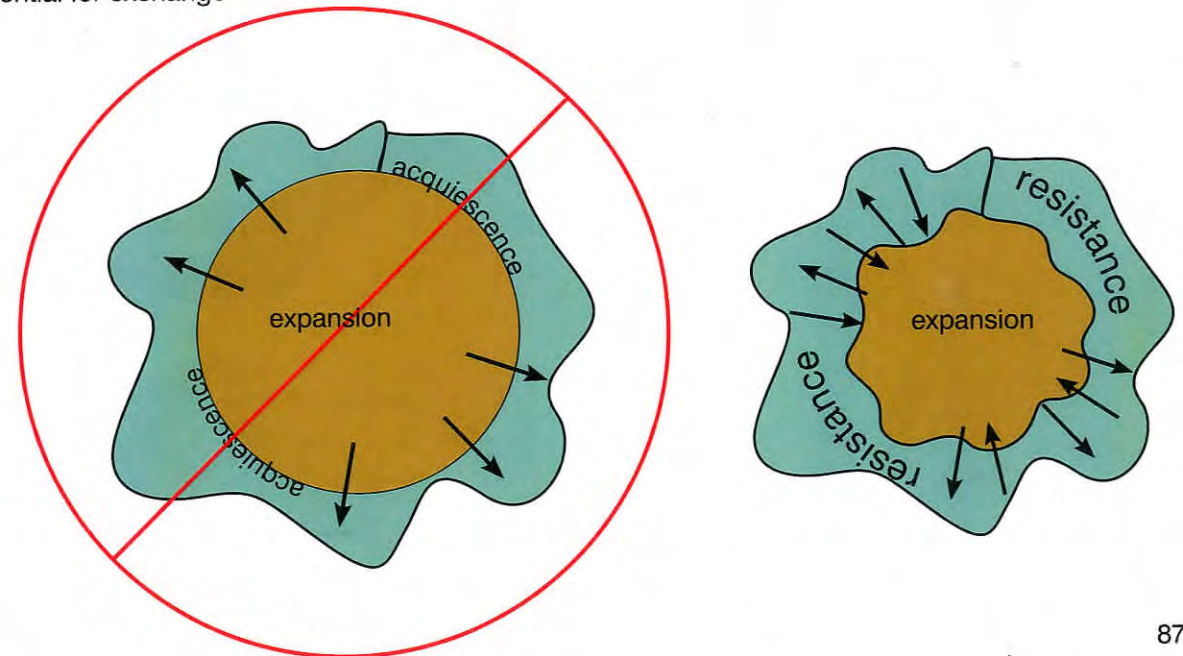
Duration pivots allow for movement between the informal space of flow and the stable realm of permanent and certain existence. Presenting great opportunity for exchange between the two, the duration pivot often lies in a heavily-patrolled or otherwise contested area.

86 pivoting the informal economy | pivot points



10

variability of duration  
potential for exchange



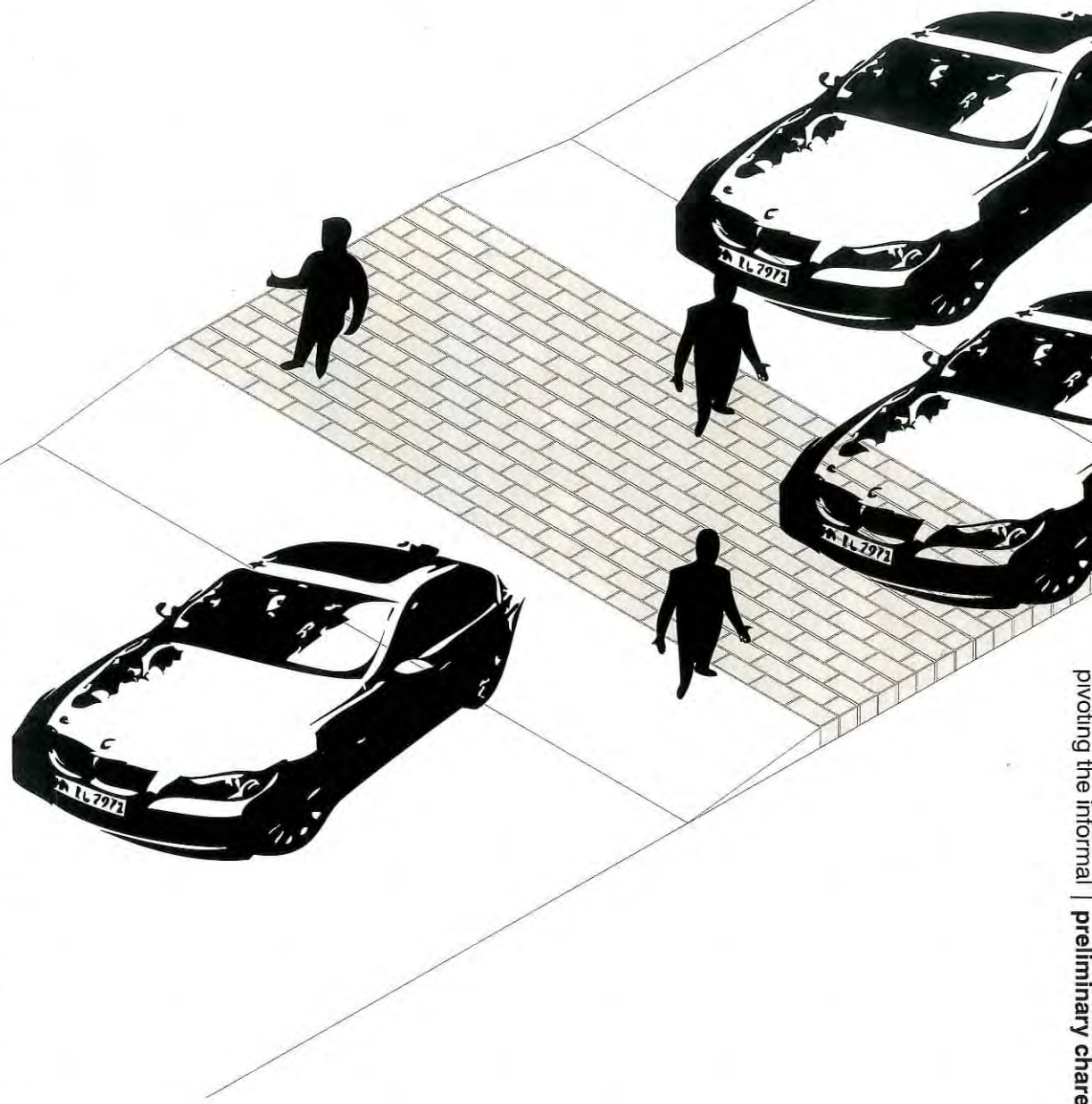
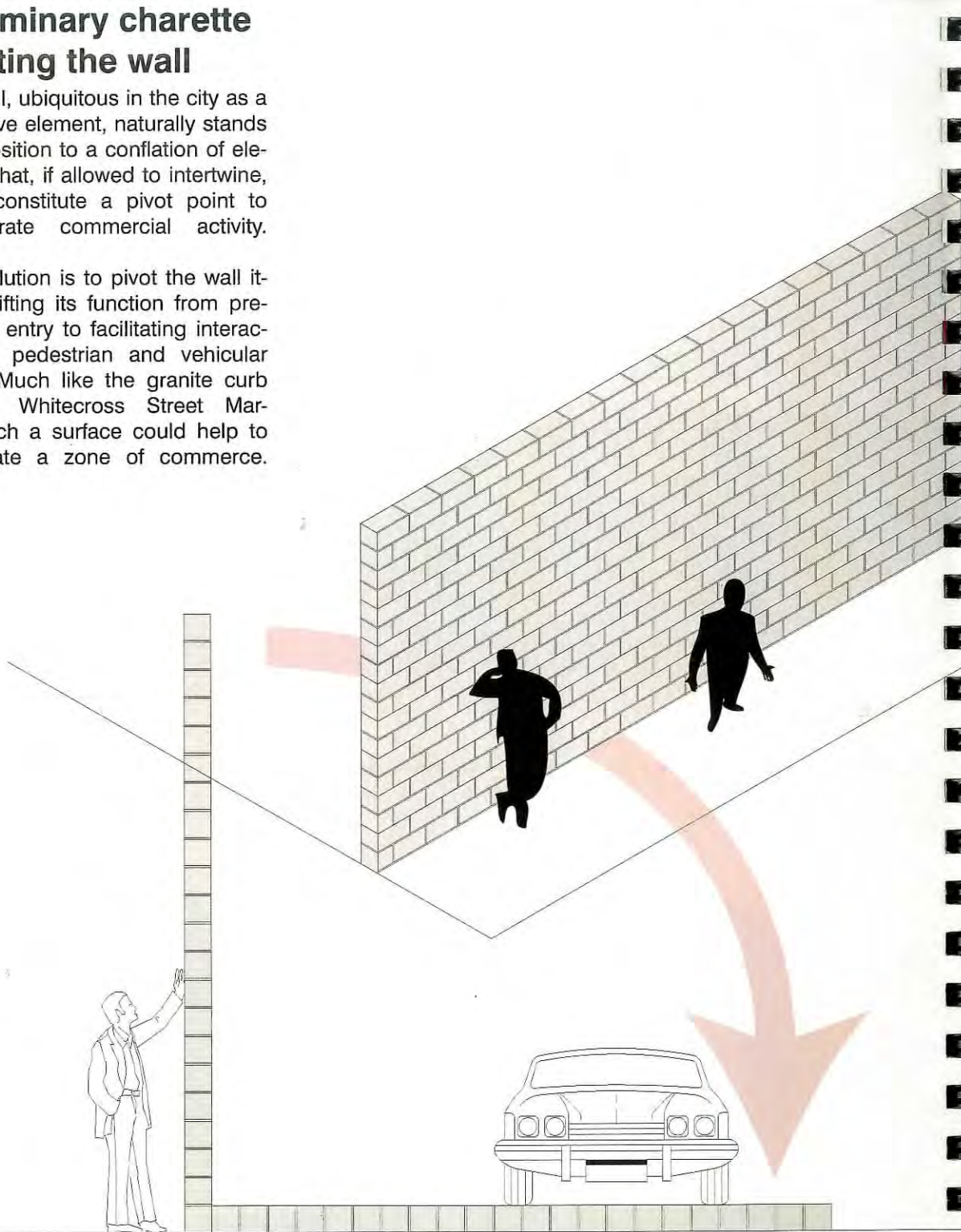
87

# preliminary charette pivoting the wall

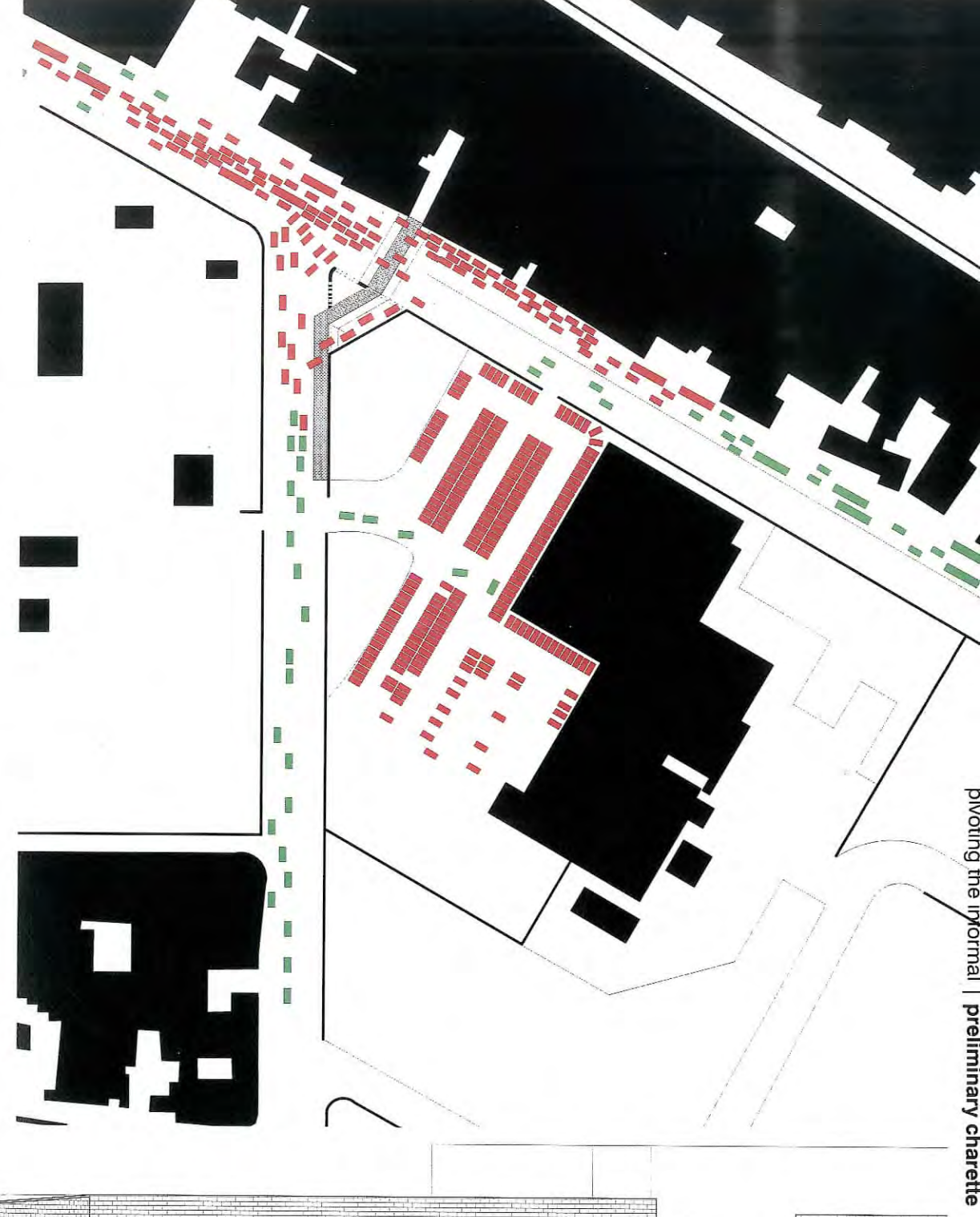
The wall, ubiquitous in the city as a defensive element, naturally stands in opposition to a conflation of elements that, if allowed to intertwine, could constitute a pivot point to orchestrate commercial activity.

One solution is to pivot the wall itself, shifting its function from preventing entry to facilitating interaction of pedestrian and vehicular traffic. Much like the granite curb of the Whitecross Street Market, such a surface could help to designate a zone of commerce.

pivoting the informal | preliminary charette



pivoting the informal | preliminary charette  
89



**jam space**

"the totally negotiable, usually illegal and hugely productive space of the traffic jam, is not something to fix, solve, or even rationalize. Jam space cannot be controlled or short-circuited, only bypassed. Rampant entrepreneurialism charges the bottleneck's enormous physical friction with an even greater social traction."<sup>13</sup>

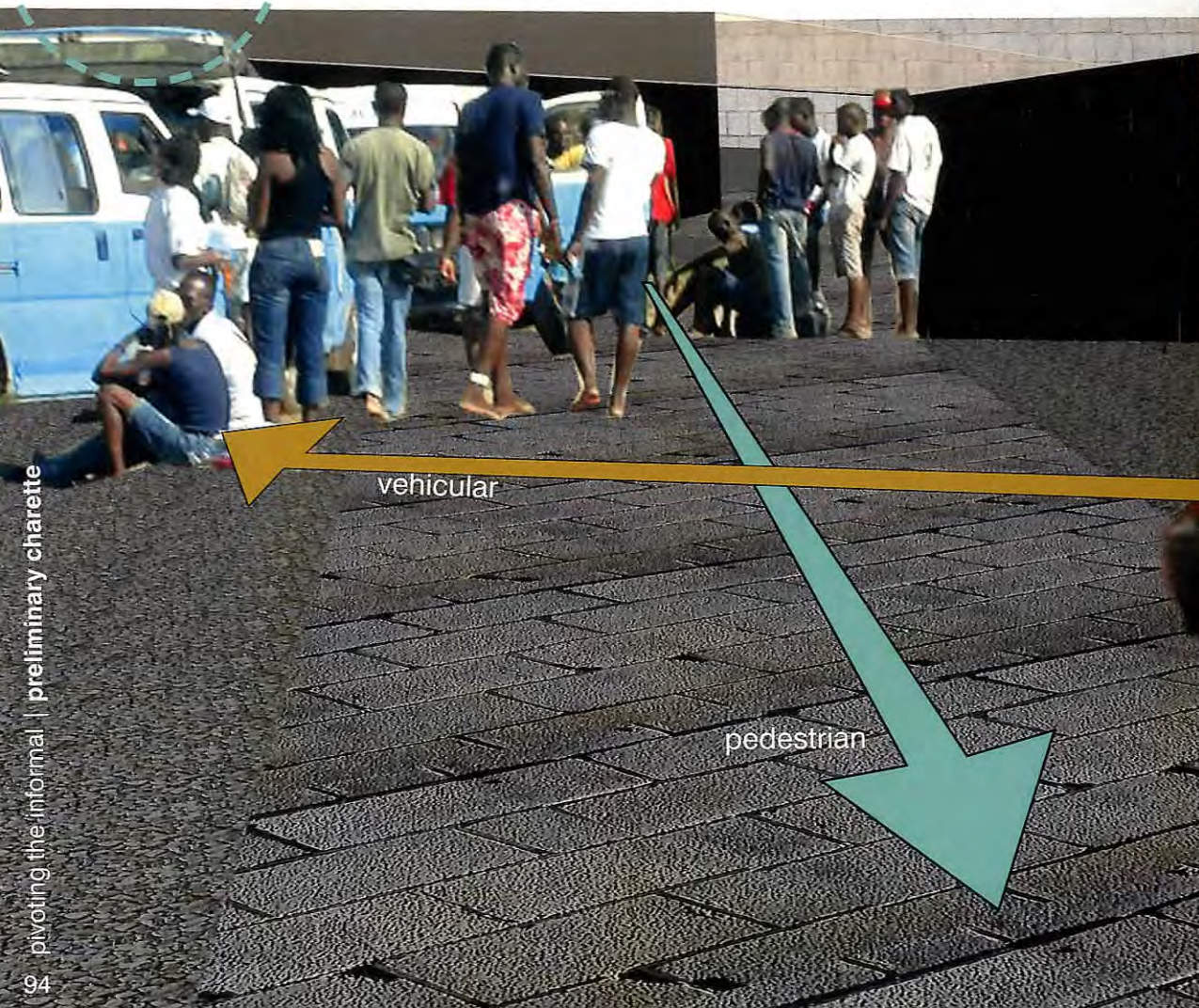
- Rem Koolhaas, *Mutations*



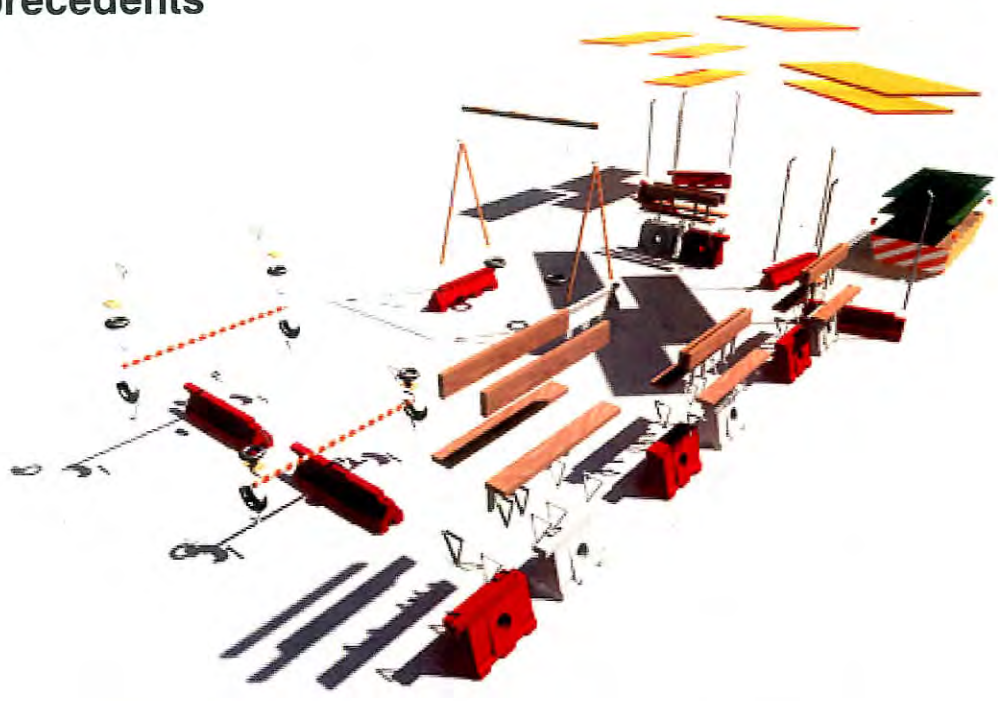
pivoting the informal | preliminary charrette



pivoting the informal | preliminary charrette

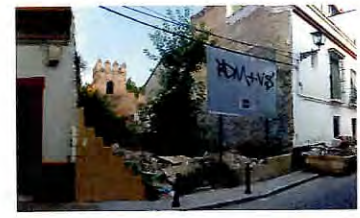
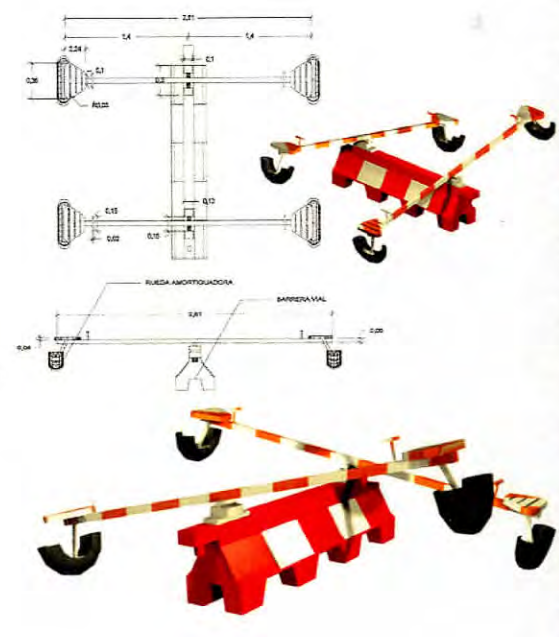
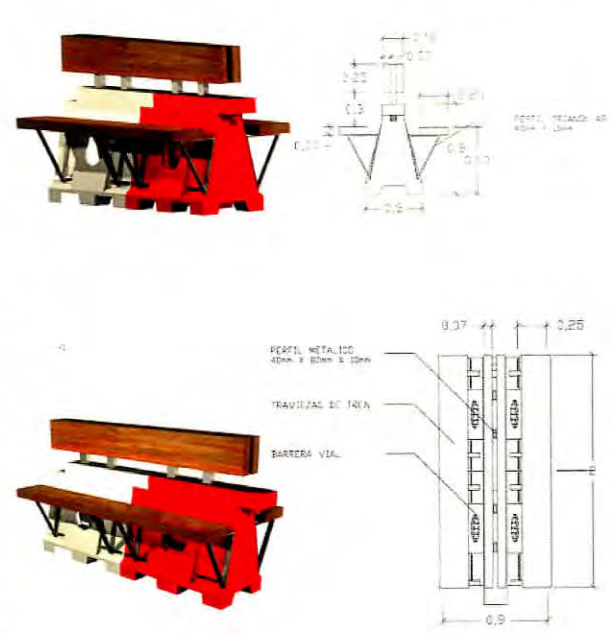






**MOBILIARIO**

ARCHITECTURAL GAMES S.C.

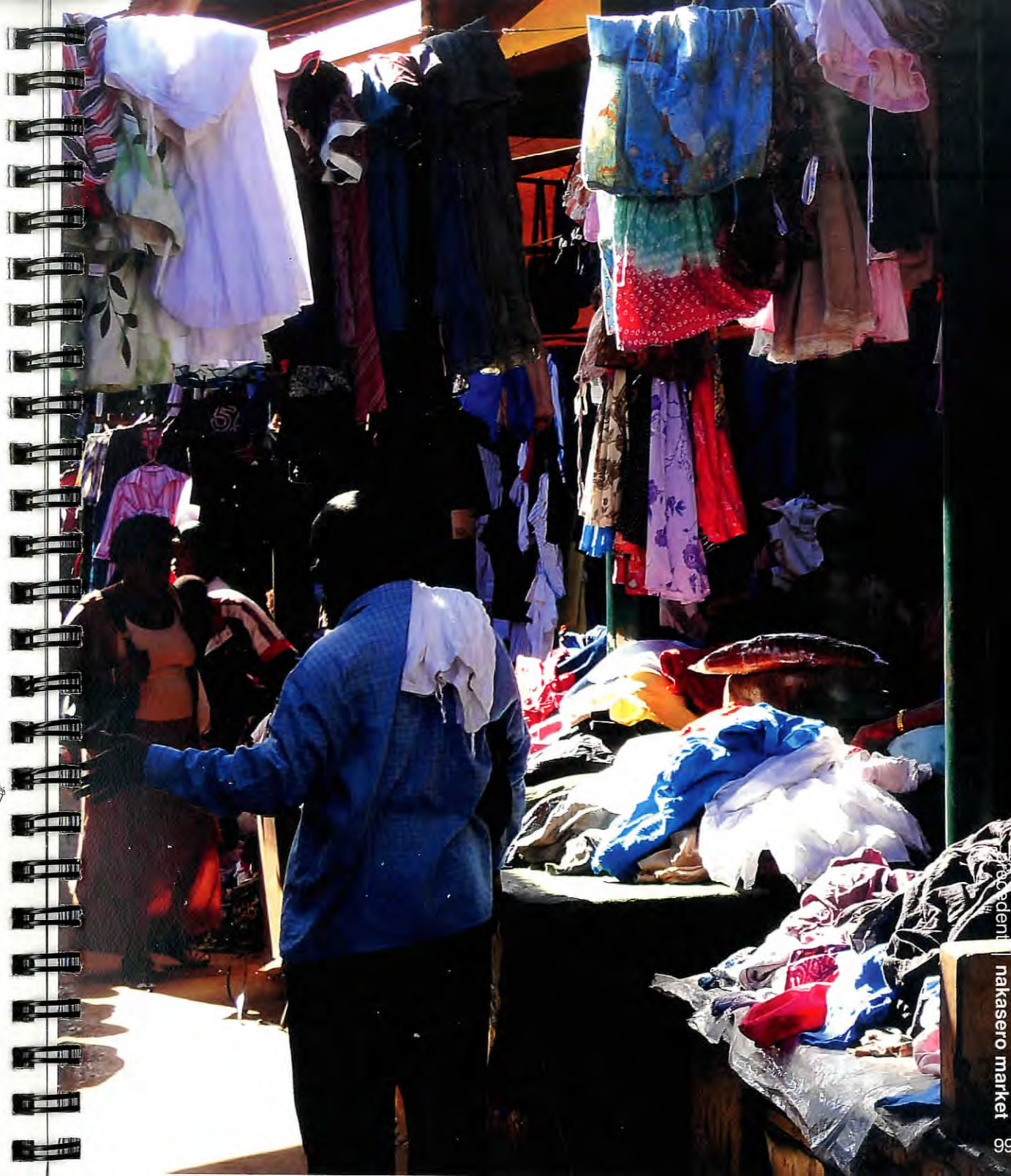
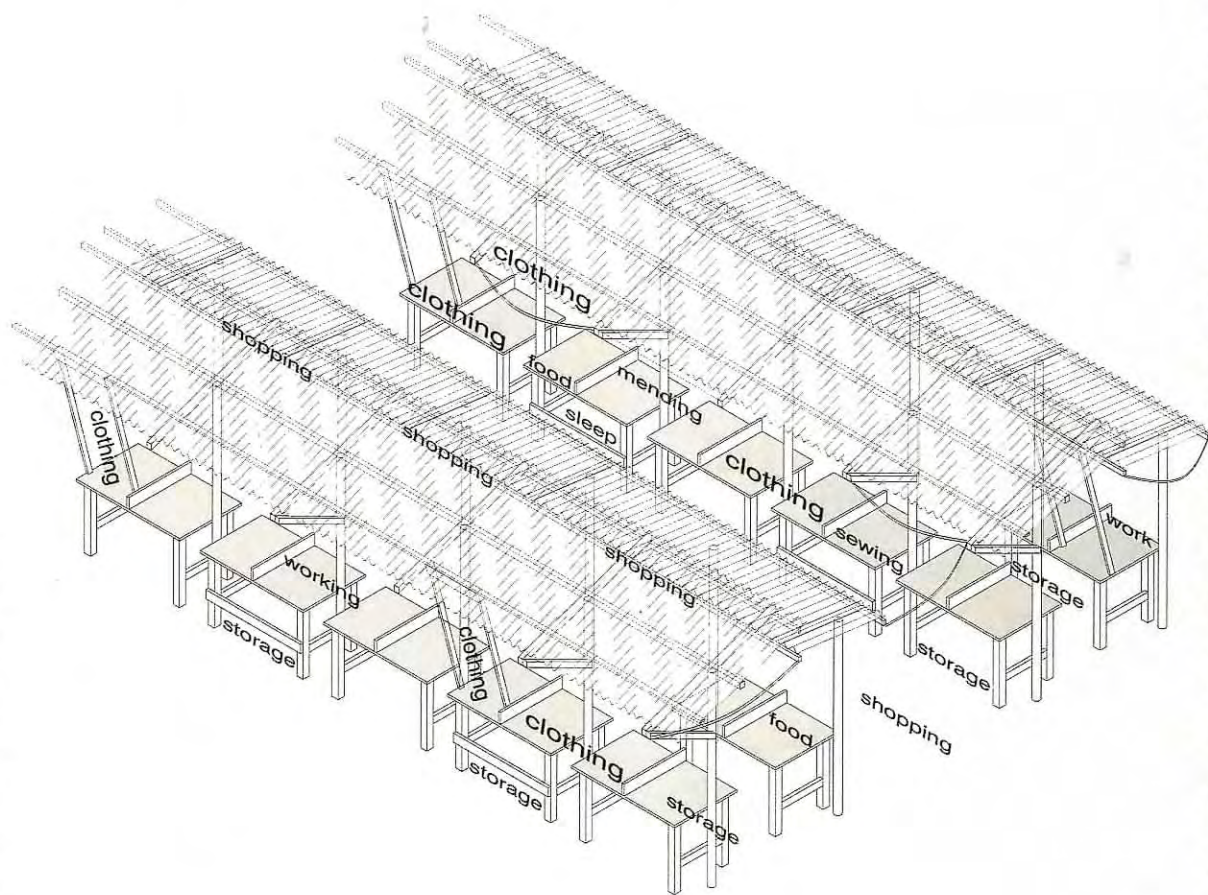


recetas urbanas | urban prescriptions, seville, spain  
legislation and temporary occupation of empty lots

In response to a long-standing Spanish law to combat vacant lots, this project seeks to further a proposed city ordinance allowing for the re-use of public lots with temporary furniture. This furniture aims to redefine Seville's conspicuously empty lots as a equally-conspicuous collective spaces, as "public squares, but also [sites for] short-lived equipment, such as meeting places for neighborhood associations, or even temporary housing."<sup>17</sup> Using readily-available materials in new combinations, the informal economy could potentially use tactics such as these to activate previously unoccupied territories within the formal sector, allowing for flexible program and continuous occupation.

**nakasero market | kampala, uganda**

Nakasero Market is among the largest of Kampala's thriving city markets. Proximity to Kampala's main taxi park enables merchants to capitalize on daily traffic cycles, as well as to expand the space of the market beyond its official borders. As commerce ebbs, unused space in the market becomes a place to sleep, to mend clothes, and to gather.





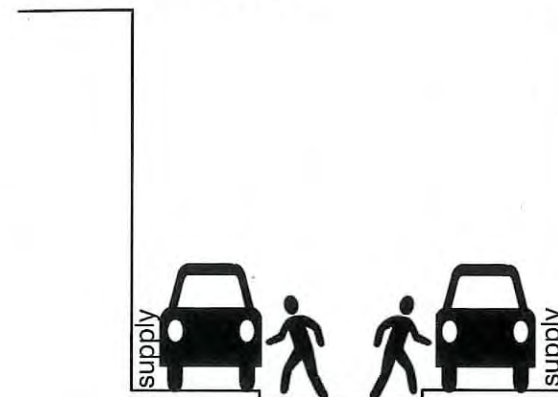
20

**whitecross street market | muf architects | london, england**

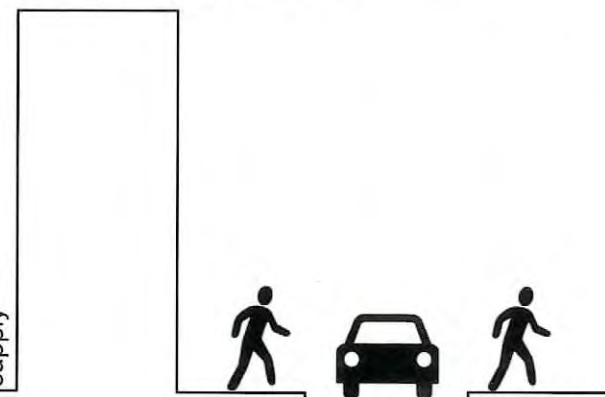
After engaging in dialogue with merchants operating in the Whitecross Street Market, muf Architects proposed to lay a 1.8 meter strip of granite to delineate the licensed area for trade. Following the historic curb line, the project seeks to accommodate the needs of existing stallholders by acknowledging the diurnal cycle of market operation. The design privileges the "sidewalk" as a stage for commercial enterprise (often operated from merchants' cars and trucks), and relegates the space of the street itself to pedestrian circulation. At the end of the day as the road opens to vehicular traffic, street and sidewalk invert. Although Whitecross Street Market caters to licensed vendors, the strategy of incorporating architectural elements capable of supporting informal tactics within a formal framework could be used at a number of scales in an architectural intervention.

precedents | whitecross street market

market operation by day

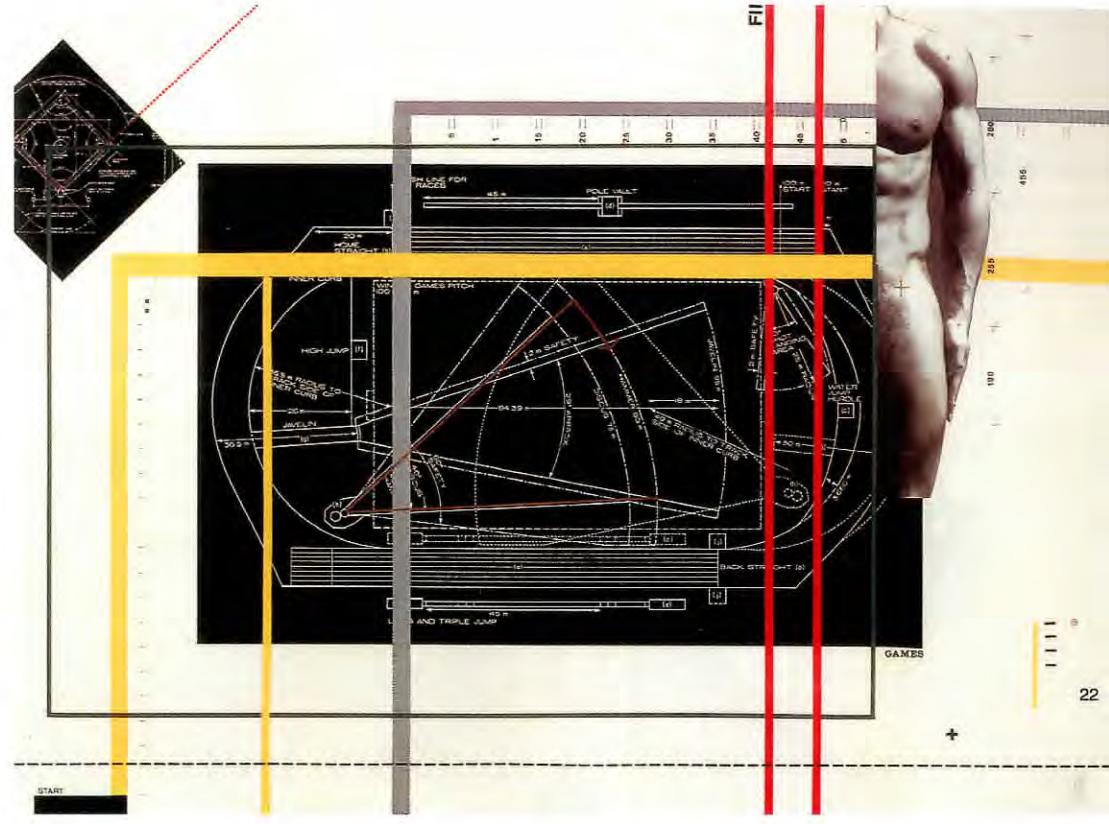


market operation by night



21

precedents | whitecross street market



### james corner | "games"

The overlap of functions, and definition of space by activity itself are key to understanding the workings of the informal sector. James Corner's "Games" uses a method of collage and line drawing that could help make clear that activity doesn't just take place in two dimensions – that there is an incredible amount of overlap and confusion, but that its representation needn't be so. Although a high amount of activity takes place in a track meet, density of activity is relatively low – large allowances are made for safety, and adjacencies of sports are organized in an effort to minimize potential harm. The length of the javelin field and the design of the javelin itself, for example, respond to one another to settle on a safe distance to keep from shot-put; the average javelin is engineered to fly a limit of 90 meters, and the field to accommodate it is built to 95 meters. Overlap and high levels of activity in a market space operate in a similar way, where density of use comes in waves, responding to prices and availability of supplies in a give-and-take that defines the extent of the market on a minute-by-minute basis. Corner's representation of the field, too, could highlight the ephemeral nature of activity that literally defines the space itself. The classification of a place of speculation or commerce as one defined almost entirely by the events contained within it may help move the argument forward.



# situating architecture in a changing climate : potential for an architecture of resistance

## the next step

With physical and capital pressures mounting in Angola's capital, the city is poised for expansion. What will be the next step?

## desertification

With dwindling resources unable to support continued foreign investment, boundaries between formal and informal begin to blur. The state's power wanes along with its oil revenues, and corruption runs rampant as officials seek increasingly-lucrative extra-legal perks to supplement their wages.

**potential architectural response :**  
**filling the void**

## formalization

Pressured by critics, Luanda's government incorporates vocational training and micro-enterprise loans for its slum-dwellers into the city budget, while at the same time actively discouraging informal activities. Market functions are brought under government control.

**potential architectural response :**  
**limited by official constraints**

## protection

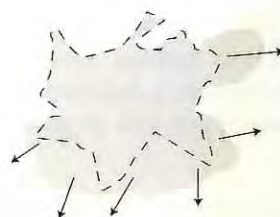
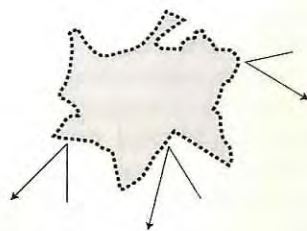
Increasing hostilities between Luanda's formal and informal sectors prompt officials to erect a "wall" (either literally or via increasingly harsh punishments for operating extra-legally) to defend against incursions by players of the informal economy.

**potential architectural response :**  
**undermining agencies of harassment**

## expansion

Probably the most likely scenario. The formal sector continues to expand outwards, following the path of least resistance - surrounding slums are either densified or further peripheralized.

**potential architectural response :**  
**resistance by infiltration & subversion**



24



25



26



27

Luanda population<sup>28</sup>

1900

1950

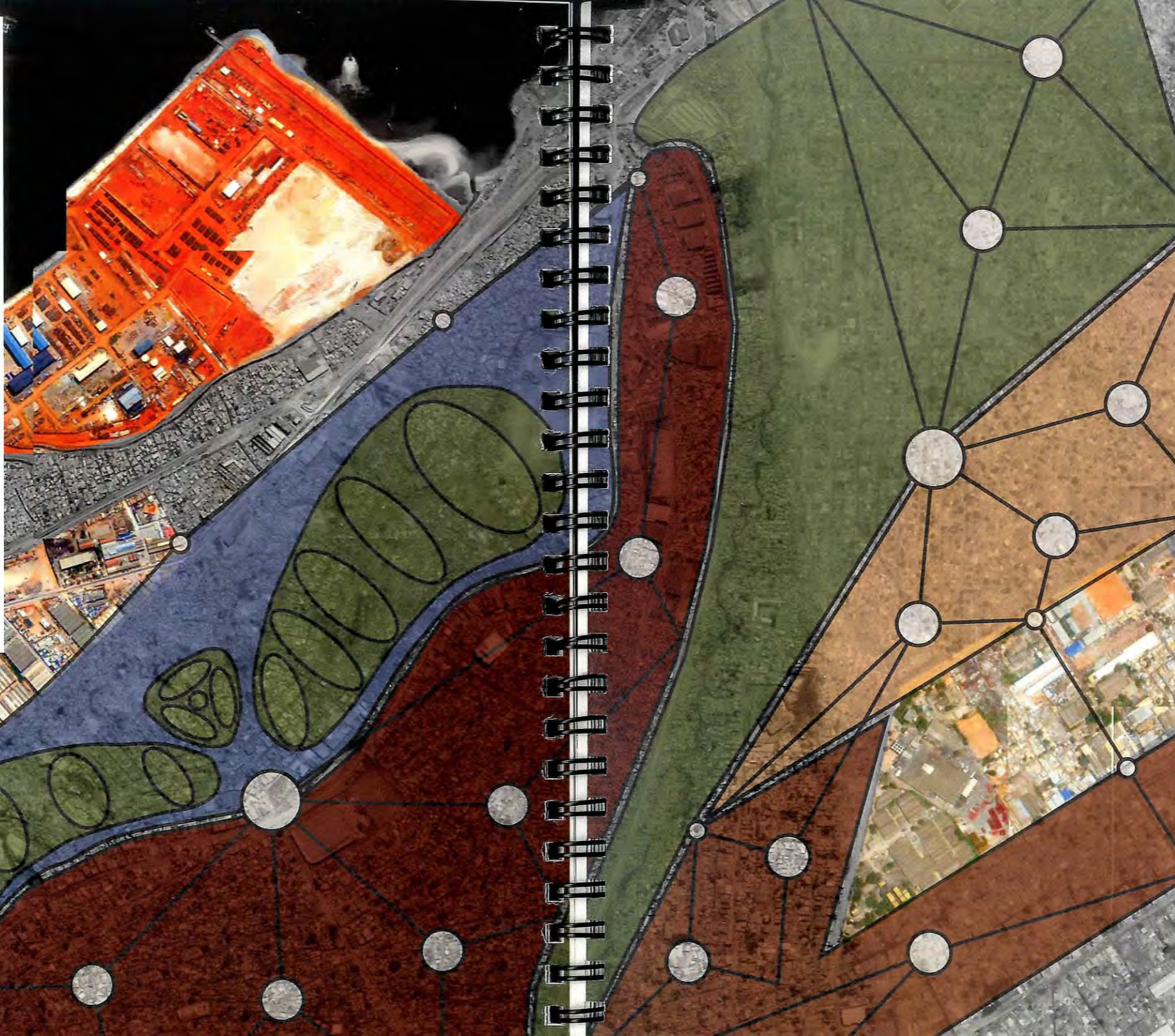
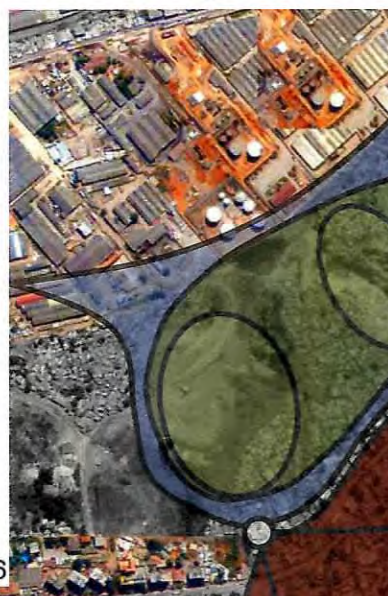
2000

105

the reality  
Luanda Norte masterplan<sup>29</sup> :  
the path of least resistance

- commercial and  
"service towers"
- "upper class" housing
- "panoramic gardens"
- middle-class  
"rehabilitated housing"
- recreation
- "lower class" housing

"Luanda Sul is a self-sustaining urban infrastructure programme aimed at valorizing public assets through careful land-use management and planning. In close partnership with Government agencies, the private sector and community-based organizations, the population living in temporary settlements and the people displaced by the war are being resettled."<sup>30</sup>



"In Soba Kapassa, Kilamba Kixi municipality, the residents' initiative to turn their neighbourhood into a carefully planned housing estate was thwarted by the government. Between October 2001 and February 2003 the authorities demolished a total of 1,167 houses and forcibly evicted residents from Soba Kapassa."

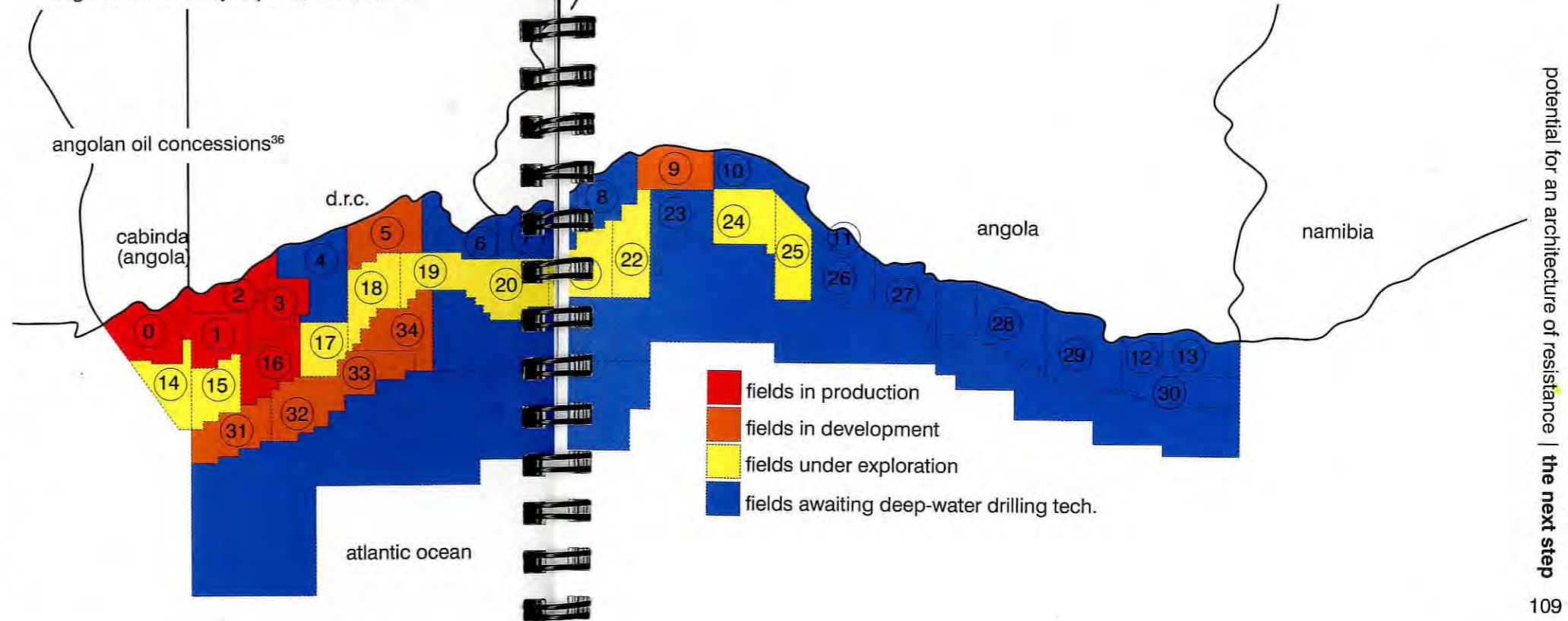
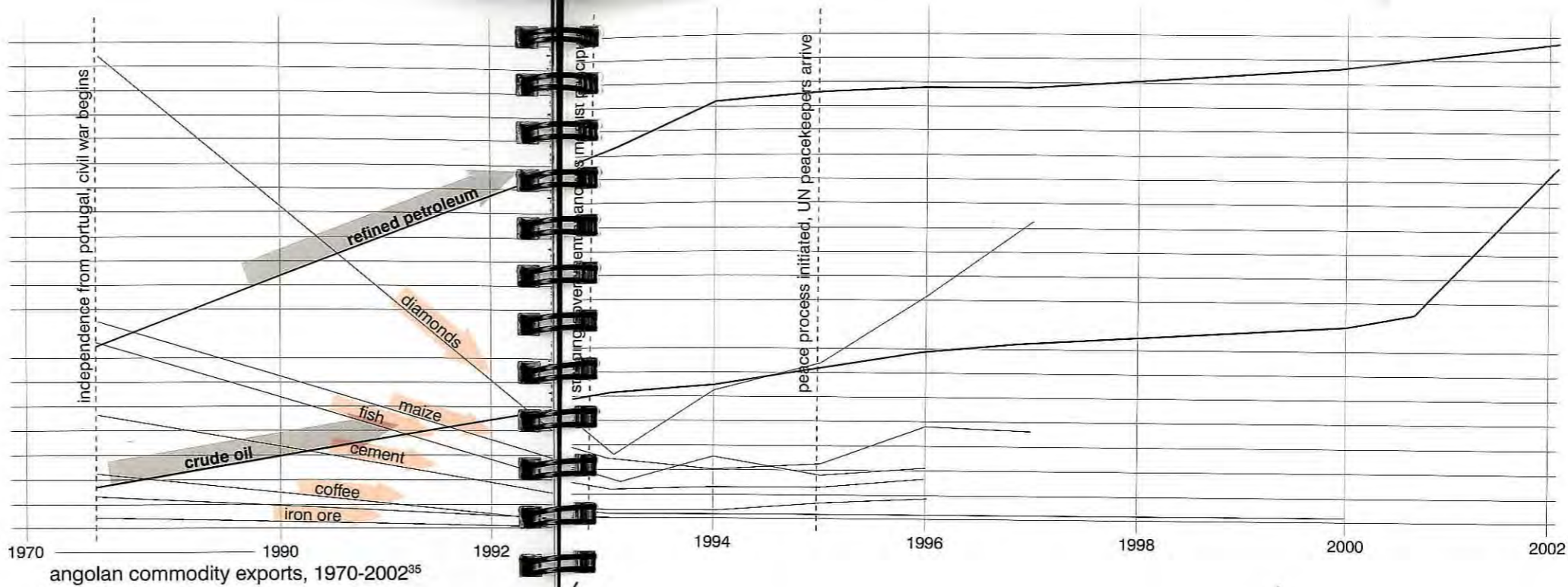
"Government officials, including the Luanda Provincial Governor, often justified forced evictions by claiming that the houses were "randomly and illegally" built on land owned by the government and earmarked for development projects, including housing, or that the land belonged to private individuals. In the course of a press conference on 23 January 2006, the Luanda Provincial Governor reportedly announced that the demolitions of houses built "in a disorderly fashion" would continue and that his office would continue to penalise citizens who insisted in operating outside the law. He added that those who had been granted provisional land concession titles but had not yet built on the land within the time frame established by law would have their titles revoked and that the land concession would be passed to individuals with the financial capacity to carry out building projects within six months. He was quoted as having said it was time to end the anarchy of spaces filled with zinc sheets and to bring order by activating the mechanisms of the law."<sup>31</sup>

### hooked on oil

In a 27-year civil war following independence from Portugal, Angola's standing government was forced to rely almost exclusively on oil production to fuel its war effort – in the midst of the fighting, offshore oil platforms were the only components of economic infrastructure insulated from attack.<sup>32</sup> After a ceasefire was declared in 2002, the war-torn economy looked again to oil as a means to expedite reconstruction efforts. Today, as production approaches 2 million barrels per day,<sup>33</sup> the country's economy is driven almost exclusively by petroleum exports. An unyieldingly narrow government focus on oil revenues, fittingly generated wholly offshore, has transformed the city into a thriving enclave for the oil and gas industry.

### undermining the enclave

The city of Luanda, the nucleus of Angolan oil exports, has seen dramatic changes as the result of its growing dependence on oil revenues. The city was recently named the most expensive in the world for expatriates – an average month's rent costs \$15,000, and dinner for two for below \$300 is considered a bargain.<sup>34</sup> However, even as oil-driven foreign investment and its offshoot industries jockey to develop their "downtown," more than half of Luanda's population continues to thrive on less than two dollars per day; Luanda is a city bifurcated by its own wealth. The spatial effects of this division are quite literally visible in aerial photographs of the city as a disjunction of programmatic elements and alignment of circulation patterns. Formal settlements occupy the high ground near the high-rise commercial district, while informal communities are relegated to marginal land on the city's periphery. **While the meeting point of these conflicting worlds is frequently a battleground in the struggle for growth, their junction offers great potential for overlap, intersection, connection, and commercial exchange.**

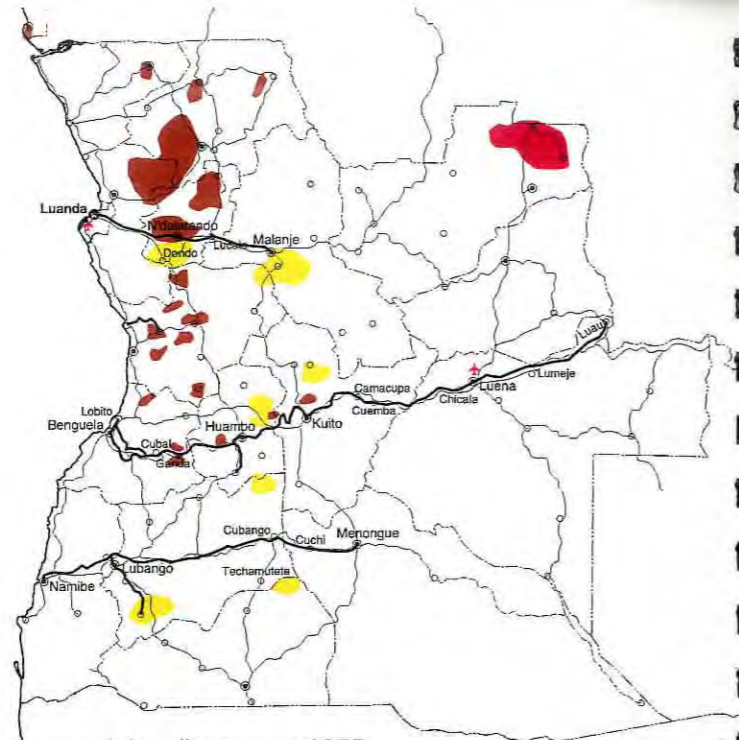


potential for an architecture of resistance | the next step

potential for an architecture of resistance | the next step

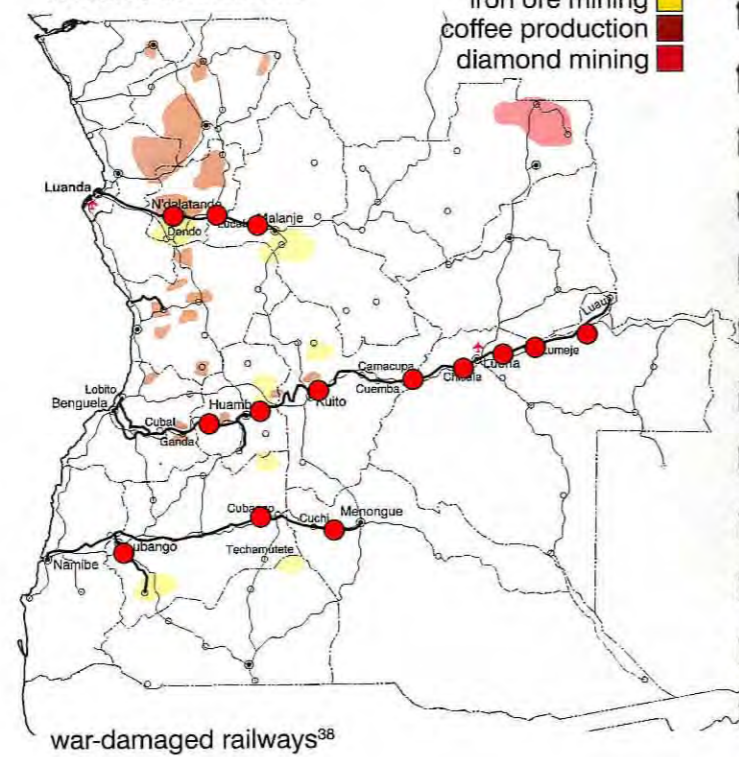
One such junction is the terminus of Luanda's railway. Bordered at once by Luanda's most exclusive community and its most impoverished settlement, the city's bustling commercial district and countless informal micro-enterprises, southwest Africa's largest port and Angola's hub of re-emerging industrial production, Luanda's barely-functioning railway can be reconsidered as the puzzle piece to lock together these disjointed elements and facilitate their interaction – in other words, a pivot point.

At a larger scale, Angola's war-damaged infrastructure amplifies the divide between Luanda and its resource-rich hinterlands. Less than one-third of the railway survived the civil war intact, and those remaining portions are peppered with landmines. In exchange for guaranteeing the flow of Angolan oil to China, government officials have awarded a contract for the de-mining and reconstruction of Angola's railways to Chinese contractors. The new railway, on track for completion in 2011, aims to reconnect Luanda with the formerly copper-rich city of Malanje. Although the existing railroad completed under colonial rule favored the transport of freight, the reconstruction will focus instead on passenger transportation. **Anticipating the completion of Luanda – Malanje railway project, I propose to redesign its terminus to serve as the foundation for a pivot point upon which to direct the flow of unregulated commerce in resistance to further peripheralization of Luanda's informal sector.**



angola's railways pre-1975:  
resource connections<sup>37</sup>

- railway —
- iron ore mining ■
- coffee production ■
- diamond mining ■



war-damaged railways<sup>38</sup>

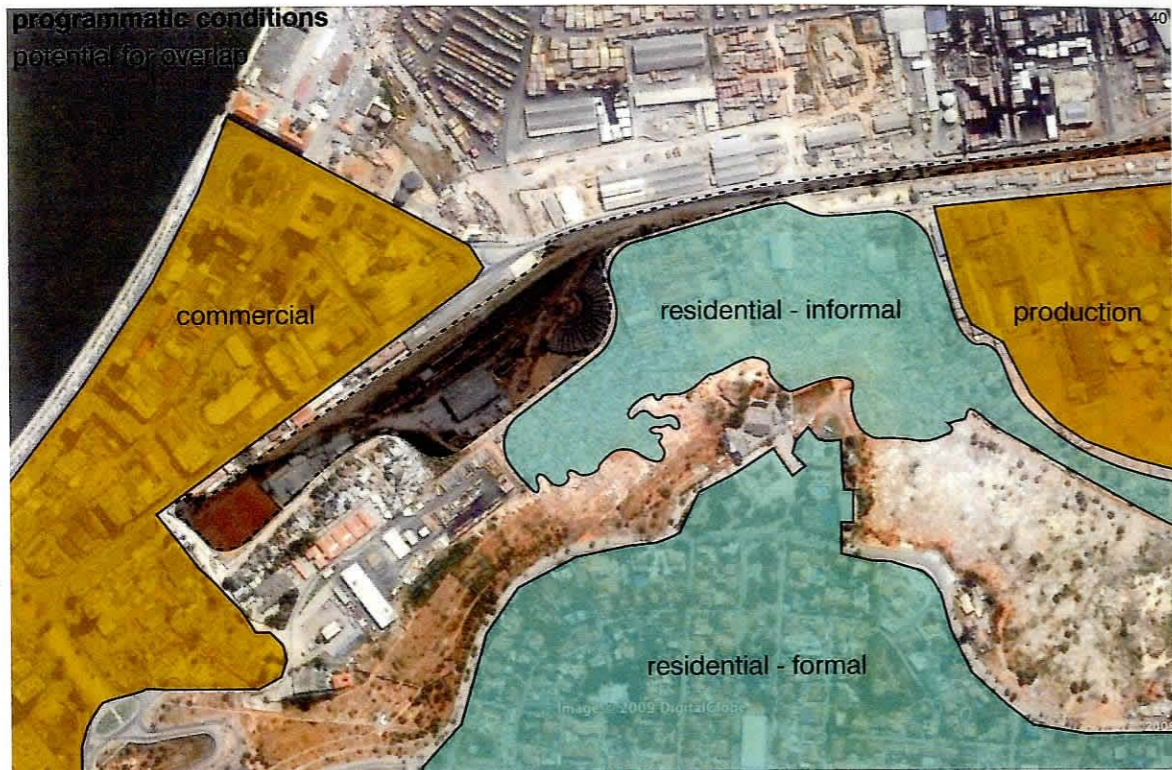


potential for an architecture of resistance | site strategy

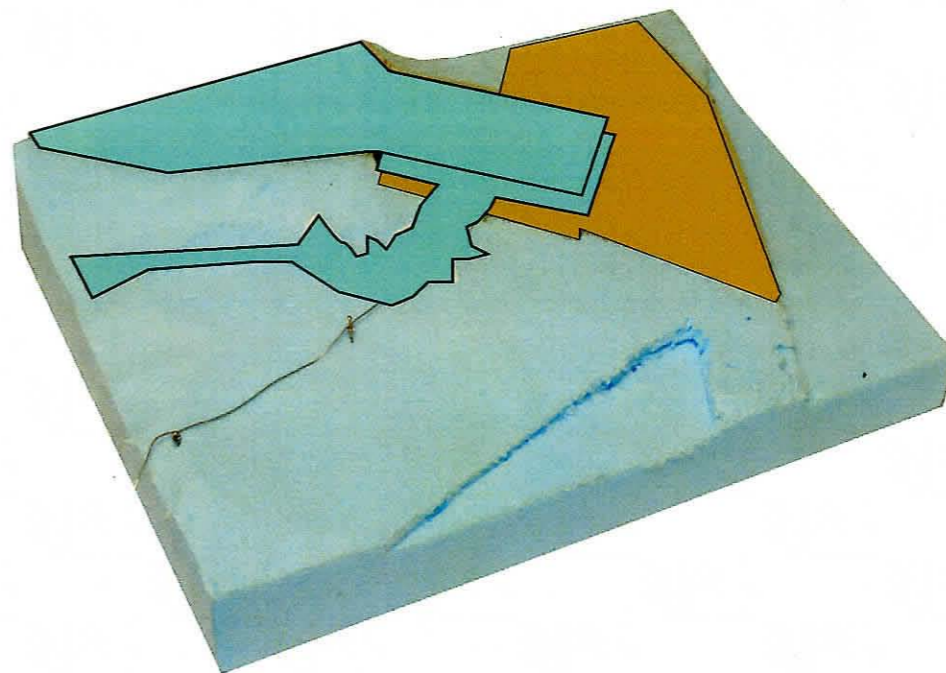
potential for an architecture of resistance | site strategy



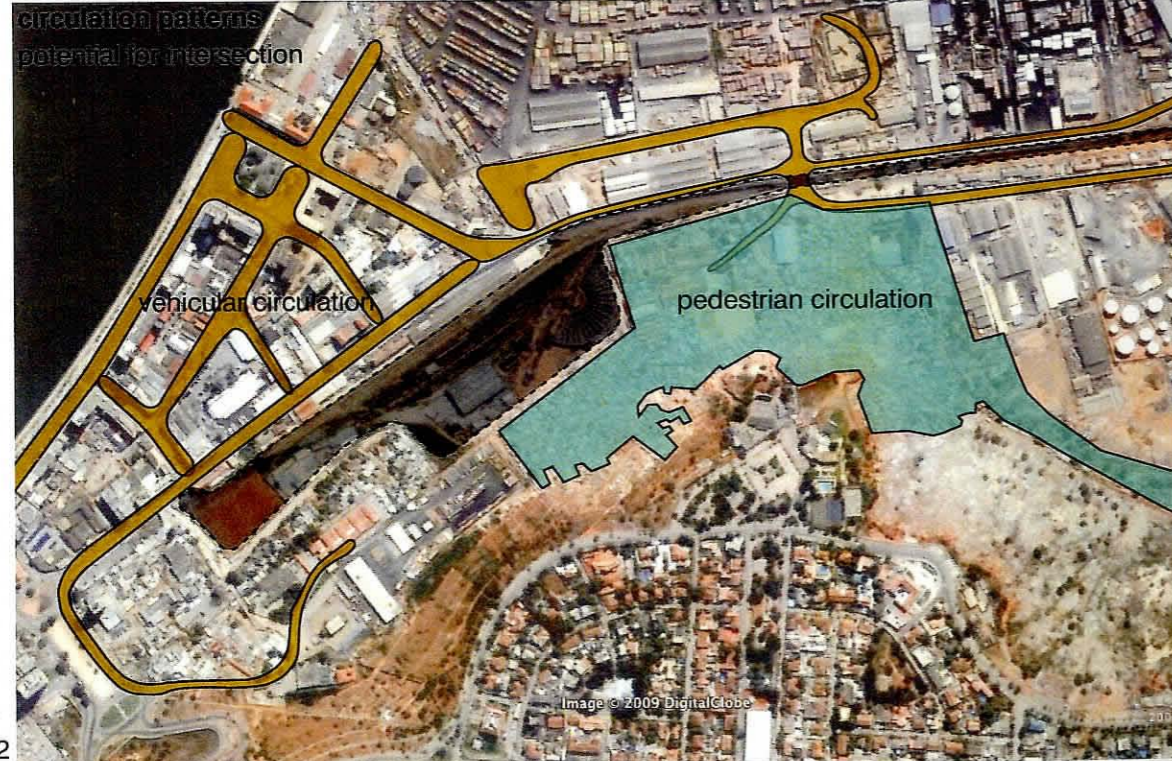
programmatic conditions  
potential for overlap



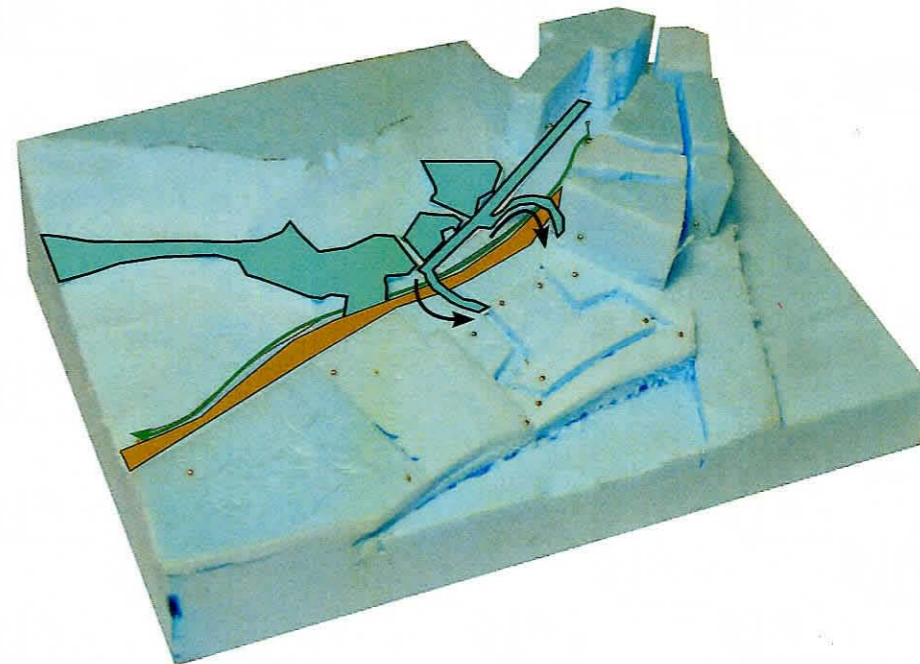
programmatic pivot point

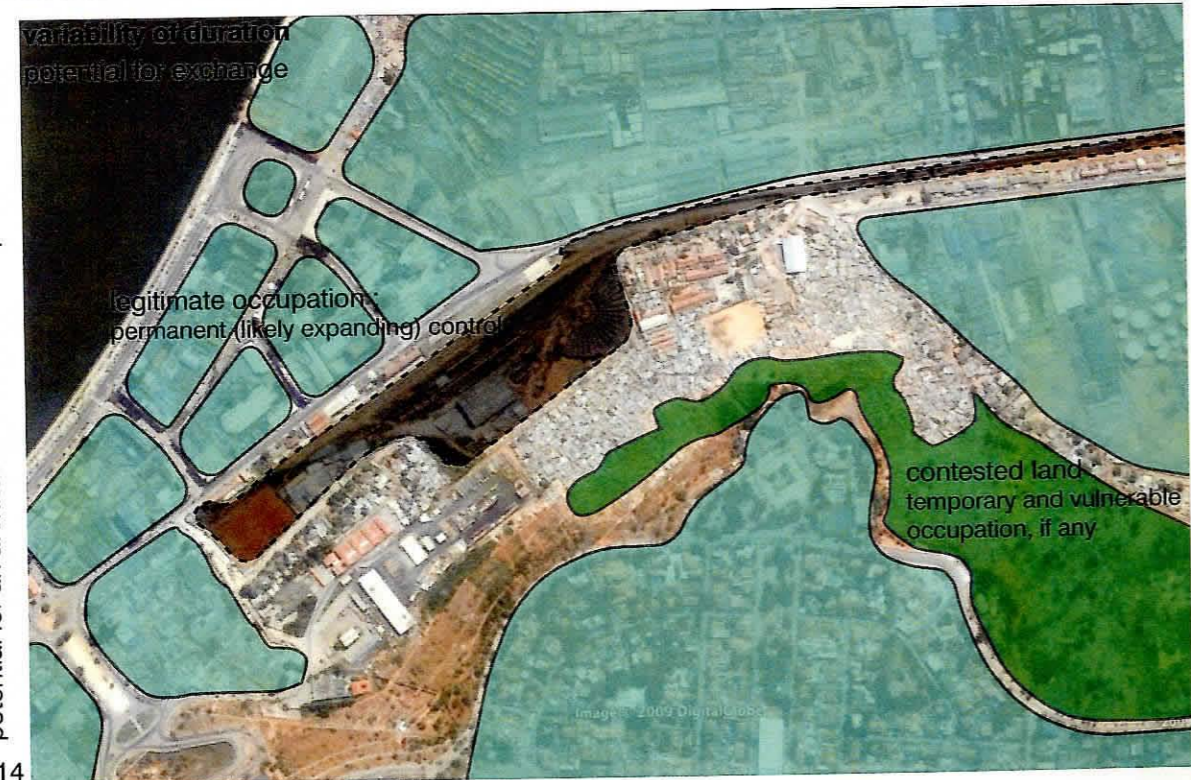


circulation patterns  
potential for intersection



circulation pivot point





point of sale pivot



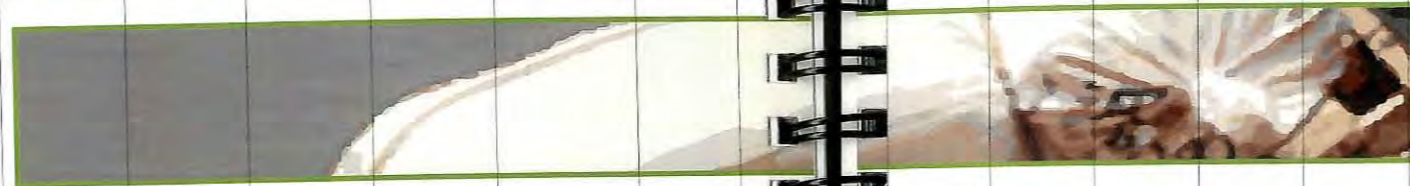
parallel program :  
"clients"

**"the driver."**  
Mobile place of business - responsible for moving all other players.



space of flow

**"the robot."**  
Mover of supplies only. No fixed location. Schedule follows market timetable.



inter-market routes

**"the opportunist."**  
Intervals of intense operation, long periods of waiting. Dependent on traffic flow.



space of pause

**"the bank."**  
Always found where and when people are spending money. Because of high profit, hours are usually more abbreviated.



formal & informal place of exchange

**"the trafficker."**  
Most active in times of congestion, usually in taxi parks and on major roads.



"jam space"

**"the nomad."**  
Reliant on pedestrian flow. Position and product type may vary depending on time of day.



formal public space

**"the chameleon."**  
Must blend with formal market activities, and as such operates on their timetable.



municipal market space

operating within formal program  
operating within municipal infrastructure  
operating in both municipal infrastructure and formal program

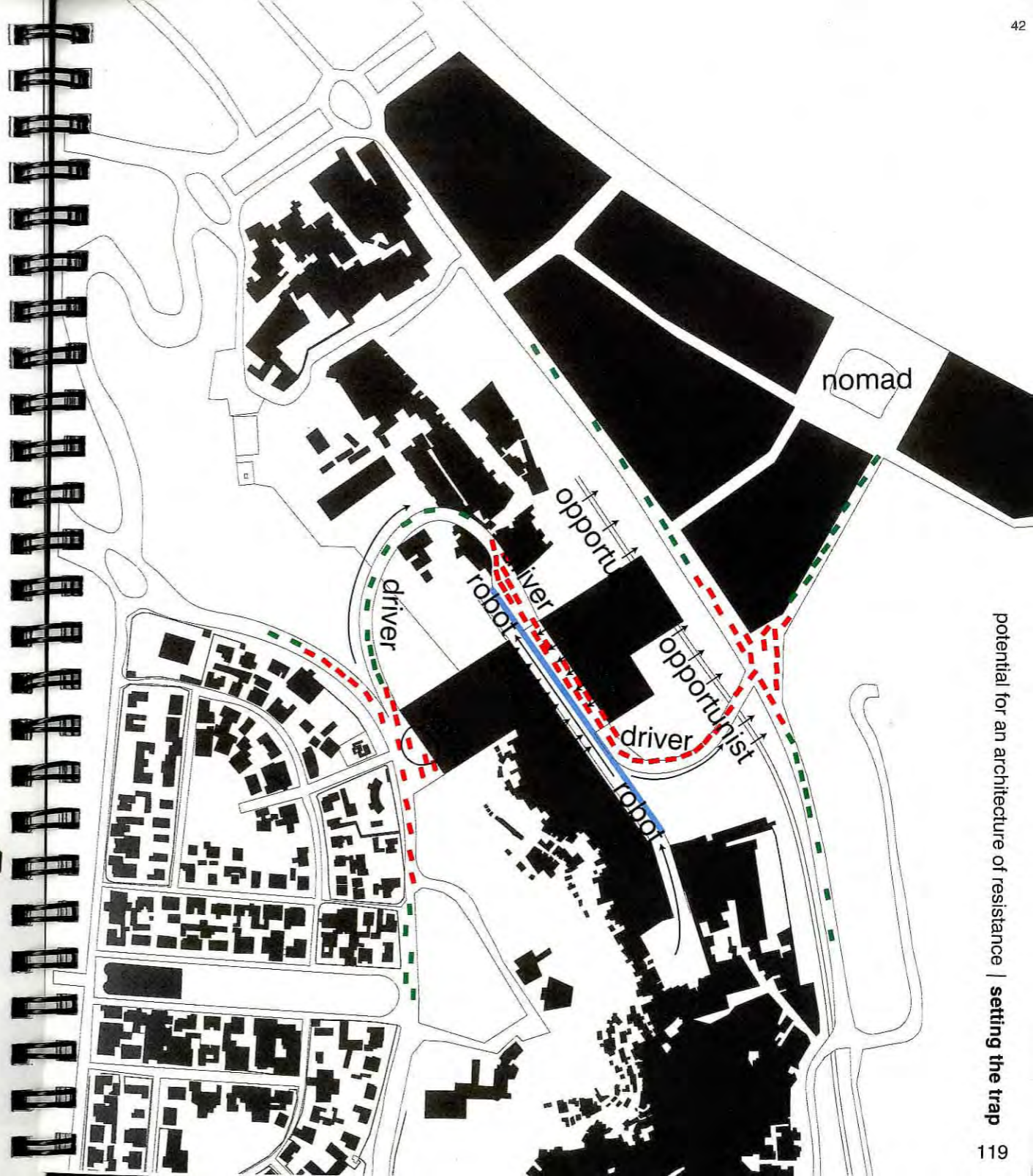
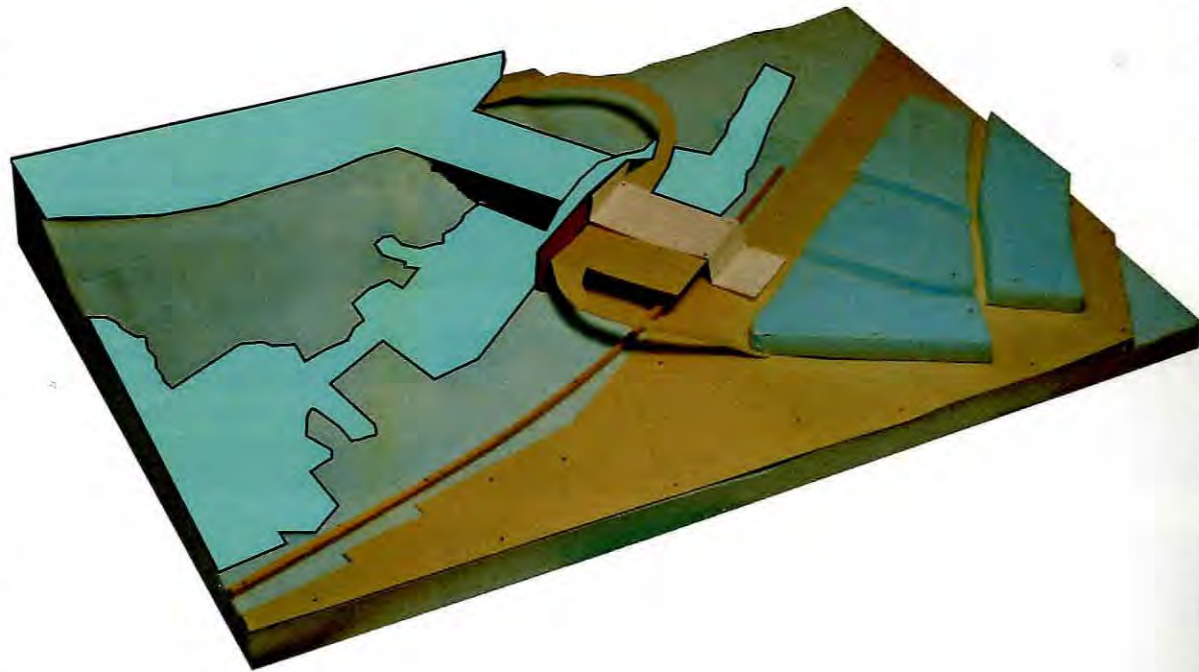
potential for an architecture of resistance | parallel program

### setting the trap

At the outset, the proposed program for an architectural intervention appears to align with expansionary tactics typically exercised by Luanda's formal sector - **and so it must, to garner financial support and to encourage use.**

An existing wall, initially built to divide municipal land from a hillside informal settlement, has the potential to re-emerge as the hub of activity in an architectural intervention. Heightening this wall to serve as a structural junction while at the same time undermining its foundations to draw program across its surface negates the function of the wall as purely a divisive mechanism. Instead, the wall becomes an attractor, hosting opportunity for informal exchange and **luring the players of the informal economy to their respective zones of operation.**

- commercial district
- train station (proposed)
- port
- extension of formal housing (proposed)
- supermarket (proposed)
- informal settlement



- <sup>1</sup> Lopes, Carlos. *Roque Santeiro: Entre a Ficcao e a Realidade*. S. Joao do Estoril: Principia, 2007, 241.
- <sup>2</sup> Base images courtesy of Google Earth.
- <sup>3</sup> "Infrastructure." Stanallenarchitect.com. Web. 13 December 2009.
- <sup>4</sup> World Bank. Africa Development Indicators 2008/2009. Washington: World Bank, 2009.
- <sup>5</sup> "Fotos da Cidade." Skyscraper City. Web 13 December 2009.
- <sup>6</sup> Base images courtesy of Google Earth Historical Imagery.
- <sup>7</sup> "Justice Tuck Shop." Photo. University of Toronto. Web 13 December 2009.
- <sup>8</sup> Unnamed Photo. Mutations, 688.
- <sup>9</sup> Unnamed Photo. Panoramio. Web. 13 December 2009.
- <sup>10</sup> Unnamed Photo. Panoramio. Web. 13 December 2009.
- <sup>11</sup> Base image courtesy of Google Earth.
- <sup>12</sup> Base image courtesy of Google Earth.
- <sup>13</sup> Koolhaas 685.
- <sup>14</sup> "Burning Tire." Beacon Online. Web. 13 December 2009.
- <sup>15</sup> Base image courtesy of Google Earth.
- <sup>16</sup> "Axonometric." Photo. Recetas Urbanas. Web. 13 December 2009.
- <sup>17</sup> "Legislation and Temporary Occupation of Empty Lots." *Urban Prescriptions*. July 2004. Web. 9 November 2009.
- <sup>18</sup> Unnamed Photo. Recetasurbanas.net Web. 13 December 2009.
- <sup>19</sup> Author's image.
- <sup>20</sup> Image courtesy of Google Street View
- <sup>21</sup> "Whitecross Street Market." Photo. Muf Architects. Web. 13 December 2009.
- <sup>22</sup> Corner, James and Alex Maclean. *Taking Measures across the American Landscape*. New Haven: Yale University Press, 2000.
- <sup>23</sup> "Track and Field." Photo. *Istockphoto.com*. 9 November 2009.
- <sup>24</sup> "Angola's Oil King." Photo. *Energy Briefing Blog*. 9 November 2009.
- <sup>25</sup> Unnamed Photo. *Panoramio*. 9 November 2009.
- <sup>26</sup> "Wall." Photo. *Flickr*. 9 November 2009.
- <sup>27</sup> "Youths Stoning Bulldozer." Photo. *Livingfromlove Blog*. 9 November 2009.
- <sup>28</sup> Jenkins, Paul, Robson, Paul, and Allan Cain. "Luanda City Profile." *Cities* 19.2 (2002) 141.
- <sup>29</sup> "Luanda Masterplan – Luanda Norte." *Skyscraper City*. May 2009. Web. 9 November 2009.
- <sup>30</sup> "Winners: 2000 Best Practice." *Dubai International Award for Best Practices*. October 2008. Web. 9 November 2009.
- <sup>31</sup> "Angola: Mass Forced Evictions in Luanda – a call for a human-rights based housing policy." Index: AFR 12/007/2003, 9.
- <sup>32</sup> "Deadly attack in Angola Enclave." BBC News. 7 March 2008. Web. 13 December 2009.
- <sup>33</sup> World Bank. Africa Development Indicators 2008/2009. Washington: World Bank, 2009.
- <sup>34</sup> "Luanda 'Priciest City for Expats.'" BBC News. 11 June 2009. Web. 13 December 2009.
- <sup>35</sup> Tvedten, Inge. *Angola: Struggle for Peace and Reconstruction*. Boulder: Westview Press, 1997. Print.
- <sup>36</sup> "Angola Oil Concessions." Image. Berkeley College. Web. 13 December 2009.
- <sup>37</sup> "Angola Map." Image. United Nations. Web. 13 December 2009.
- <sup>38</sup> "Business Travelers, Angola." United States Embassy, Luanda. November 2008. Web. 13 December 2009.
- <sup>39</sup> Base image courtesy of Google Earth.
- <sup>40</sup> Base images courtesy of Google Earth.
- <sup>41</sup> Lopez, Carlos. "Candongeiros, Kinguilas, Roboteiros and Zungueiras: A Tour of the Informal Economy of Luanda." VIII Congresso Luso-Afro-Brasileiro de Ciencias Sociais (2004): Web. 14 September 2009.
- <sup>42</sup> Base image courtesy of Google Earth.



# timeline

political stability -> architectural opportunity -> (potential) political outrage

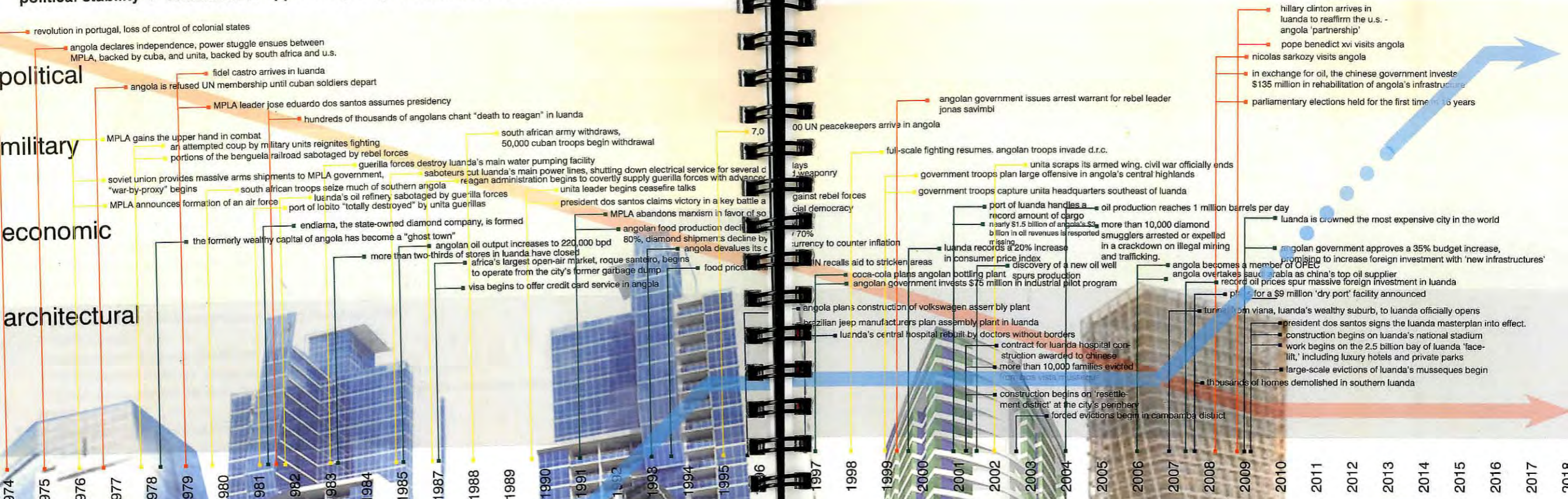
## political

## military

## economic

## architectural

## forces of resistance



1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018

**civic / commercial district**

Luanda's commercial district consists almost entirely of multi-story buildings situated almost directly on the street edge. Government buildings dating from the colonial era, as well as modern skyscrapers housing Angola's financial companies line the waterfront.



**industrial district**

predominantly large, open, single-story buildings clustered around parking facilities and access roads. Though damaged through neglect and a wartime focus elsewhere, Luanda's industrial district is on the rise.



**informal settlement**

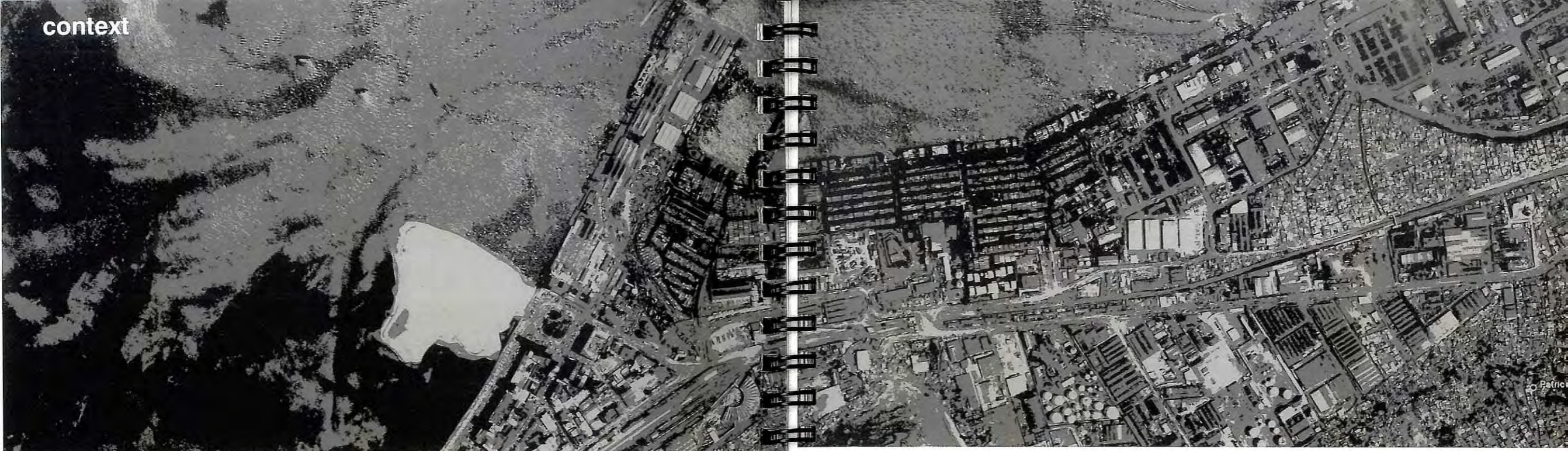
the high density of Luanda's informal settlements allows for a very narrow distinction between public and private space - these ambiguous zones between buildings become ripe for informal exchange.



**formal settlement**

Luanda's wealthy live in this entirely gated community. This block type is almost suburban in its carefully planned layout and spacious allowance between buildings.

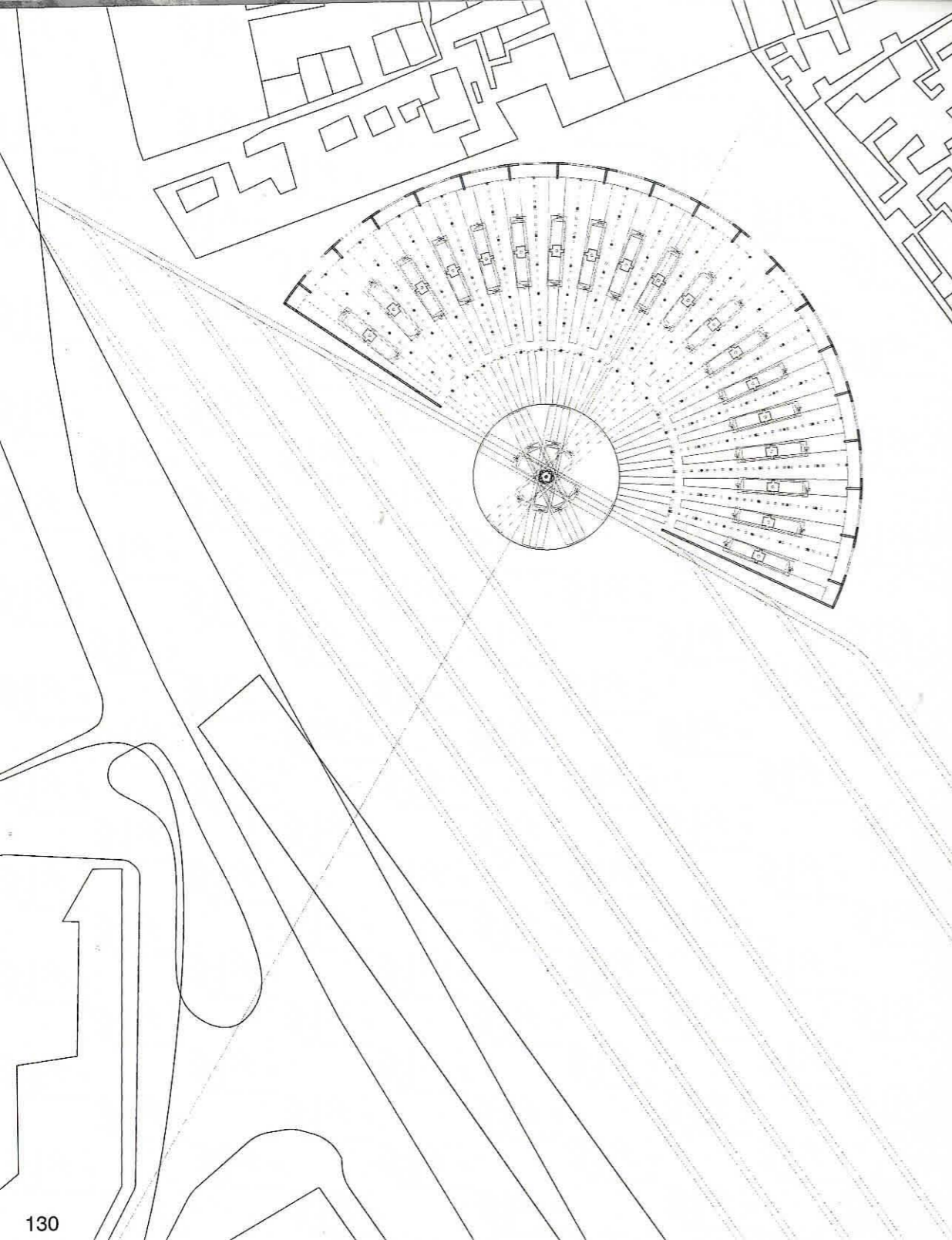




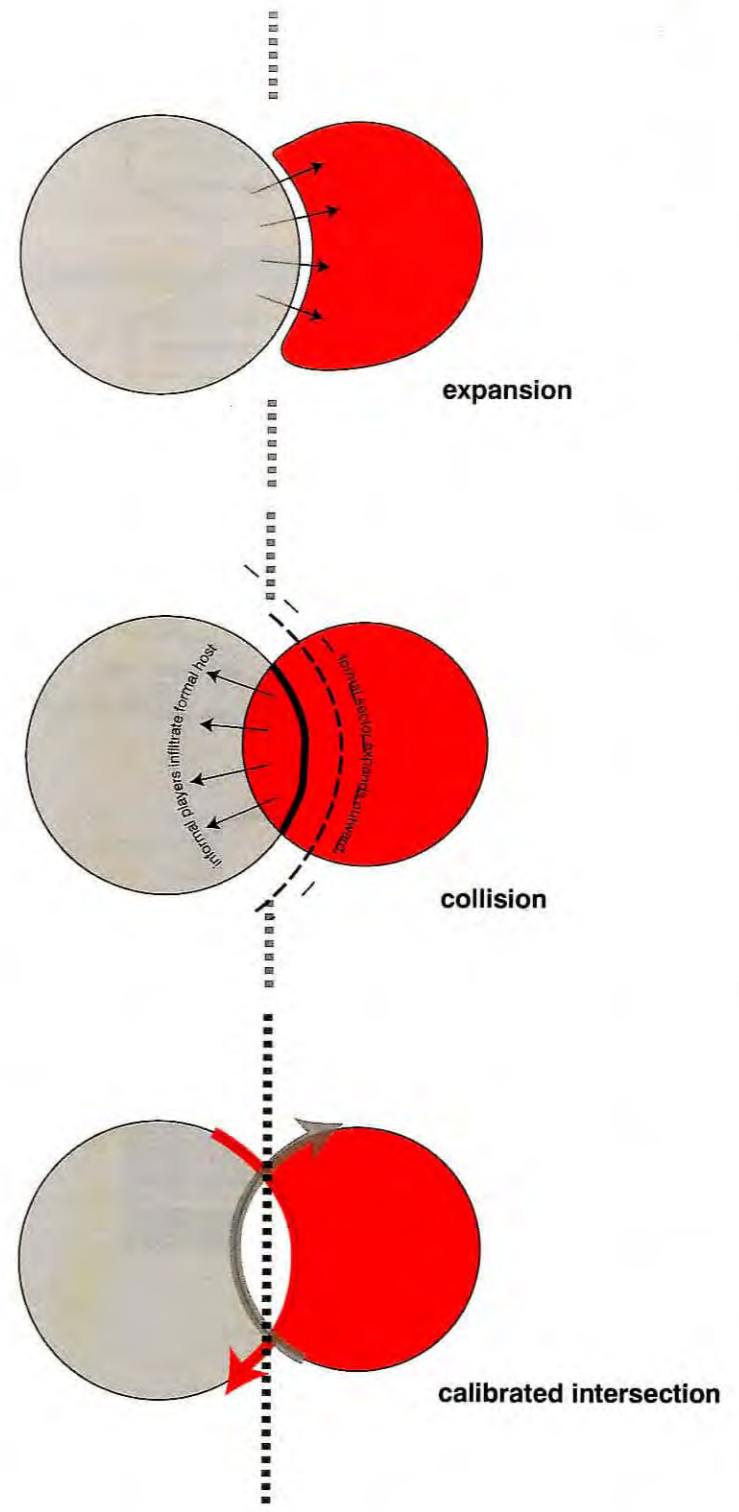
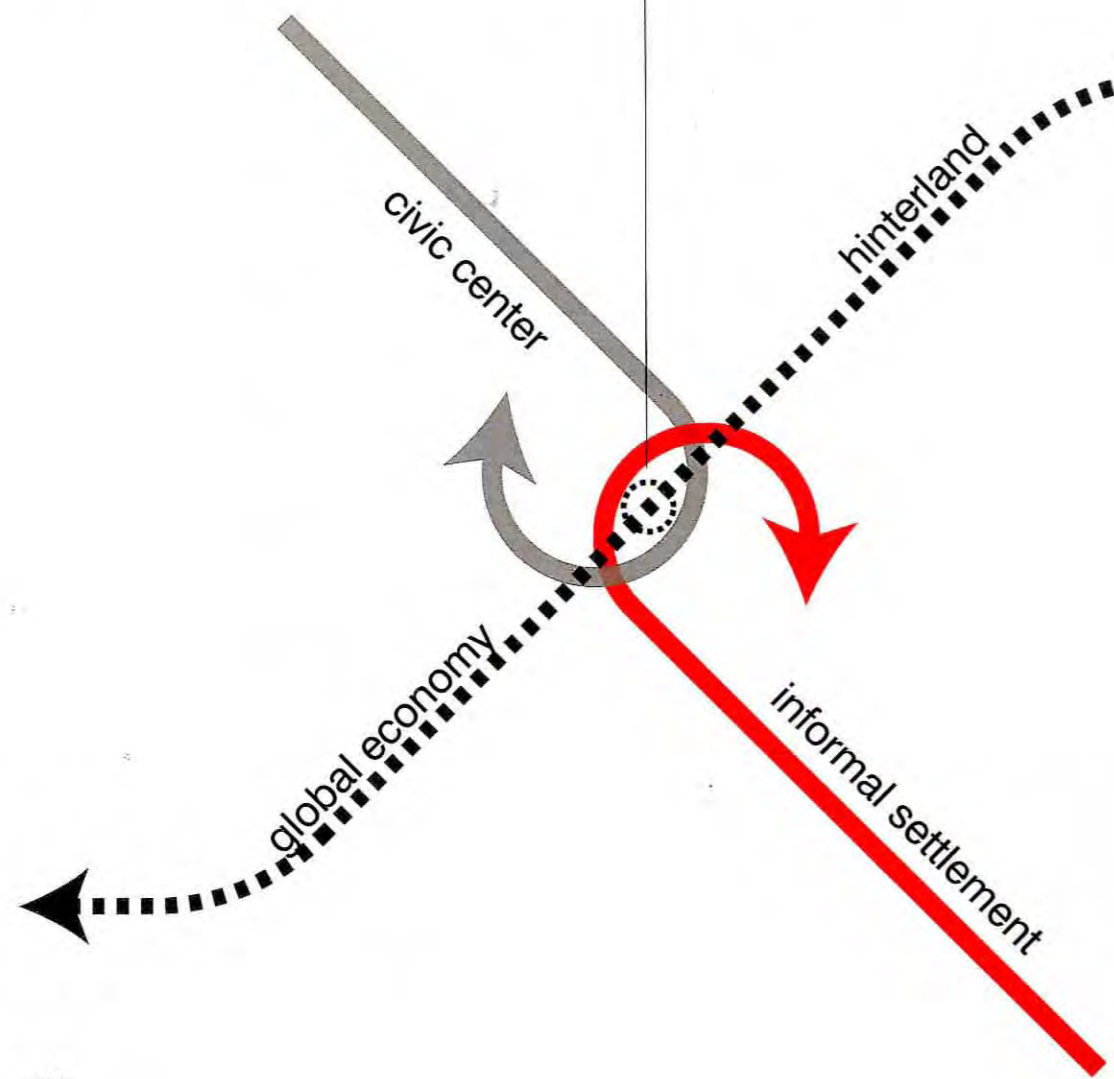


- program
- residential
  - government/industry
  - leisure, entertainment
  - commercial
  - wall





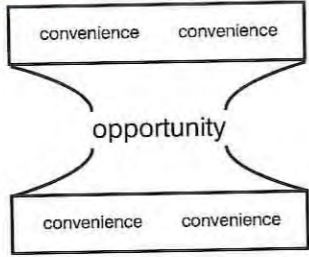
a pivot point is a device which directs and promotes a **calibrated intersection** of distinct sets of users through the manipulation of circulation systems around high-traffic program. Its goal is not merely to guide these users into contentious engagement with one another through a direct collision, but to upset and redefine patterns of formal and informal exchange.



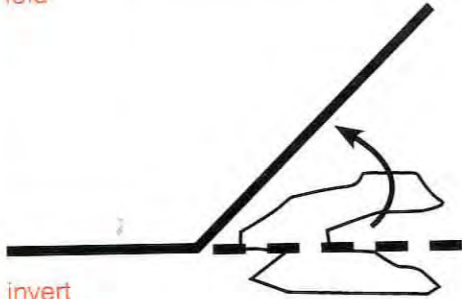
# tactics & agents of subversion



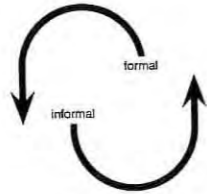
"the fortress" ---> **undermine**



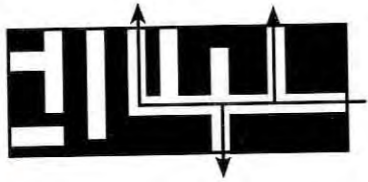
"the wall" ---> **fold**



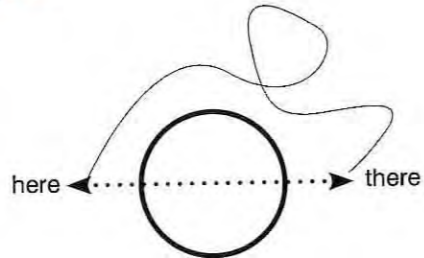
"the high ground" ---> **invert**



"the streetfront" ---> **puncture**

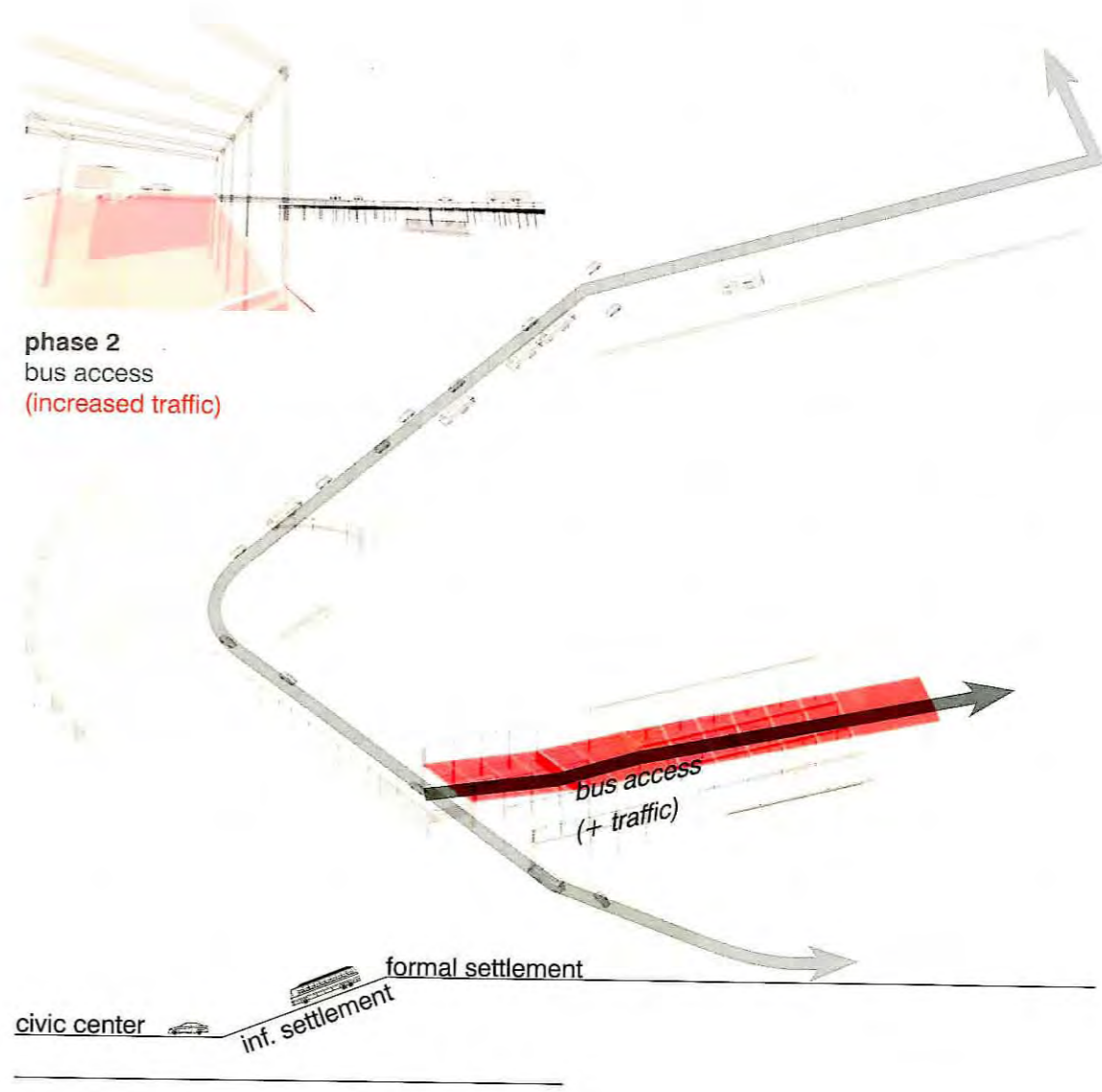
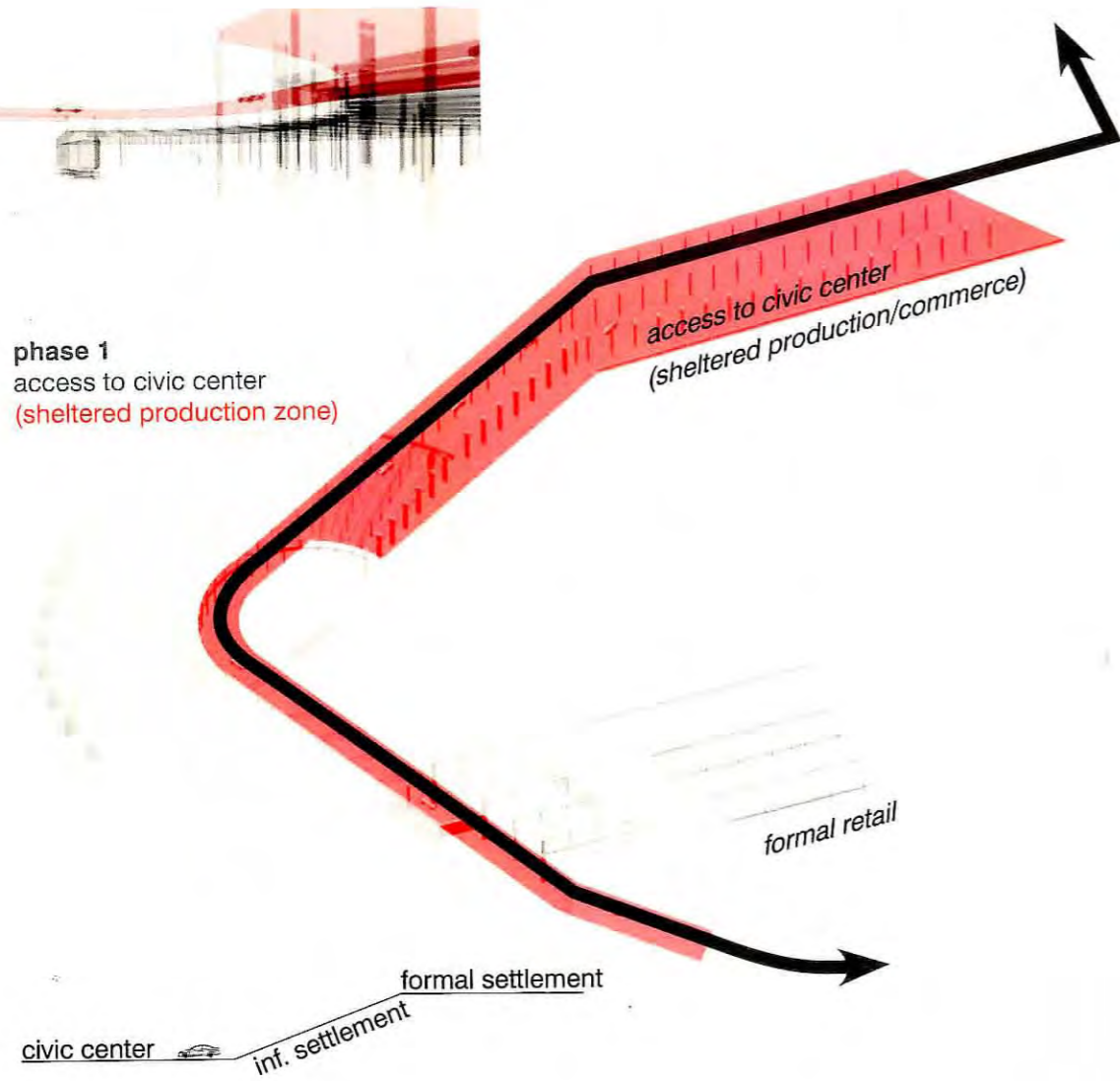


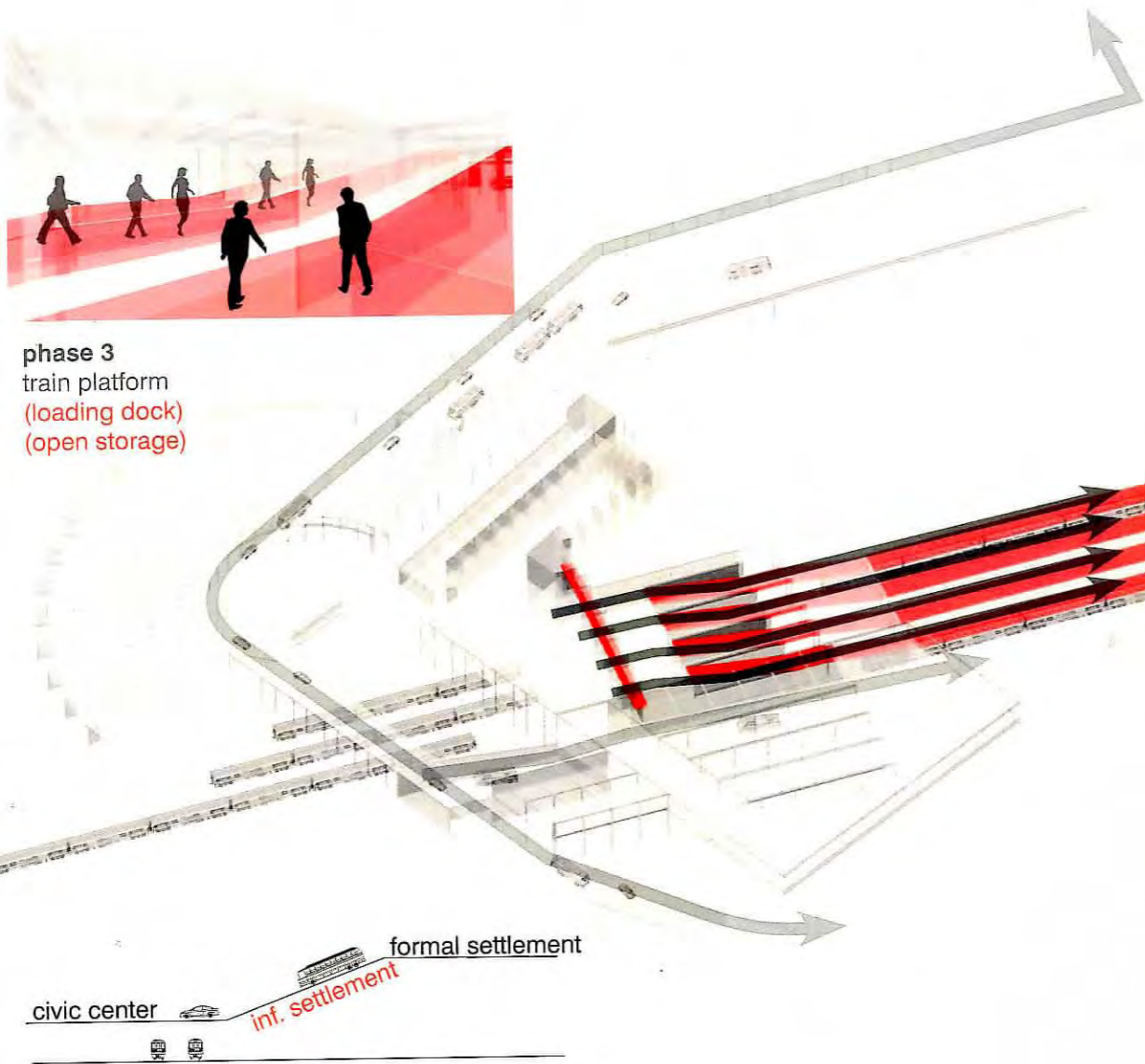
"see no evil, hear no evil" ---> **expose**



buyer  
 long-range transport - global scale  
 mover  
 medium-range overland transport - regional scale  
 driver  
 market supply for hire - urban scale  
 robot  
 supply and demand equalizer - local scale  
 nomad  
 market space in public space  
 opportunist  
 mobile market in the space of flow  
 chameleon  
 market space nested in market space  
 trafficker  
 market in the space of congestion  
 worker  
 commuter  
 tourist

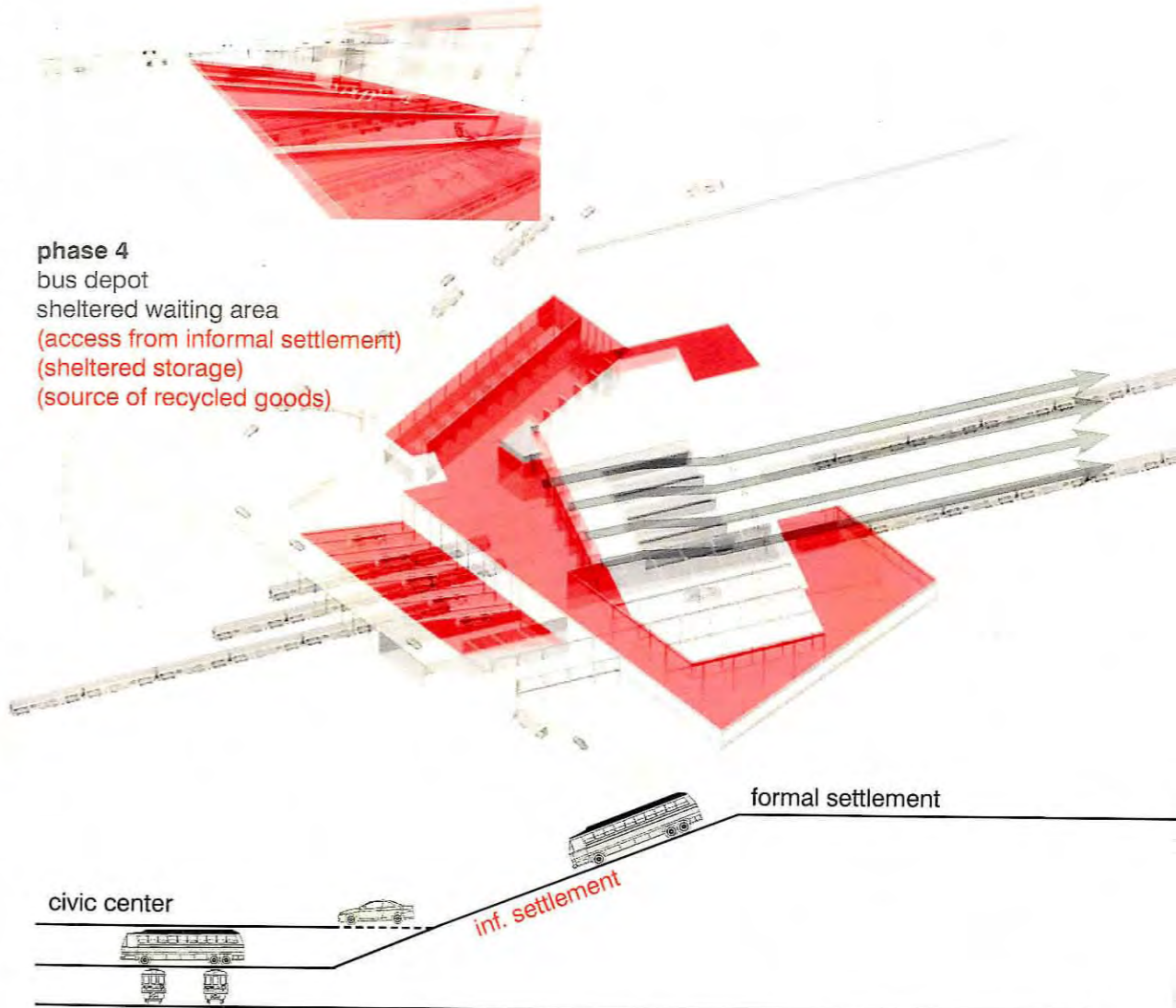
phasing for government support  
(and a more discreet brand of subversion)





phase 3  
train platform  
(loading dock)  
(open storage)

civic center      inf. settlement      formal settlement

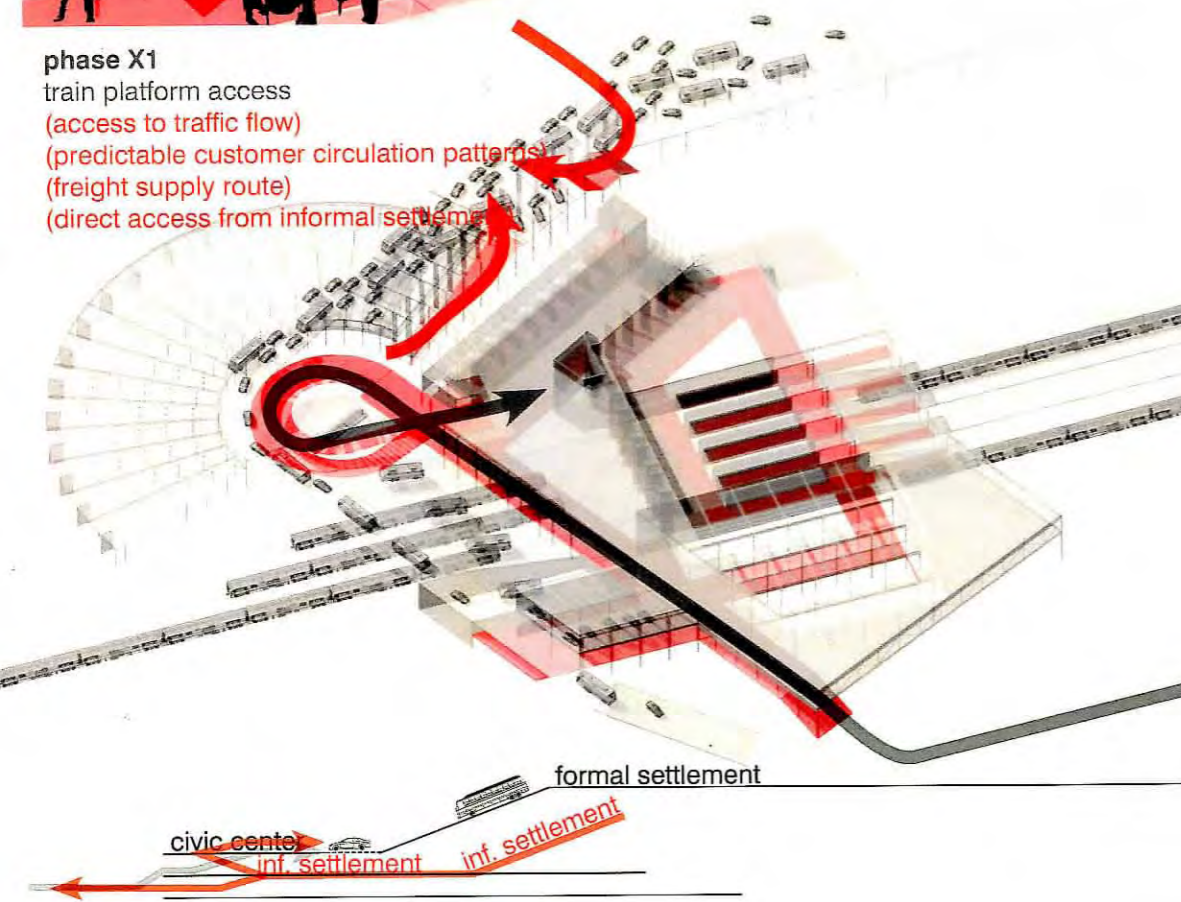


phase 4  
bus depot  
sheltered waiting area  
(access from informal settlement)  
(sheltered storage)  
(source of recycled goods)

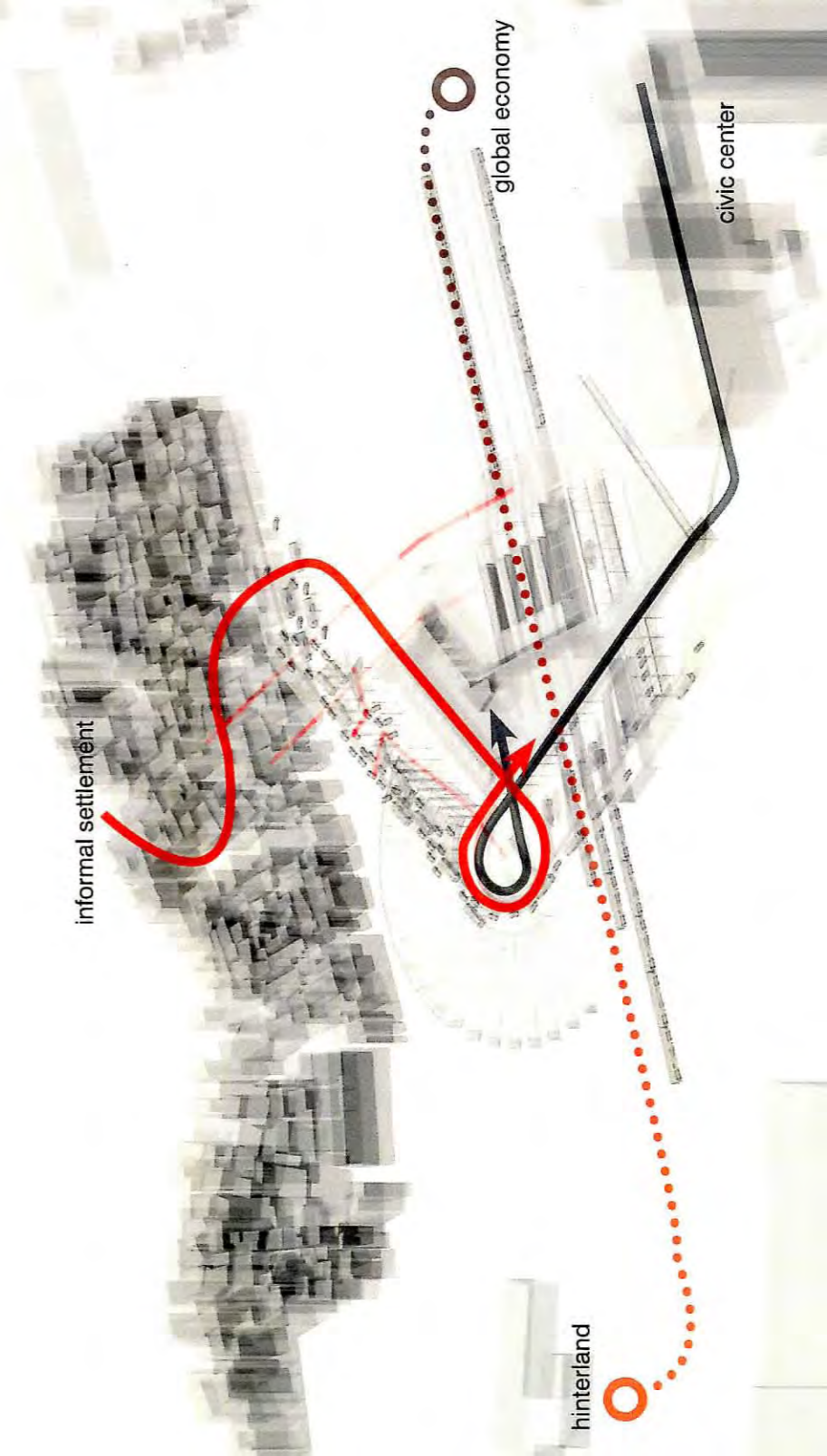
civic center      inf. settlement      formal settlement



phase X1  
train platform access  
(access to traffic flow)  
(predictable customer circulation patterns)  
(freight supply route)  
(direct access from informal settlement)

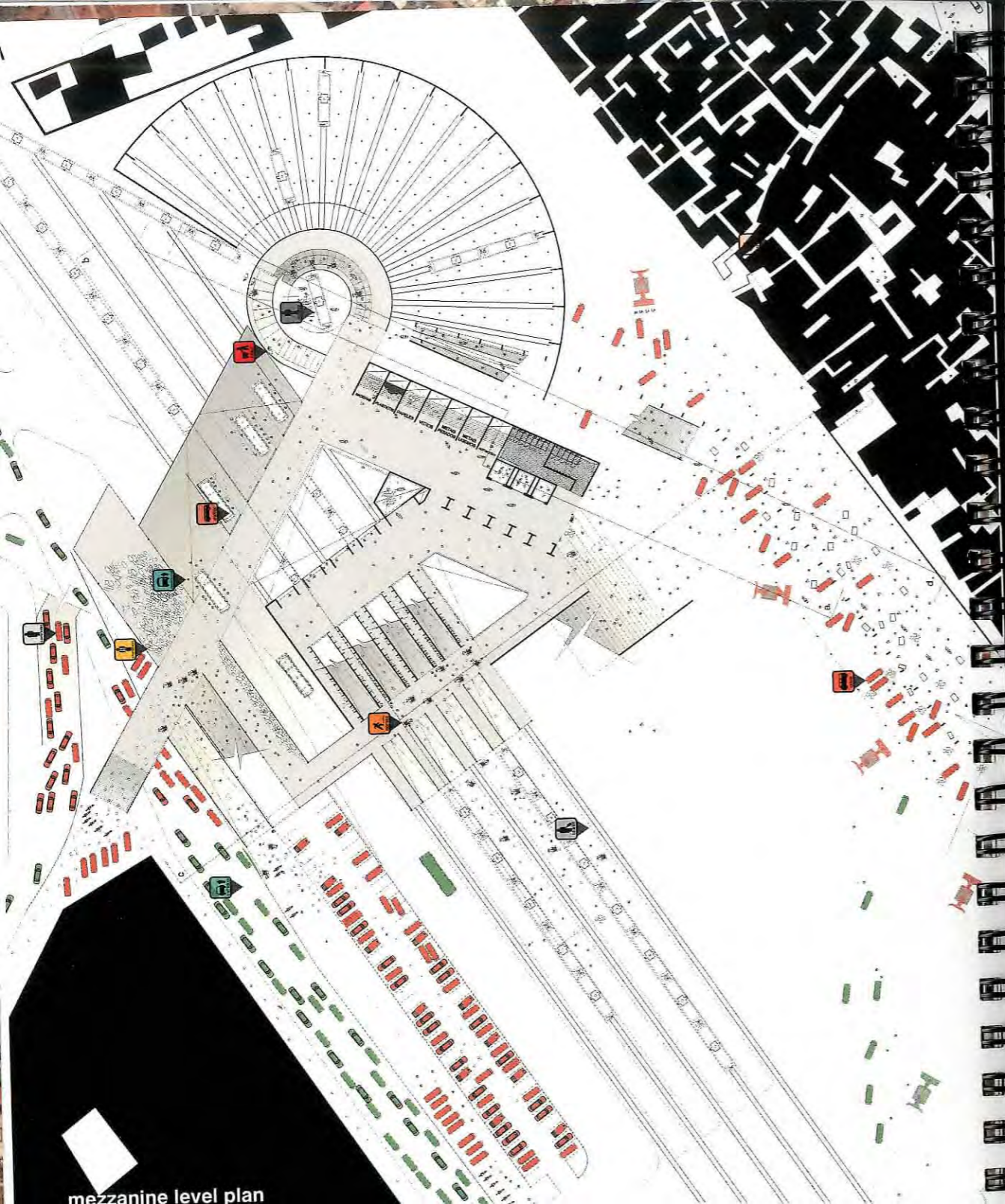


phase X2

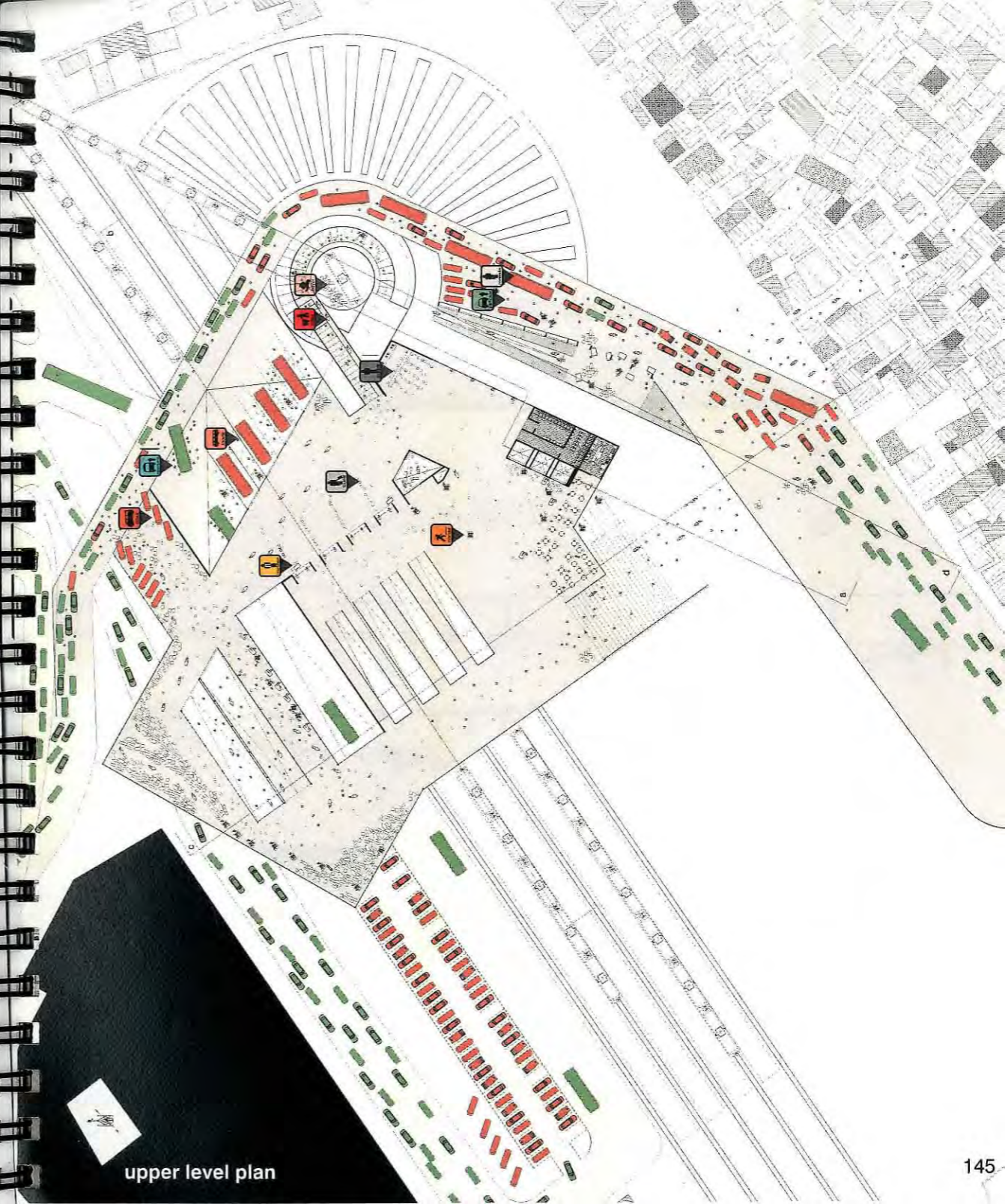




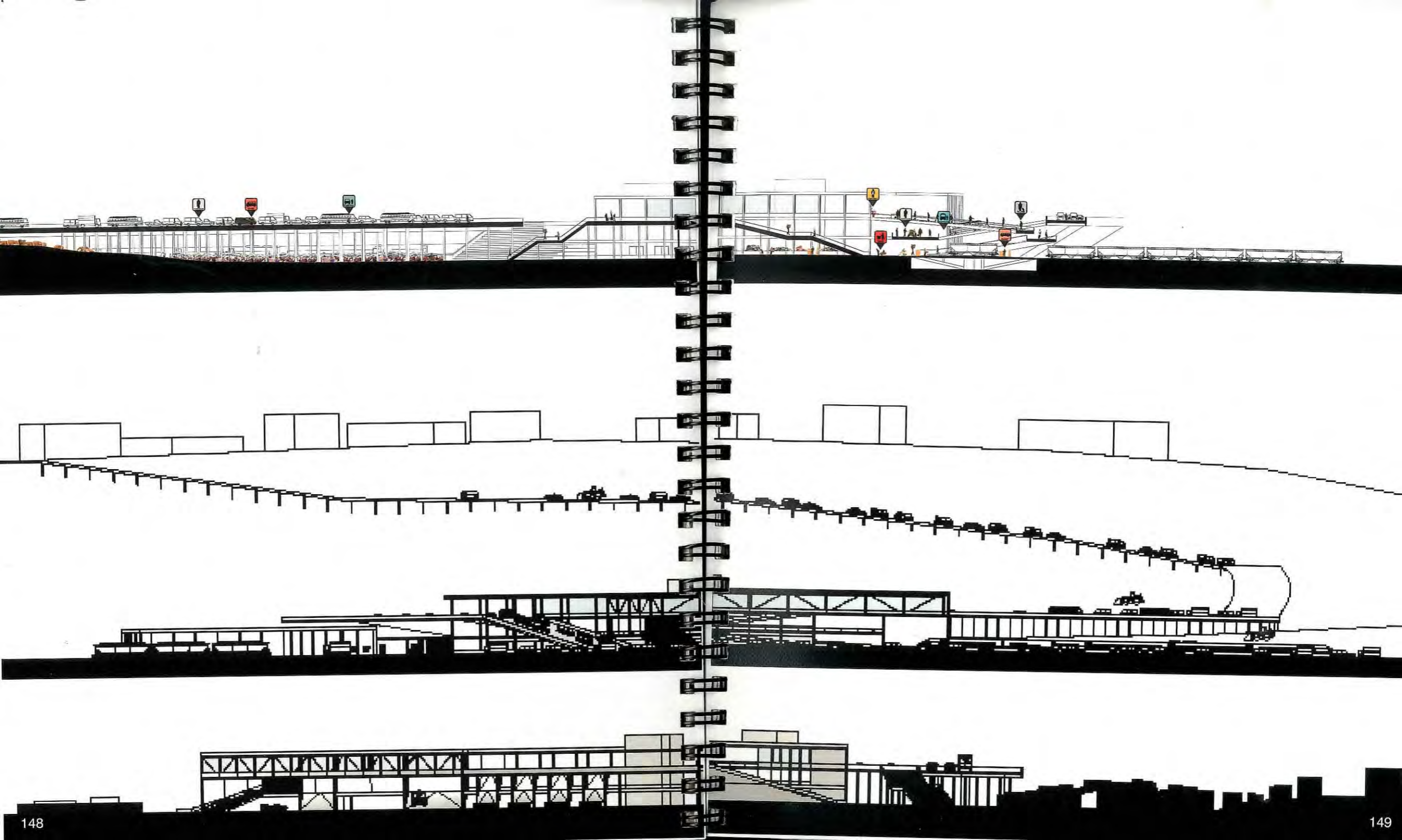


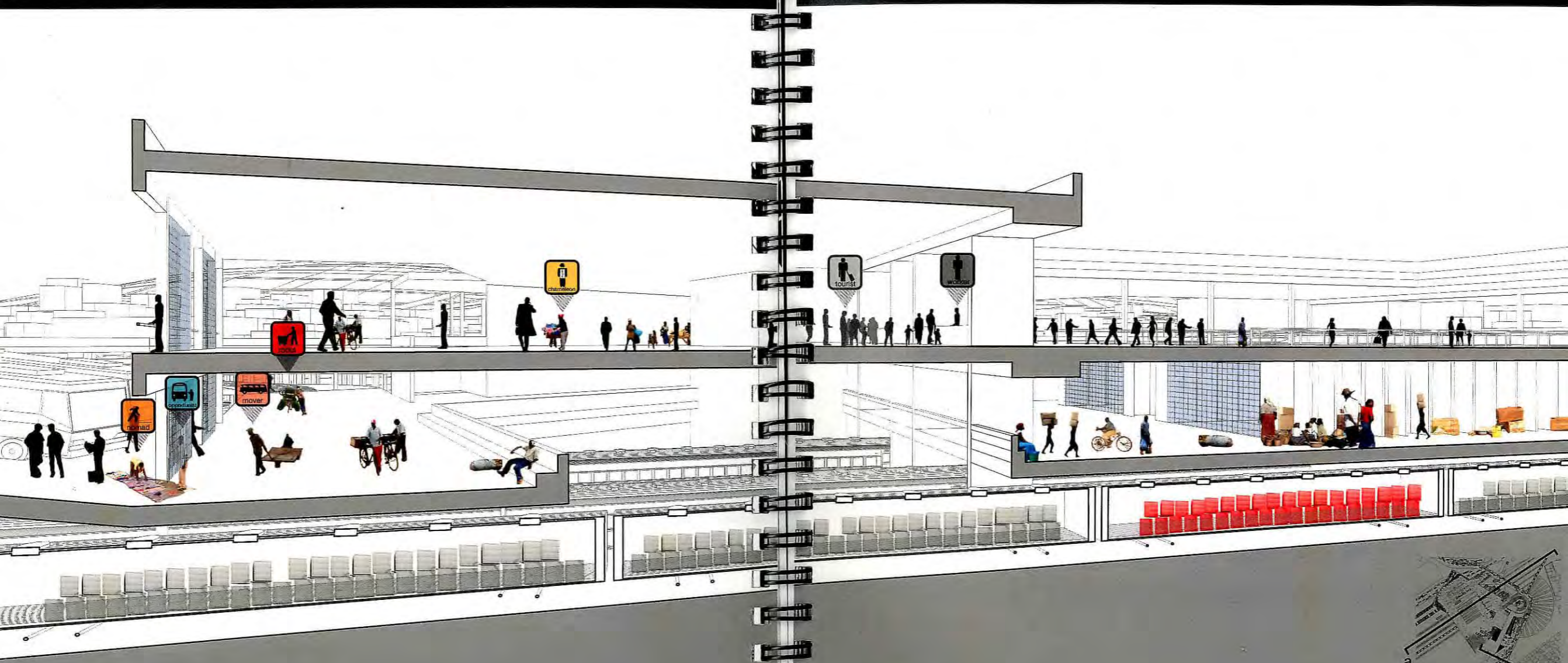


mezzanine level plan

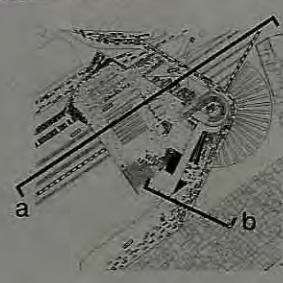


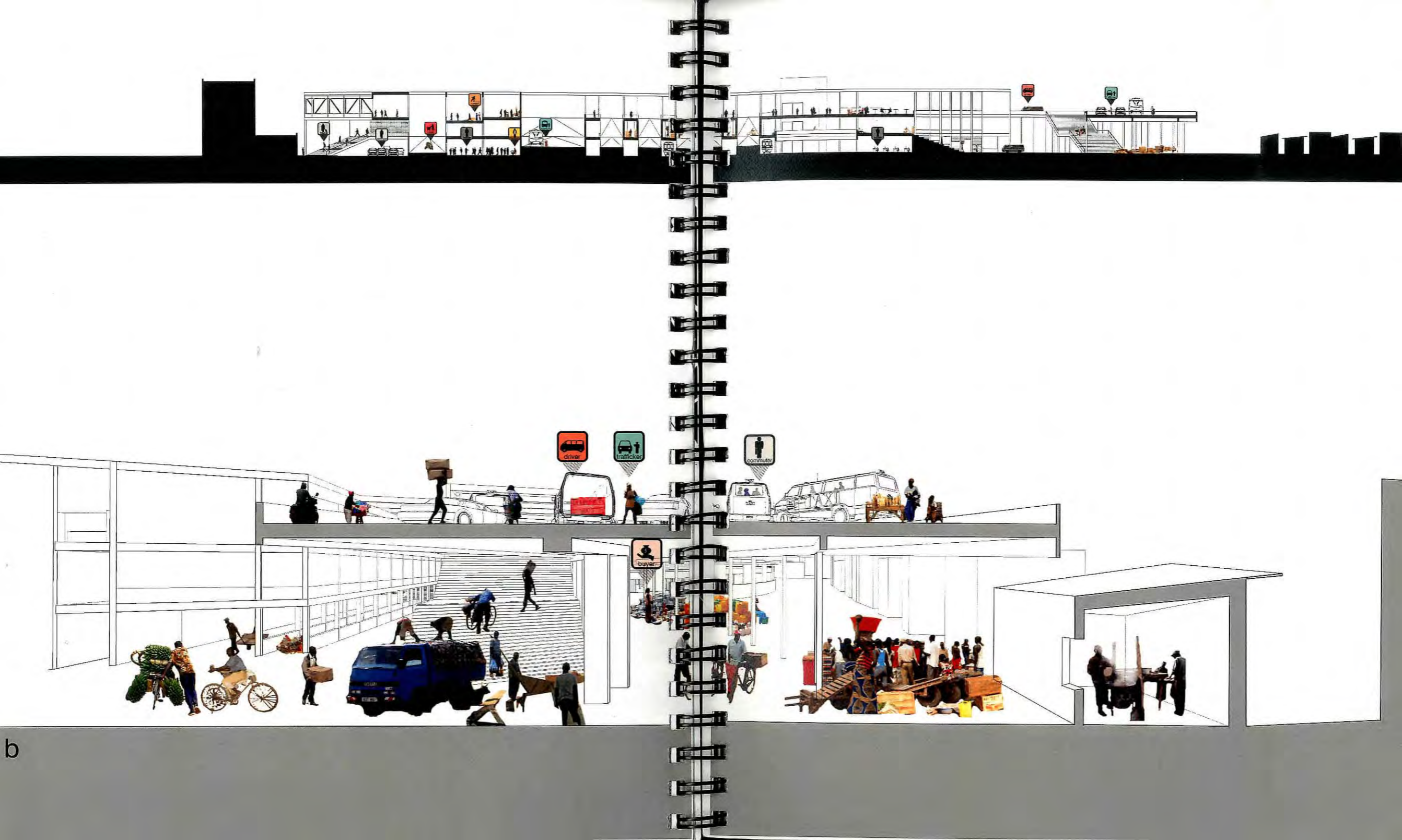
upper level plan



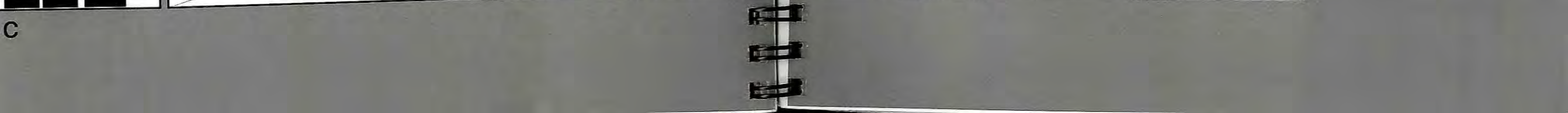
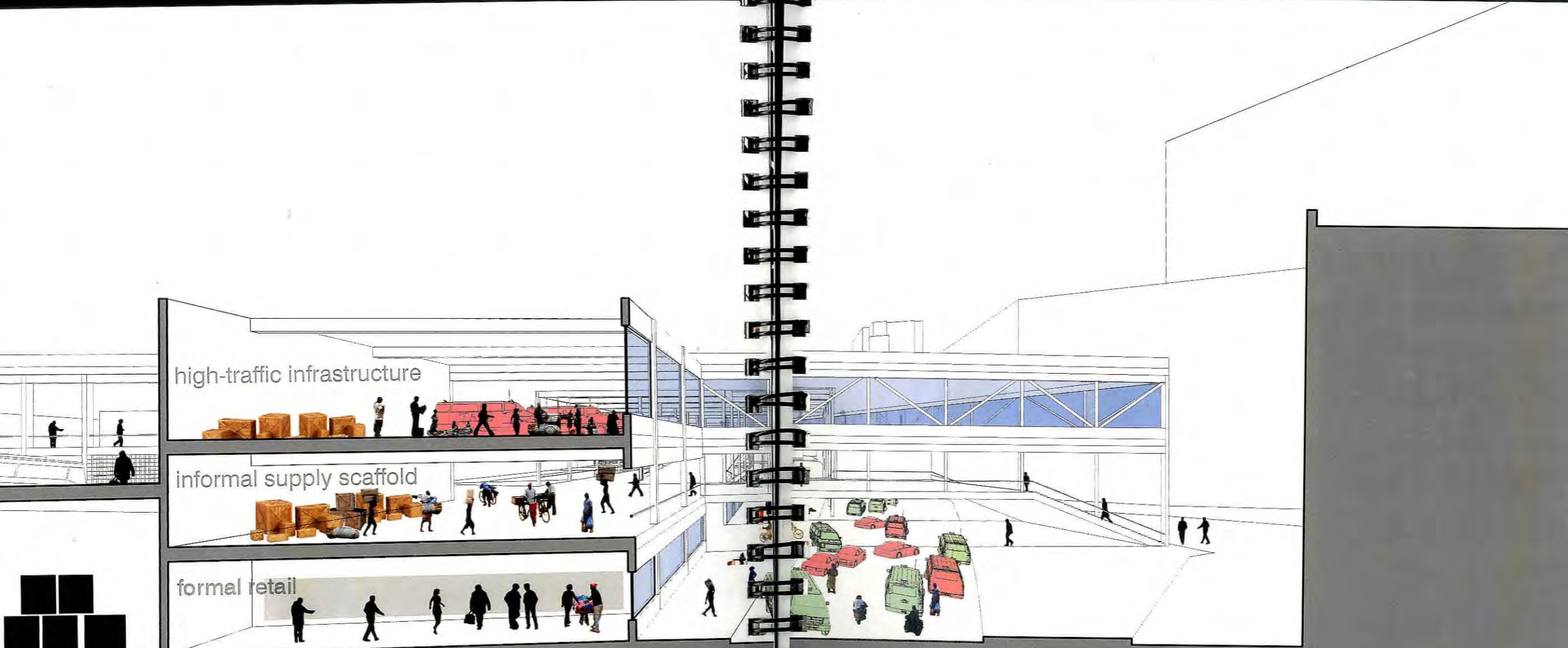
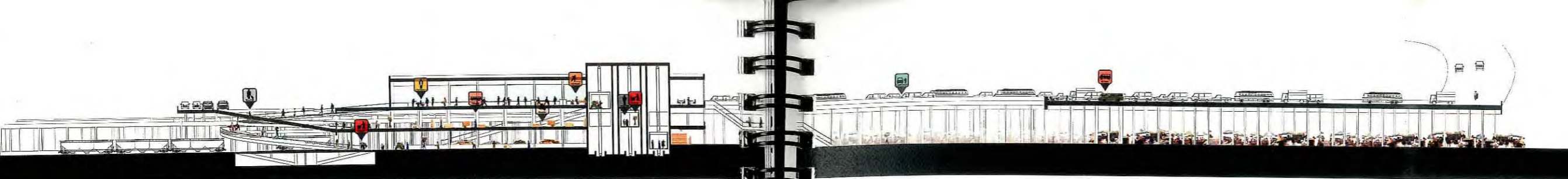


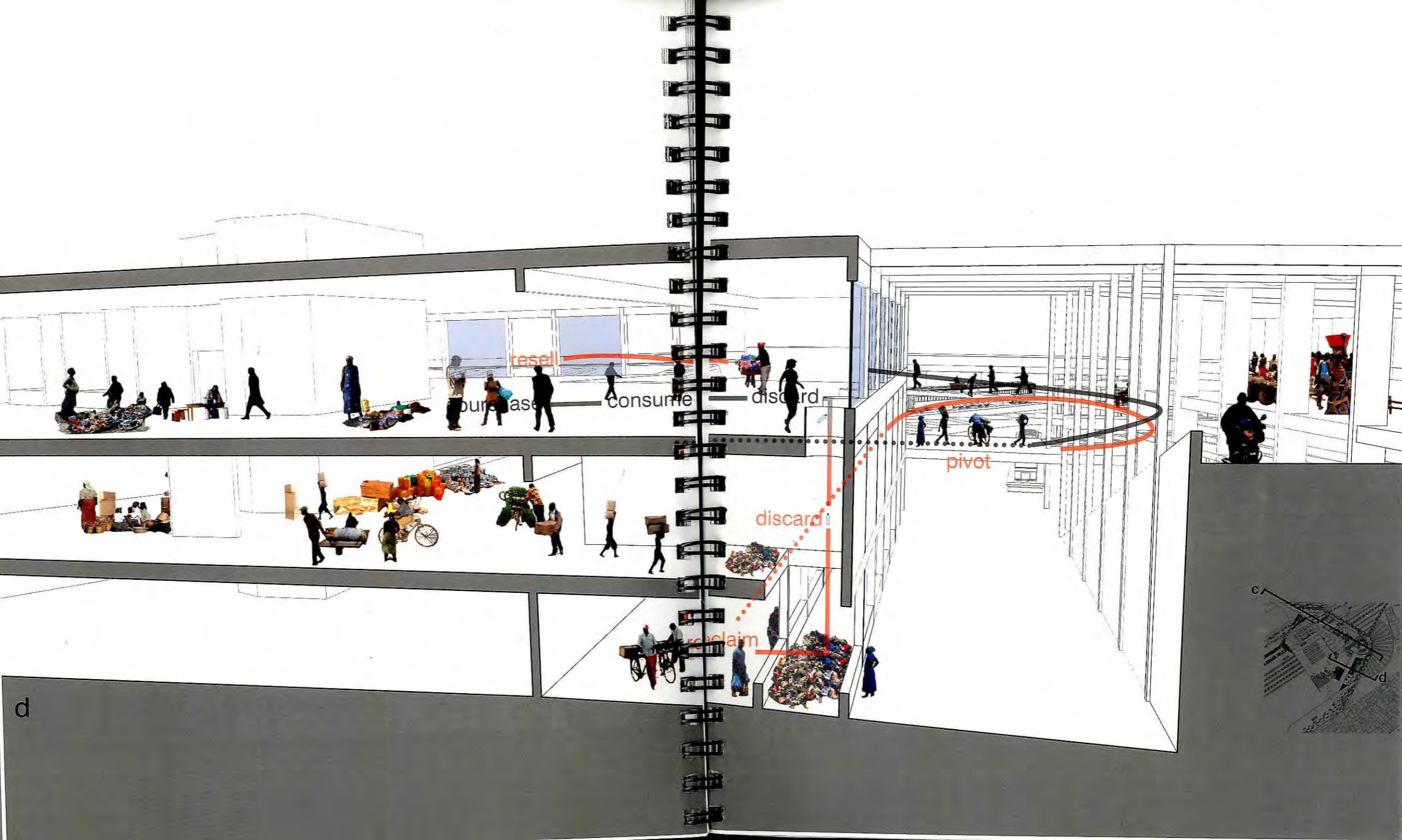
a





b





d

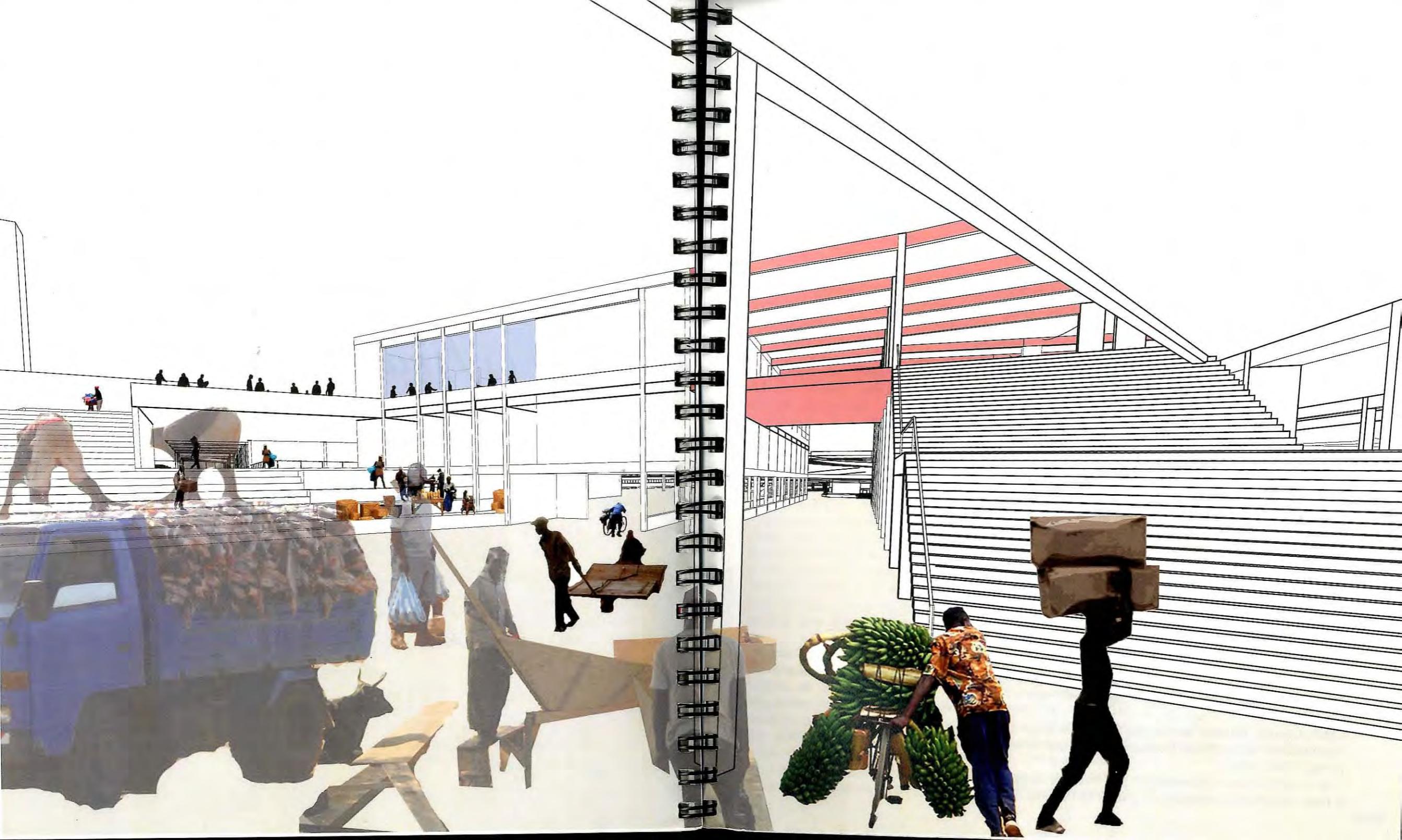




the next step : speculation







**Ten Brink, Marije.** *UrbanInform: Mini-documentaries on the Informal City.* HIVOS, 15 August 2009. Web. 20 September 2009.

An online archive of documentaries focused on architectural interventions based in informal settings, with an emphasis on contemporary work in developing cities. There are, however, several projects sited in developed countries which view the informal sector in a different light. This source has been helpful in providing precedents which actively acknowledge the presence and legitimacy of the informal sector.

**Jenkins, Paul, Robson, Paul, and Allan Cain.** "Luanda City Profile." *Cities* 19.2 (2002) 139-150.

This source provides highly comprehensive historical and statistical information on the city of Luanda, from the pre-colonial period onwards. Written by planners living and working in Luanda, the authors of this article are the co-directors of Development Workshop, an NGO responsible for several building projects and studies in the area.

**Lopes, Carlos.** "Candongeiros, Kinguilas, Roboteiros and Zungueiras:

**A Tour of the Informal Economy of Luanda." VIII Congresso Luso-Afro-Brasileiro de Ciencias Sociais (2004):** Web. 14 September 2009.

Details on the inner workings of Luanda's informal economic sector and formal regulatory policy, including interviews with vendors and government officials, outline the basis for its analysis in this proposal.

**Rodrigues, Cristina Udelsmann.** "From Family Solidarity to Social Classes: Urban Stratification in Angola (Luanda and Ondjiva)." *Journal of Southern African Studies* 33.2 (2007) 1-17.

Published recently, this article focuses on the reasons behind the extreme social stratification in Luanda, and dismisses the traditional dividing line between the "haves" and "have-nots" in favor of ideas of an emerging cultural identity that in and of itself generates social strata.

**Clark, Gracia.** *Traders Versus the State: Anthropological Approaches to Unofficial Economies.* London: Westview Press, 1988. Print.

The conflict between government and informal traders is not a new one, and is certainly not unique to Luanda. The book

examines various programs to combat informality or to assimilate traders into the formal sector, and outlines their successes and failures. This information could be useful in looking at what stance *not* to take with regard to "squashing" informal trading practices through architectural intervention. One case-study in Tanzania in particular shows the disastrous economic effects of a state-sanctioned policy of harassment and "repatriation."

**Rem Koolhaas, audiobook.** *Lagos Wide & Close. Submarine Channel, 2005.* Film.

This source is helpful in clarifying how the cities of Luanda and Lagos differ in the reasons for the proliferation of their informal sectors. It would provide excellent material for a precedent study on the informal city, but is hesitant to include specific material regarding the functioning of the informal economy in Lagos with regard to the remainder of the city.

**"Land Access in Peri-urban Angola: Informal Urban Land Survey and Analysis, Luanda and Huambo." Center for Environment and Urban Settlements (2005).**

This source includes highly specific statistical information on informal settlements ringing Luanda, complete with data on informal employment and descriptions of building types unique to each settlement. The source is an organized means of looking inside informal settlements that otherwise appear chaotic and disorderly.

**Jenkins, Paul, Robson, Paul, and Allan Cain.** "Local Responses to Globalization and Peripheralization in Luanda, Angola." *Environment and Urbanization* 14.1 (2002) 115-127.

This source explores effects of colonial rule and independence on the globalization of Angola. Special attention is paid to the 3.4 million inhabitants of informal settlements in Luanda, looking at the benefits and liabilities presented by globalization. This source is useful in determining how the relationship between Luanda's formal and informal sectors has oscillated throughout history, and offers clues as to where we may be headed.

**"Ngola Kiluanje: Report on Micro-Enterprises." Development Workshop, Luanda. (1992).**

Based on extensive survey information in Luanda and elsewhere in Angola, this article published by an NGO working in-country examines each major type of production and trading (tailoring, metalsmithing, auto repair, restaurant ownership, etc.) in an effort to understand how and where it functions. Specifically, this source is valuable in that it details production and consumption paths for each of these industries.

**Koolhaas, Rem et.al. *Mutations*. Barcelona: Actar, 2000.**

While many similar patterns exist between Luanda and Lagos, the two cities are distinct. Fundamentally, the difference is that while Lagos explodes in population, Luanda does so in monetary terms. Koolhaas' investigation yields lots of data concerning the type of development that this heavy population influx has caused. More than similarities, study of the differences between the way Lagos and Luanda function is a product of this text.

**Los, Maria. *The Second Economy in Marxist States*. New York: St. Martin's Press, 1990. Print.**

The formation of what Los refers to as "second economies" is a common response to economically repressive Marxist regimes, which, through strict regulation and state control of certain goods, necessarily create a subversive provision of goods and services apart from these.

**Hodges, Tony. *Angola from Afro-Stalinism to Petro-Diamond Capitalism*. Indianapolis: Indiana University Press, 2001. Print.**

This source presents careful deconstruction of official policies towards informal development, as well as facts and figures indicating the "successes" and "failures" of some of these efforts. Several accounts of the implementation of state policies toward the informal sector may influence specific potential responses to state attempts to drive traders from the market.

**Tvedten, Inge. *Angola: Struggle for Peace and Reconstruction*. Boulder: Westview Press, 1997. Print.**

One chapter in particular, concerning the function of informal market, helps to explain real-world situations in which the formal and informal economies are severely "out of whack" (for example, a foreigner who generates a \$5000 profit selling a dozen eggs). Such extreme situations offer a perspective on the relationships between state-sanctioned economic activity and extra-legal responses to it.

**Davis, Mike. *Planet of Slums*. London: Verso, 2006. Print.**

Planet of Slums, particularly those sections which explore "misunderstandings" of the informal sector by architects and urban planners, raise real issues with the way in which "the developing world" is treated by our profession.

**World Bank. *African Development Indicators 2008-2009: from the World Bank Africa Database*. City: World Bank Publications, 2008-2009. Print.**

The World Bank publishes a study by this name each

year, which is overflowing with statistical information and analysis of issues faced by each sub-saharan country. This proposal utilizes World Bank's data mainly for the generation of charts and graphs to understand the changes in GDP, etc. that have taken place in the recent past.

**Corner, James and Alex Maclean. *Taking Measures across the American Landscape*. New Haven: Yale University Press, 2000. Print.**

This source is utilized mainly as an inspiration for representational techniques used in this proposal. Corner presents large amounts of data, often in tandem with photography, creating efficient yet highly visually-intriguing images.

**Malamud, Gary. *Boomtown Communities*. New York: Van Nostrand Reinhold, 1984. Print.**

Analysis of the "boom" and the shockwaves emanating from it are useful in documenting the way in which the timeline of physical expansion unfolds from a single starting point.

**Horden, Peregrine and Nicholas Purcell. *The Corrupting Sea*. Oxford: Blackwell, 2000. Print.**

This source is helpful in establishing a point of entry to an urban situation which is undoubtedly highly-dynamic and subject to reinvention on almost a daily basis. While the recent emergence of the "global city" is a popular idea, extensive inter-power trade networks in the Mediterranean have existed for millennia, fading and re-emerging in response to a set of variables that even today's urban centers cannot dodge.

**Lopes, Carlos. *Roque Santeiro: Entre a Ficcao e a Realidade*. S. Joao do Estoril: Principia, 2007. Print.**

A look inside Luanda's Roque Santeiro market presents information literally unavailable outside of personal interaction with those traders at work in the informal market. Although the source is in Portuguese, translation of several chapters has helped significantly in my understanding of the informal marketplace and its players.

**Bulfin, Michael Patrick. "Bursting at the Seams: Water Access and Housing in Luanda." *Ufahamu: A Journal of African Studies* 35.1 (2009) 1-18.**

This paper examines access to clean water and formal housing, looking specifically at the intended size of the city relative to the population it currently supports. An examination with this focus is key in looking forward to the future of the city, investigating whether the provision of necessary infrastructure will come first from the state, or from those who must create it themselves.

**“Luanda’s Hive of Economic Activity.” Africa Report 37.6 (1992) 28.**

This article is an overview of the unique and interesting airline supply process for Luanda’s Roque Santeiro, often originating in Dubai, South Africa, or Brazil. In this proposal, this source is used in placing the “players of the informal economy” in Luanda’s informal supply system.

**“Luanda Informal Water Sector Study.” Development Workshop, Luanda (2007).**

In this study, Development Workshop, a Luandan NGO, documents existing means of water supply, and the vast price discrepancies between them. The boundary between formal and informal, between state infrastructure and community infrastructure, is quite apparent in examining the way that water reaches the city.

**Chen, Martha Alter. “Rethinking the Informal Economy: Linkages with the Formal Economy and the Formal Regulatory Environment.” United Nations Department of Economic and Social Affairs. 2007.**

In this article, Chen examines the potential policy options for negotiating the informal economy. The conclusion suggests how more equitable linkages between formal and informal sectors, fostered through public policy, could benefit both. The source is useful for examining real potential for policy change in Angola, and whether an architectural intervention could convince the state of the possibilities at hand.

**Cain, Allen. “Livelihoods and the Informal Economy in Post-war Angola.” Monograph 102 (2004).**

Post-war urban challenges plague Angola. There is also, as Cain mentions, great opportunity to be seen in reconstruction, including the facilitation of informal trading through microcredit institutions as a means of re-entering the workplace. Cain takes a firm stance against formalization, arguing that while it will substantially increase permanence of commerce in the city, it will ultimately be restrictive due to increased taxes and fees associated with the registration of entrepreneurial activities.

**Under Siege: Four African Cities. Goethe Institute Lagos, Platform 4 Documenta 11. 2002.**

This symposium brief offers a succinct yet informative take on the informal sector’s relationship to the formal, using Kinshasa, Johannesburg, Lagos, and Freetown as examples of the adversarial stance taken by the state toward the settlements at its periphery.