

# The Square

Spanish Colonial Plazas in a  
Contemporary Context

Juan C. Contin





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## Acknowledgments

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Finally, I'd like to remember Professor Arthur Ovaska whose insight has lasted a lifetime.



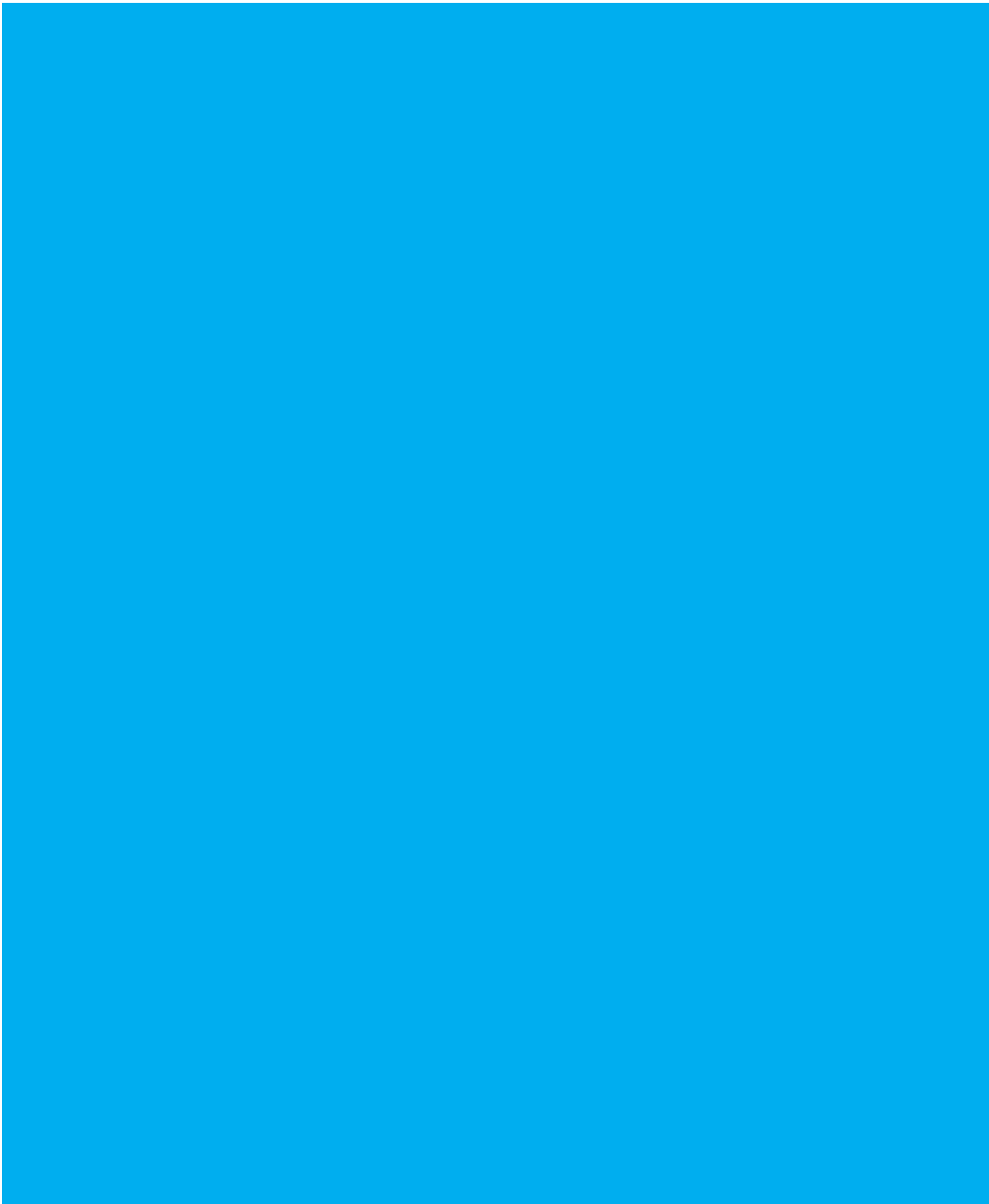
Juan Contin began his career in architecture at a young age, attending the acclaimed High School of Art and Design in New York. His academic career took him to Cornell University where he received both his Bachelor of Architecture as well as his Masters in Architecture, receiving multiple AIA academic awards along the way. Following his time at Cornell, Juan worked as a project architect for IBM, leading the development of large scale high tech facilities. In 1997, after three years at IBM, his practice in corporate design took him to Hong Kong where he worked as a project manager and project architect for several of the world's largest institutions including New World Telephone, Credit Suisse, and Goldman Sachs.

In 2004, Mr. Contin founded his studio, Contin Architecture and Design, working on a wide variety of projects from large scale commercial facilities and historical preservation works, to award winning residential homes throughout Florida. While the studio is located in Lake Worth, Florida, Mr. Contin has taken his architectural expertise to several projects in New York, Colorado, Boston, and Hong Kong.

While Contin Architecture and Design continues to thrive, Mr. Contin has taken the opportunity to share his knowledge and passion of the world of architecture by becoming a faculty member at Florida International University's school of architecture since 2015. As a professor of graduate studies, Juan enforces a curriculum surrounding residential design, urban planning, building technology, and professional practice.

A long term member of the American Institute of Architects, Mr. Contin has received several accolades back to back in 2018 and 2019 at the AIA Palm Beach Design Awards ceremony for design works in Miami Beach, Pinecrest, and the City of Miami.

Today, Mr. Contin continues to work on producing exceptional design while maintaining time with his wife and daughter. His commitment to those around him is reflected in his devotion to the built environment and his belief that the architecture that surrounds us defines much of who we are and what we are to become.



# Introduction

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**“...Unprecedented in its time...One of the most expansive efforts in urban planning at the continental scale.”**











“they should have good access  
and outlet by sea and by land”









“A caballeria is an urban lot...

92 feet wide and 184 feet deep”



# *The European Square*

The Middle Ages (500AD / 1500AD) had a long thousand year and critically significant period in Europe. It was a time for architecture to reflect new realities. There were changes of kingdoms with castles harboring peasants, the rise of Popes and crusades, wild barbarians terrorizing towns small fraught kingdoms.



*Plaza Mayor De Manila. 1847, Biblioteca Nacional De Espana, Spain.*

From the dissolving Roman Empire to the astounding growth of the Ottoman Empire, Europe ramped up and organized itself for the birth of its urban legacy. Its end gave rise to cities with growing urban plans that almost always included an urban square as its center.

The square became the center of public life. It was a creation of a place that hosted all of the urban activities in every European town. The local identity was formed and shaped by the sheer notion of a town square. The square grew from a need for a market for trade. The market was necessary for not only trading but also for communication between its townspeople. This communication translated itself into many of the original facets of government through self-representation, which ultimately yielded democracy. The square, through its humble beginnings, became the center of each town. Each square was unique and pluralistic, representing the needs of the people that used it and formed it, day after day.



## THE URBAN “LIVING ROOM

From 500AD, Europeans flocked to markets as their cities became safe from invading barbarians, and kingdoms were formed that supported organic and later formal urbanism. In whatever language or context, Agoras, piazza's, Platz, or Rynek defined a main square that developed unique characteristics. Along with its commercial importance, the markets developed the cornerstone of culture and democracy.

In Spain, the Plaza Major was no different. Spaniards counted on the Plaza Major to be it's urban “living room” in Spanish towns and cities. While towns had one main square, cities began to grow squares in clusters based around urban life. The square may have begun with a market but was quickly followed by churches and cathedrals, town halls, eateries, and shops that made up the most important architecture the Spaniards produced to support this special new place. The Plaza Mayores can be found in almost all towns and are one of Spain's most characteristic urban elements. The plaza's ornamental details, their color, their façades create a balance in the atmosphere they create. The birth of Plazas Mayores (main squares) began to appear in Spanish towns and cities at the end of the Middle Ages. Over the centuries, they have given rise to squares in a range of different styles, from Renaissance to neo-Classical and Baroque.



*Delgado, Carlos. Plaza Mayor, Madrid. Madrid, Spain, 26 Aug. 2012.*

Due to their formal nature, Plaza Mayores have certain characteristics that distinguish them from other kinds of squares: a rectangular layout with semi-circular arches, uniform façades, colonnades, balustrades, galleries of balconies and medallion decorations. It could be argued that Spain was at the forefront of formal urbanism long before others in Europe began to take up formalizing their urban agendas. It is important to single out Spain at this point as centuries later, Spanish urban planning played the most significant role in the largest urban planning project that man has ever undertaken.



## THE TRADITIONAL EUROPEAN SQUARE

Traditionally, European town squares are urban spaces surrounded by a curtain of structures, with smaller scaled human type entrances and pathways leading in and out of the urban room. This creates the feeling of an outdoor room, a room for the masses. There is an interplay of shops, houses, civic buildings, and religious buildings that are the very fabric of the urban square. It represents the most significant urban architectural fabric in each town and creates an identity for the cities and towns. In Spanish and French towns, the Church building would have been a centerpiece whereas, in Polish and Czech towns, the City hall was placed at the center of the square to show its importance.

Public squares need not be limited to the city center. Public spaces that offer outlets for incidental interactions build healthier and less isolated communities. Needless to say, every square is special in its own right. Greatest squares may be fan-shaped as in Siena or a trapezoid as in Venice's Piazza San Marco, triangular in Tübingen, oval-shaped in Verona or square in Salamanca.

The structures around the periphery create a playful three-dimensional composition; Articulation happens through a play of dissonance and harmony of more imposing buildings, spires, and details that articulate the vertical attributes.



*Rohana, M. Siena Piazza Del Campo. Siena, Italy.*



*Delgado, Carlos. Plaza Mayor, Madrid. Madrid,*

## **VISUAL ENCLOSURE**

The visual edges of the square give a sense of place. This sense of place and space make its inhabitants feel included in the activities being played out in this urban room. The sense of place gives a feeling of belonging to a community and provides the basis for human interaction. The urban room becomes a stage, a reflection of oneself being in a larger room in a larger home. It is a home with walls and a ceiling that is limitless in space. It makes people feel that they belong to a larger place. For example, the curved walls of Siena's Piazza Il Campo are designed with a perfect balance between the architecture beneath the arcades, much like Salamanca's square-shaped Plaza Mayor. Passing through a dark cooler archway heightens the experience of crossing the threshold, through the change of color and temperature. Large and small entrances may be concealed within arcades, as they are in Salamanca's Plaza Mayor, or under the colonnades of the Piazza San Marco. This passage raises one's awareness of entering the public arena once inside the open square.



*Gustavo. Dancing at the Zocalo. Mexico City, Mexico.*

## **DIALOUGE ON THE SQUARE**

The European square is also a place for dialogue and discussion, meetings and greetings, for shared experiences, and forming bonds. Plazas provide open forums for public communication. It is a stage for exchanges for a wide variety of experiences. The concept of a city exists when people are aware of what others stories are.

## **SOCIALIBILITY AND WELL BEING**

The square is a generator of sociability and interaction. It is a psychological hotbed of thoughts, gossip, jokes, support, and love. Its social ramifications are limitless and never-ending. There is a feeling of the interplay between people that can only happen in this outdoor room. This interplay can be seen as a freedom that is hosted by an urban stage, which is the heart of each and every square.

## LESSONS FROM EUROPEAN SQUARE

As in every house's living room, the square becomes the urban living room. Human interaction is paramount in the space that acts as the urban living room. Different stages of human interaction from weddings, daily eating, the market, and children observing the greater society around them happens at the square. Without this open stage, European cities would be devoid of freedoms and interactions that benefit everything from commerce to sports.

## PLAZAS AND MARKETS



*Insiders, Athens. Monastiraki Square,  
Athens. Athens, Greece.*

The market today is the most powerful tool for generating economic and social life in the urban square, it is more powerful than any other activity on the square, stronger than the formal designs of the square, and even more influential than the structures and their uses surrounding the square.

Monastiraki Square in Athens is living proof of the market's importance. This market is a reflection of Greece's larger economy that is dependent on tourism and small businesses. It is here that the restaurateurs host tourists and locals alike, where local farmers sell their produce and wholesalers and craftspeople come together to offer goods that bolster the economic activity surrounding the square. The market at the square is one of the most significant factors in Athens success as a center of regional urban commercial activity and in generating dialogue and community engagement. The great diversity of urban users with varied points of view and a host of opinions come together on the square, added to the presence of city hall, will yield vibrant civic discourse and debates brought directly to the square.

## **DEMOCRATIC DIALOUGE, CIVIC ENGAGEMENT**

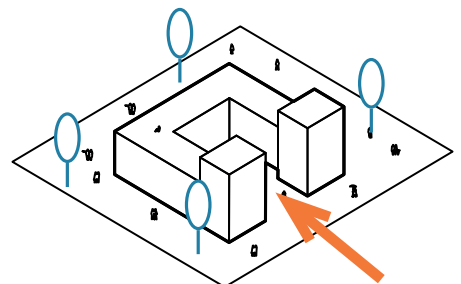
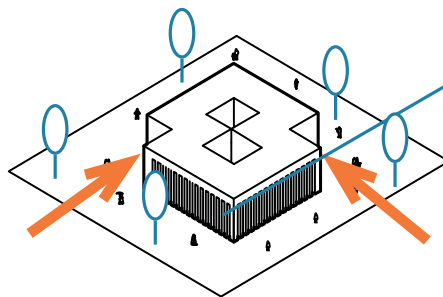
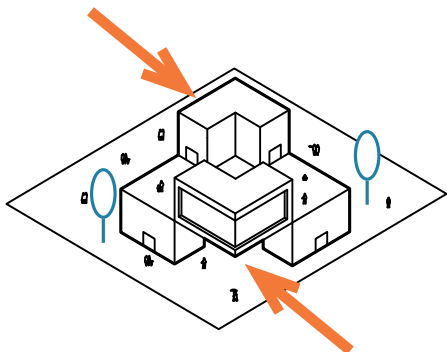
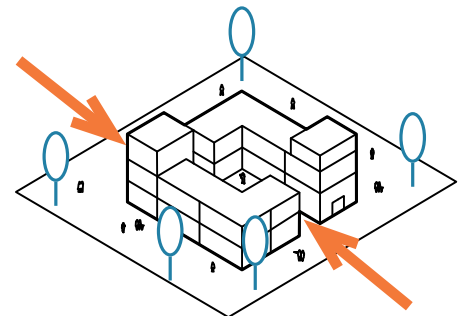
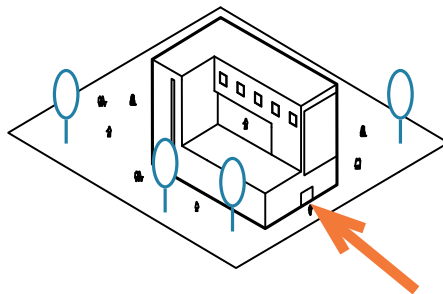
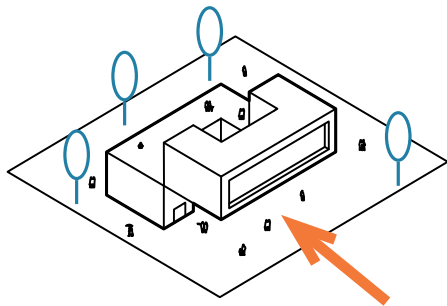
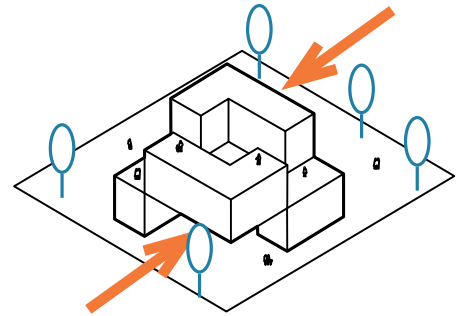
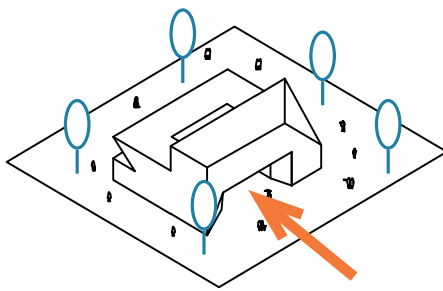
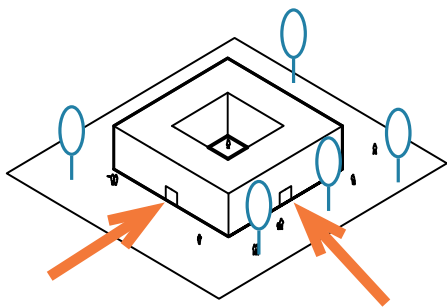
Without the square, the essence of the European city would not be the same. The square epitomizes each community's history and creates a unique identity. This creates robust symbolism which not only fosters culture but creates a machine to generate culture and democratic forms of interaction that galvanize each town they serve. The social functions of the square need to be understood as they lay the foundation for the need and purpose of the square. These functions are powerful. So powerful that the Europeans and especially the Spanish kingdoms would take this concept and use it to create a framework that will become mankind's most expansive urban project. On the Venetian campo many are involved in discussions of issues affecting Venice - the most recent flooding and whether the proposed technological solution (Moses Gates) will cause an even greater ecological disaster; whether those responsible for the fire at the Fenice theater will be punished; the gondoliers' strike to force the city to reduce speed limits for motor taxis; or how to prevent the administration from buying more of the poorly designed new vaporetti (water buses).

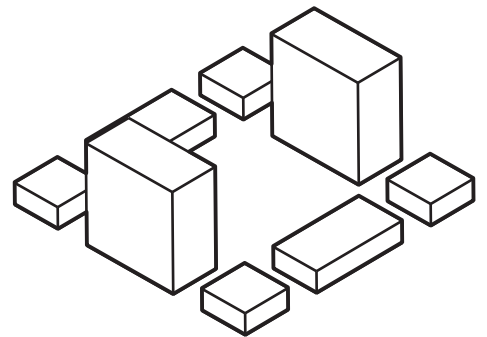
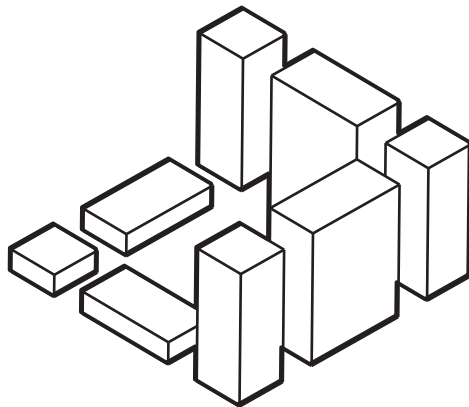
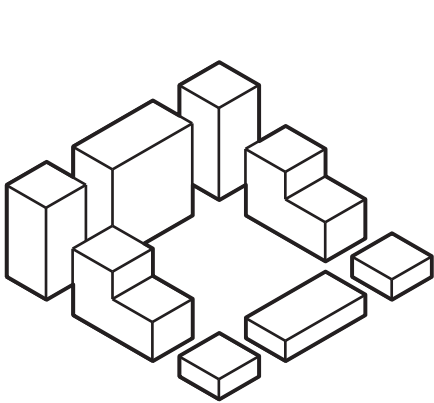
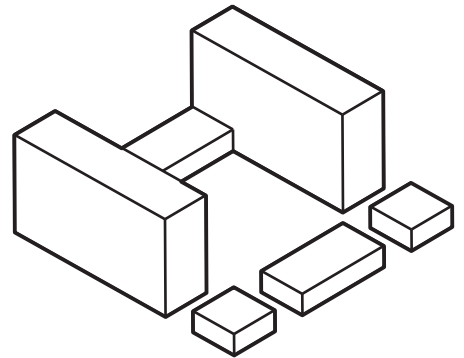
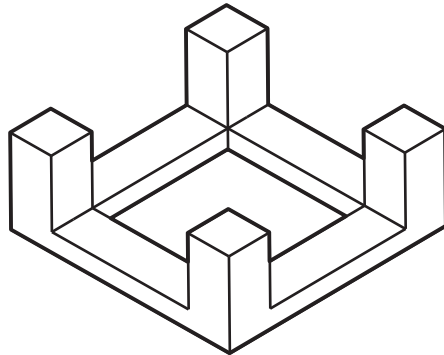
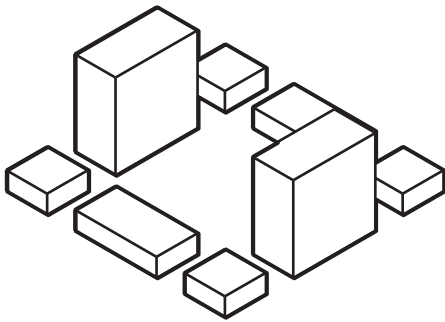
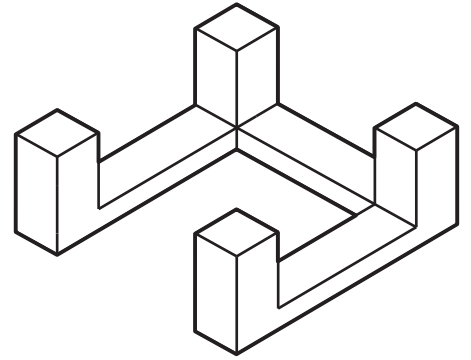
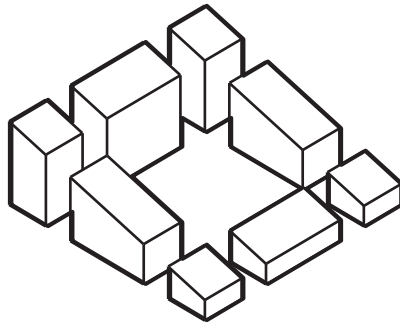
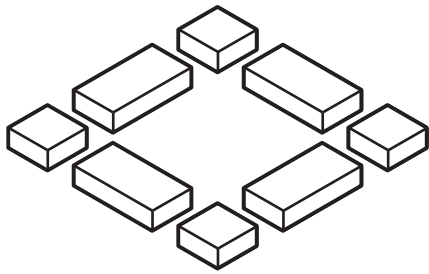


## SUMMARY OF URBAN SQUARES

Without the square, the essence of the European city would not be the same. The square epitomizes each community's history and creates a unique identity. This creates robust symbolism which not only fosters culture but creates a machine to generate culture and democratic forms of interaction that galvanize each town they serve.

The social functions of the square need to be understood as they lay the foundation for the need and purpose of the square. These functions are powerful. So powerful that the Europeans and especially the Spanish kingdoms would take this concept and use it to create a framework that will become mankind's most expansive urban project.







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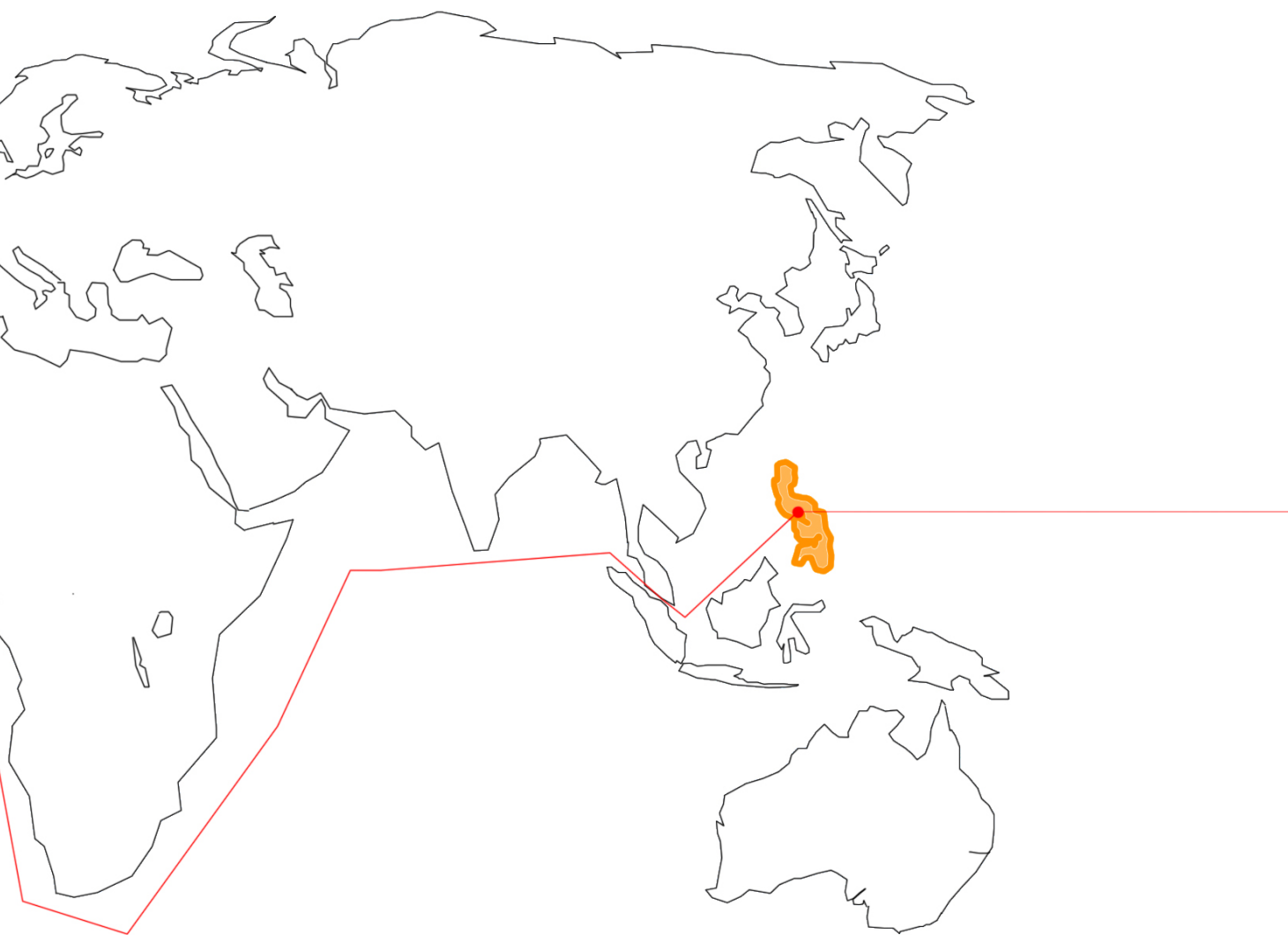
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*Spanish-American  
Urbanism Based on the Laws of  
the Indies*





Christopher Columbus was commissioned by Carlos II of Spain and landed on the island of San Salvador. Soon after, he landed and settled in what is now Hispanola. Eventually he founded what is now the capital of Santo Domingo from which all conquests of the Spanish crown originated from in the New World. In order to colonize and urbanize this new land, the Spanish crown began town planning.

The Laws of the Indies (Spanish: *Leyes de las Indias*) are the entire body of laws issued by the Spanish Crown for the American and the Philippine possessions of its empire. They regulated social, political, religious, and economic life in these areas. The Spanish establishments in America were located in a vast territory between southernmost American continent and California. The laws are composed of myriad decrees issued over the centuries and the important laws of the 16th century, which attempted to regulate the interactions between the settlers and natives, such as the Laws of Burgos (1512) and the New Laws (1542).

Throughout the 400 years of Spanish presence in these parts of the world, the laws were compiled several times, most notably in 1680 under Charles II in the *Recopilación de las Leyes de los Reinos de las Indias* (Compilation of the Laws of the Kingdoms of the Indies). This became considered the classic collection of the laws, although later laws superseded parts of it, and other compilations were issued.



*Coello, Follower of Claudio. "Carlos II King of Spain." Oil on Canvas,*

## HISTORY

The Spanish Viceroyalties in the Americas sometimes generated conflicts between indigenous peoples ('Natives' or 'Indians') and the Spanish colonists. The Spanish attempted to control the Natives to force their labor. At the same time, conflicts on policy and implementation occurred between the *encomenderos* and the Crown.

Two of the main sets of laws issued in the 16th century regulated Spanish interaction with the Native peoples, an issue about which the Crown quickly became concerned soon after the voyages of Christopher Columbus and his governorship. The Laws of Burgos (1512), signed by King Ferdinand II of Aragon, focused upon the welfare of the conquered native peoples. The creation of these laws is the legacy of Fray Antonio de Montesinos, who delivered his first sermon on December 21, 1511 (aka “the Christmas sermon”) advocating justice for the native peoples. Among those present at his first sermon was Bartolomé de las Casas, known for having been a staunch defender of the rights of indigenous peoples. A monograph titled The Laws of Burgos of 1512, Precursor to International Law and of the Recognition of Human Rights contends that these 500-year old laws were a forerunner to current international law and its acknowledgment of human rights.

The issuance of these laws was intended for the Island of Hispaniola, which comprises the modern states of Dominican Republic and Haiti. Eventually, their jurisdiction was expanded to cover the Greater Antilles

As colonialism grew, problems with the natives and the development of the colonies developed. To deal with the issues Bartolomé de las Casas brought attention to abuses being carried out by encomenderos. The Laws of Burgos were revised by the New Laws of 1542 issued by Carlos I and quickly revised again in 1552, after the laws met resistance from colonists. These were followed by the Ordinances Concerning Discoveries in 1573, which forbade any unauthorized operations against independent Native Americans.



*"Bartolomé De Las Casas." Oil on Canvas Depicting Bartolome de las Casas, 16AD. National Geographic. Spain.*



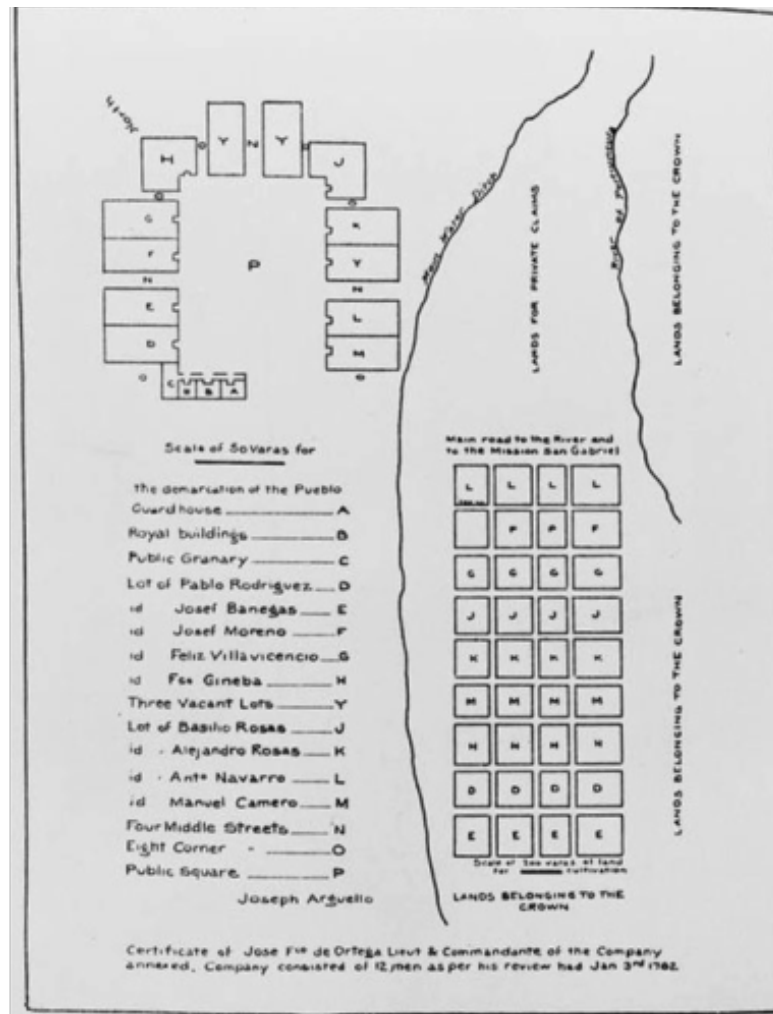
*Zarateman. Colegio De San Gregorio. September 28, 2011.*



The Valladolid debate (1550–1551) was the first moral debate in European history to discuss the rights and treatment of a colonized people by colonizers. Held in the Colegio de San Gregorio, in the Spanish city of Valladolid, it was a moral and theological debate about the colonization of the Americas, its justification for the conversion to Catholicism and more specifically about the relations between the European settlers and the natives of the New World. It consisted of a number of opposing views about the way natives were to be integrated into colonial life, their conversion to Christianity and their rights and obligations. According to the French historian Jean Dumont The Valladolid debate was a major turning point in world history “In that moment in Spain appeared the dawn of the human rights”.[2]

To guide and regularize the establishment of presidios (military towns), missions, and pueblos (civilian towns), King Phillip II developed the first version of the Laws of the Indies. This comprehensive guide was composed of 148 ordinances to aid colonists in locating, building, and populating settlements. These ordinances would be used throughout what is now called South America, Central America, Mexico and the US American West.[3] They codified the city planning process and represented some of the first attempts at a general plan. Signed in 1573, the Laws of the Indies are considered the first wide-ranging guidelines towards design and development of communities. These laws were heavily influenced by Vitruvius’ Ten Books of Architecture and Leon Battista Alberti’s treatises on the subject. Therefore, there was a Pan European model of design and thinking that was the base for these urban plans .

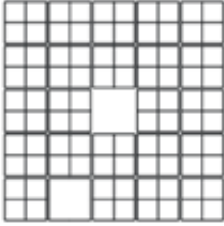
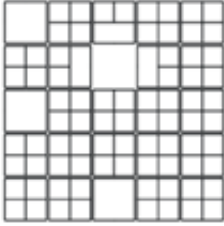



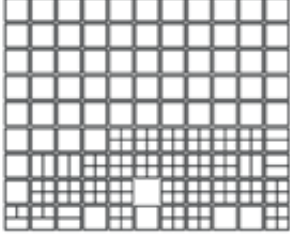
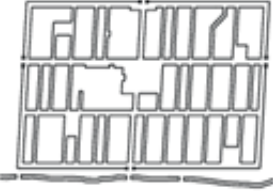
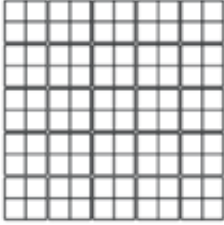




Los Angeles Plan (Credit Weebly Publications) 1781

The means and methods used by the Laws of the Indies can be considered as one of the greatest construction processes of planned cities in the history of the humanity. Although for more than three hundred years a great number of cities were constructed on very different territories and cultural atmosphere, all of them present common elements due to the existence of an urban pattern regulated by the Laws of the Indies. The basic urban layout consisted of a grid formed by parallel streets in whose center the main public space was located. The most representative buildings, the City Council, the church and the main market were constructed around this square in which the most important activities of the city took place. Different variations and proportions with respect to this model existed.

The original plans were derived from Spanish European town planning and was directly related to similar construction methods used in Spain.

<p><b>CARACAS</b></p>  <p>⌚</p> <p>Latitude 10.60 Date 1561 Streets width (m) 9.2 Blocks dimension (m) 117x117</p>	<p><b>LIMA</b></p>  <p>⌚</p> <p>Latitude 12.00 Date 1531 Streets width (m) 11.1 Blocks dimension (m) 125x125</p>
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<p><b>SANTA FE</b></p>  <p>⌚</p> <p>Latitude 37.18 Date 1492 Streets width (m) 2.5-4 Blocks dimension (m) 58x10</p>	<p><b>PALMA DE MALLORCA</b></p>  <p>⌚</p> <p>Latitude 39.55 Date 1300 Streets width (m) 6.3 Blocks dimension (m) 85x85</p>

*Diagrams of Cities:*  
José Manuel Alm-  
odóvar Melendo,  
Juan Ramon Jimenez  
Verdejo

## Examples: town planning

In Book IV of the 1680 compilation of The Laws of the Indies, plans were set forth in detail on every facet of creating a community, including town planning. Examples of the range of rules include:

- Those [Colonists] who should want to make a commitment to building a new settlement in the form and manner already prescribed, be it of more or less than 30 vecinos (free-men), (know that) it should be of no less than twelve persons and be awarded the authorization and territory in accordance with the prescribed conditions.
- Having made the selection of the site where the town is to be built, it must, as already stated, be in an elevated and healthy location; [be] with means of fortification; [have] fertile soil and with plenty of land for farming and pasturage; have fuel, timber, and resources; [have] fresh water, a native population, ease of transport, access and exit; [and be] open to the north wind; and, if on the coast, due consideration should be paid to the quality of the harbor and that the sea does not lie to the south or west; and if possible not near lagoons or marshes in which poisonous animals and polluted air and water breed.
- They [Colonists] shall try as far as possible to have the buildings all of one type for the sake of the beauty of the town.
- Within the town, a commons shall be delimited, large enough that although the population may experience a rapid expansion, there will always be sufficient space where the people may go to for recreation and take their cattle to pasture without them making any damage.
- Plan of the walled city of Manila with elements of colonial planning present.  
The site and building lots for slaughterhouses, fisheries, tanneries, and other business which produce filth shall be so placed that the filth can easily be disposed of.



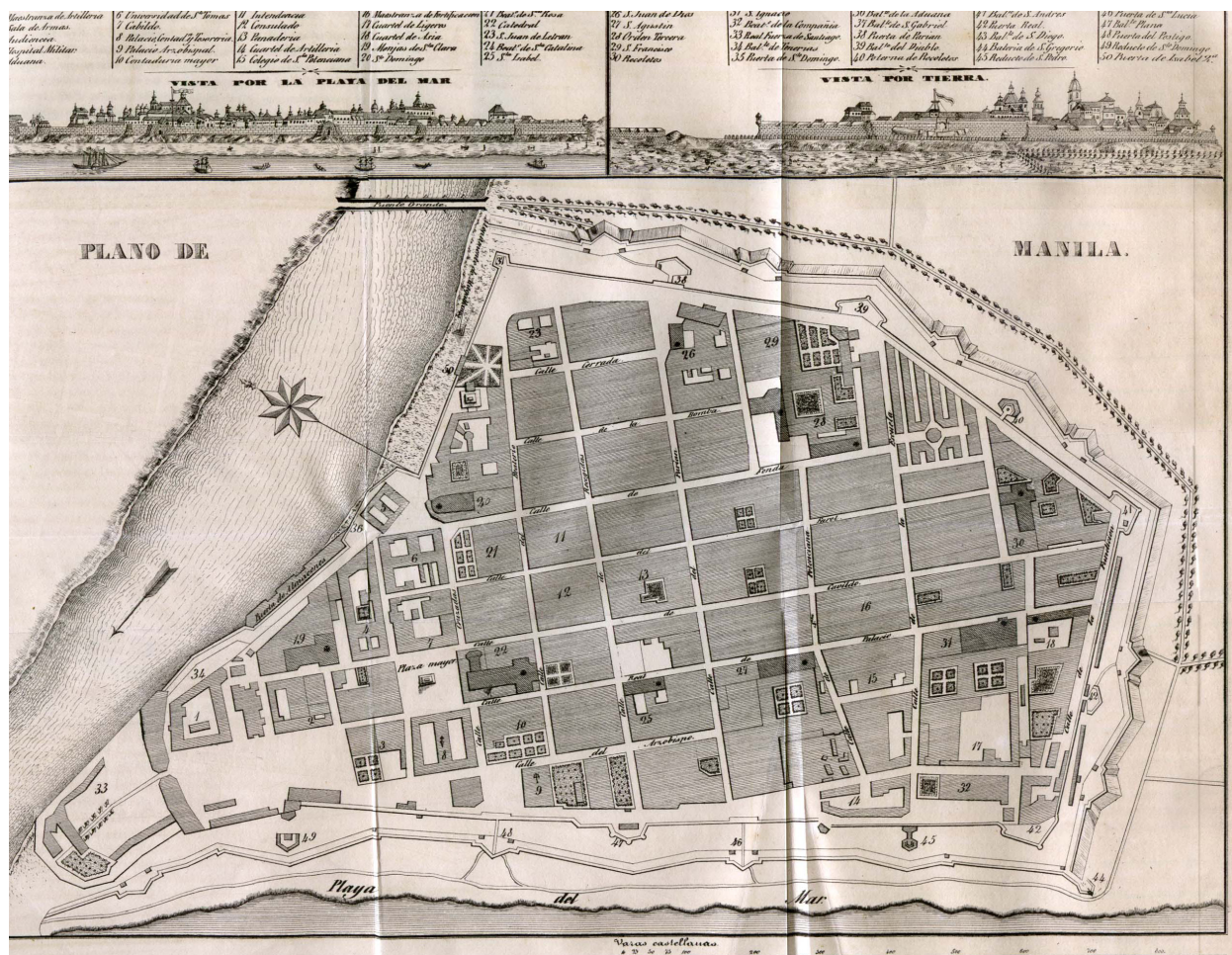
*Plaza Mayor De Manila. 1847, Biblioteca Nacional De Espana, Spain.*

These rules are part of a body of 148 regulations (see pages 39-53) configuring any settlement according to the rule of Spain and its colonies. This continued as a precedent in all towns under Spanish control until the relinquishing of the land to others, as in the case of the American colonies and their growth. The Laws of the Indies are still used as an example to design guidelines for communities today.

The Laws specify many details of towns. A plan is made centered on a Plaza Mayor (main square) of size within specified limits, from which twelve straight streets are built in a rectilinear grid. The directions of the streets are chosen according to the prevailing winds, to protect the Plaza Mayor. The guidelines recommend a hospital for non-contagious cases near the church, and one for contagious diseases further away.[4]

Most townships founded in any part of the Spanish Empire in America before the various parts became independent countries were planned according to the Laws. These include many townships with Spanish names located in what is now the United States. The creation of a central square and rectilinear grid of streets was different from the haphazard and organic growth that led to meandering streets in many old townships in Iberia.





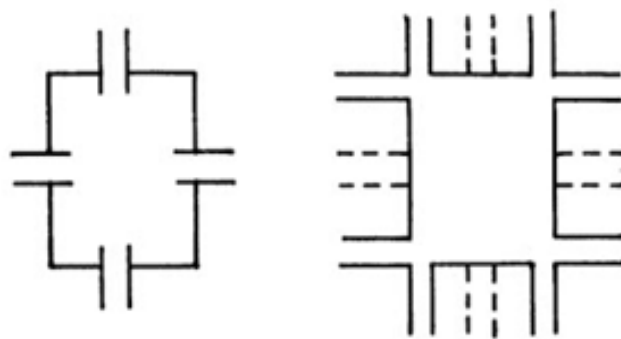
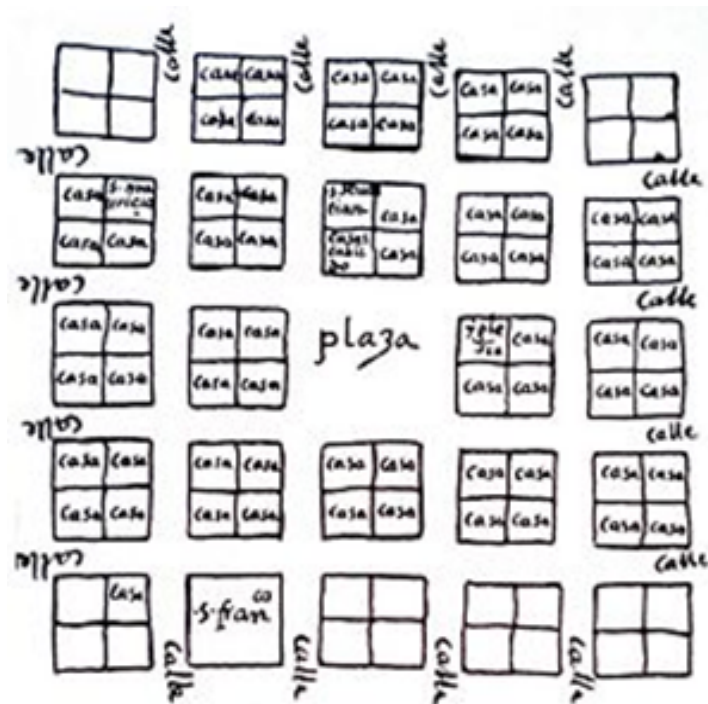


Fig. 1. Diagram illustrating the Old World (left) and New World (right) forms of plaza. Note the relationship of the street pattern from the corners and middle of each side of the plaza in the New World type, cf. Ordinance 114





1578 Caracas



1772 Caracas

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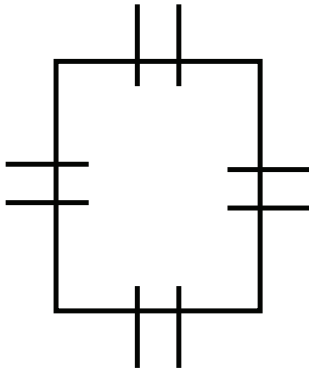
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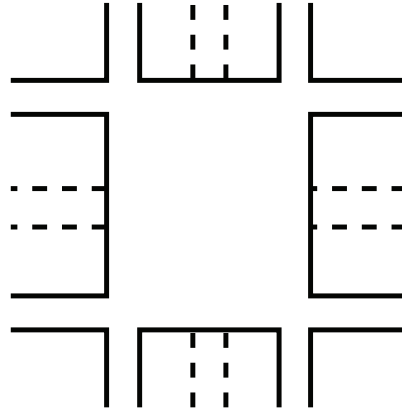




## *Laws of the Indies*



Old World

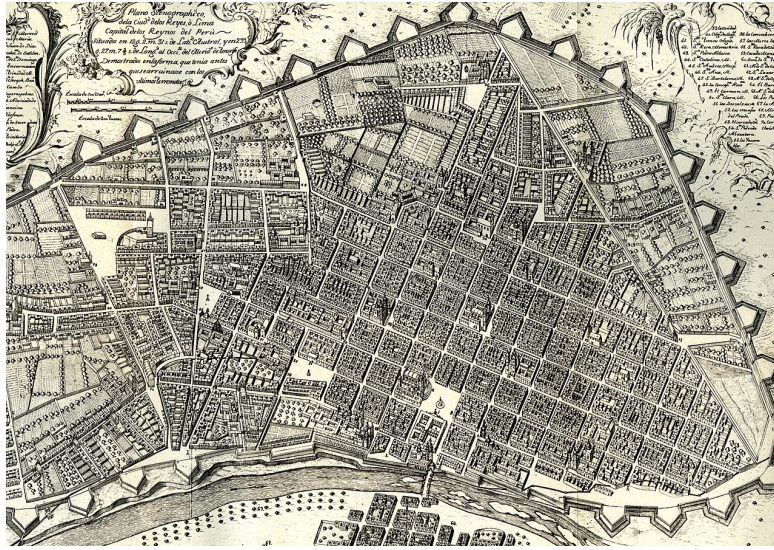


New World

1. No person, regardless of state or condition, should, on his own authority make a new discovery by sea or land, or enter a new settlement or hamlet in areas already discovered. If he were found without our license and approval or by those who had our power to give it, he would face a death penalty and loss of all his possessions to our coffers. And, we order to all our viceroys, audiencias, and governors and other justices of the Indies, that they give no license to make new discoveries without previous consultation with us and only after having obtained our permission; but we do consent that in areas already discovered, they can give license to build towns as necessary, adhering to the order that in so doing they must keep to the laws of February regarding settlements in discovered lands, [and] then they should send us a description.

2. Those who are in charge of governing the Indies, whether spiritually or temporally, should inform themselves diligently whether within their districts, including lands and provinces bordering them, there is something to be discovered and pacified, of the wealth and quality, [and] of the peoples and nations who inhabit there; but do this without sending to them war personnel nor persons who can cause scandal. They [the governors] should inform themselves by the best means available; and likewise, they should obtain information on the persons who are best suited to carry out discoveries - and with those who are best fit for this purpose, they [the governors] should inform themselves by the best means available; and likewise, they should obtain information on the persons who are best suited to carry out discoveries -and with those-(Cont. on next page)





Juan, Jorge, and Antonio de Ulloa. "Map of City of the Kings(Lima)," n.d.

2(Cont). who are best fit for this purpose, they [the governors] should confer and make arrangements, offering them the honors and advantages that justly, without injury to the natives, can be given them -and- before carrying out what has been arranged or has been learned, give narratives to the viceroy and the audiencias and also send them to the Council, which, after looking at the case, will issue a license to proceed with the discovery, which should be carried out in the following order:

3. Having made, within the confines of the province, a discovery by land, pacified it, [and] subjected it to our obedience, find an appropriate site to be settled by Spaniards and if not, [arrange] for the vassal Indians so they be secure.

4. If the boundaries of the settlement are populated, utilizing commerce and ransom, go with vassal Indians and interpreters to discover those lands, and with churchmen and Spaniards, carrying offerings and ransoms and peace, try to learn about the place, the contents and quality of the land, the nation(s)

4(Cont). which the people there belong, who governs them, and carefully take note of all you can learn and understand, and always send these narratives to the Governor so that they reach the Council [Consejo de Indias].

5. Look carefully at the places and ports where it might be possible to build Spanish settlements without damage to the Indian population.

6-12. (These ordinances provide guidelines for discoveries that are made by sea.)

13. Persons who participate in discoveries, whether by land or by sea, should take possession, in our name, of all lands and provinces they might reach and, upon setting foot on to land, perform the necessary ceremonies and writs, thus providing public evidence and faithful testimony.

14. Once the discoverers arrive at newly discovered provinces or lands, together with the officials, they should name each land, each province, and the mountains and principal rivers they might encounter as well as the settlements and towns they might find or that they may begin.

15-31. (These ordinances instruct the Spaniards on the formal issues of encountering, greeting, teaching, and punishing the native Indian population.)

32. Before discoveries are duly recognized, no new population settlements are permitted, whether in the discovered areas or in those still to be discovered, but in those parts which are already discovered, pacified, and subjected to our mandate, population settlements, both of Spaniards and of Indians, should be ordered having permanence and giving perpetuity to both groups as specified in the fourth and fifth books [of the Laws of the Indies], especially in those parts dealing with population settlements and with land allotments.

33. Having populated and settled the newly discovered area, pacified it, and subjected it to our mandate, efforts should be made to discover and populate adjacent areas that are being discovered for the first time.



"Christopher Colombus Arriving on the Island of Hispanola." Etching, 1728. Library of Congress.

34. In order to populate those areas that are already discovered, pacified, and under our mandate, as well as areas that might be discovered and pacified in the course of time, the following sequence should be adhered to: choose the province, county, and place that will be settled, taking into consideration the health of the area, which will known from the abundance of old men or of young men of good complexion, natural fitness and color, and without illness; and in the abundance of healthy animals of sufficient size, and of healthy fruits and fields where no toxic and noxious things are grown, but that it be good climate, the sky clear and benign, the air pure and soft, without impediment or alterations and of good temperature, without excessive heat or cold, and having to decide, it is better that it be cold.

35. And they should be in fertile areas with an abundance of fruits and fields, of good land to plant and harvest, of grasslands to grow livestock, of mountains and forests for wood and building materials for homes and edifices, and of good and plentiful water supply for drinking and irrigation.

36. And that they should be populated by Indians and natives to whom we can preach the gospels since this is the principal objective for which we mandate that these discoveries and settlements be made.

37. And they should have good access and outlet by sea and by land, and also good roads and passage by water, in order that they may be entered and departed easily with commerce, while bringing relief and establishing defenses.



38. Once the region, province, county, and land are decided upon by the expert discoverers, select the site to build a town and capital of the province and its subjects, without harm to the Indians for having occupied the area or because they agree to it of good will.

39. The site and position of the towns should be selected in places where water is nearby and where it would be possible to demolish neighboring towns and properties in order to take advantage of the materials that are essential for building; and, [these sites and positions should be suitable] also for farming, cultivation, and pasturation, so as to avoid excessive work and cost, since any of the above would be costly if they were far.

40. Do not select sites that are too high up because these are affected by winds, and access and service to these are difficult, nor in lowlands, which tend to be unhealthy; choose places of medium elevation that enjoy good winds, especially from the north and south, and if there were mountains or hills, these should be in the west or in the east, and if there should be a need to build in high places, do it in areas not subjected to fogs; take note of the terrain and its accidental features and in case that there should be a need to build on the banks of a river, it should be on the eastern bank, so when the sun rises it strikes the town first, then the water.



Pedro Menéndez de Avilés Founding Saintt Augustine, North Wind Picture Archives, 1565

41. Do not select sites for towns in maritime locations because of the danger that exists of pirates and because they are not very healthy, and because in these [locations] there are less people able to work and cultivate the land, nor is it possible to instill in them these habits. Unless the site is in an area where there are good and principal harbors, among these, select for settlement only those that are necessary for the entry of commerce and for the defense of the land.

42. Having selected the site for capital towns in each county, determine the areas that could be subjected and incorporated within the jurisdiction of the head town [English approximation: county seat] as farms, granges, and gardens, without detriment to Indians and natives.

43. Having selected the area, province, and site where the new settlement is to be built, and having established the existing opportunities for development, the governor in whose district [the site] is or borders upon should decide whether the site that is to be populated should become a city, town, or village settlement. In compliance with his decision, it should form a Council [and] commonwealth [república] and name corresponding officials and members in accordance with stipulations in the "Book of the Republic of Spaniards" {Libro de la República de Españoles}. Thus in case it were to become a metropolitan city, it should have a judge with title and name of adelantado [title often given to the governor of a province, probably interim governor], or governor, or principal mayor; a corregidor, or ordinary mayor, who would have insolidum jurisdiction and who jointly with the regiment would carry on the administration of the commonwealth [with the help also of] three officers of the Royal Exchequer [Hacienda Real], twelve magistrates [regidores],

two executors, two jurors for each parish, one general procurer, one scribe of the Council, two public scribes [one for mines, another for registers], one main town crier, one broker for commercial transactions, two ushers to diocesan or suffragan bishops, eight [lower] magistrates, and other such essential officials. For the towns and villages, [there should be] an ordinary mayor, four magistrates, one constable, one scribe for the Council and a public scribe, and a majordomo.

44-88. (These ordinances dictate the legislative, legal and fiduciary regulations.)

89. The persons who were placed in charge of populating a town with Spaniards should see to it that, within a specified term, assigned for its establishment, it should have at least thirty neighbors, each one with his own house, ten cows, four oxen or two oxen and two young bulls and a mare, and it should have [also] a clergyman who can administer sacraments and provide the ornaments to the church as well as the necessary implements for the divine service; if this is not accomplished, he should lose everything already built or formed and he will incur a fine of a thousand gold pesos.

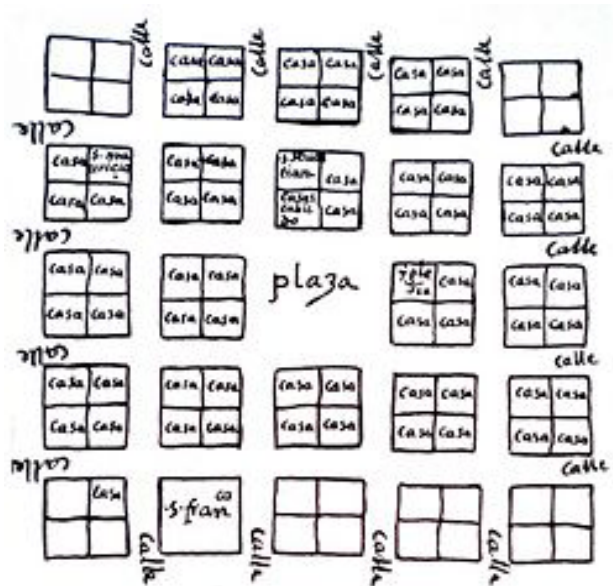
90. The aforesaid stipulations and territory should be divided as follows:

Separate first the land that is needed for the house plots [solares] of the town, then allocate sufficient public land and grounds for pasture where the cattle that the neighbors are expected to bring with them can obtain abundant feed, plus another portion for the natives of the area.

The rest of the grounds and territory should be divided into four parts: one is for the person in charge of building the town, the other three should be subdivided into thirty lots for the thirty neighbors of the town.

91. Land and boundaries for the new settlement cannot be given nor taken at a seaport nor anywhere where it can ever be redundant and detrimental to the Crown nor to the country because such sites will be reserved for us.

92. We define a neighbor as the son, daughter or children of a new settler or his relatives to and beyond the fourth degree that have different households and families and, if they are married, each of them has his own household.



Pimatl, Juan de. "Detailed Plan." Detailed Plan of Caracas, 1578.



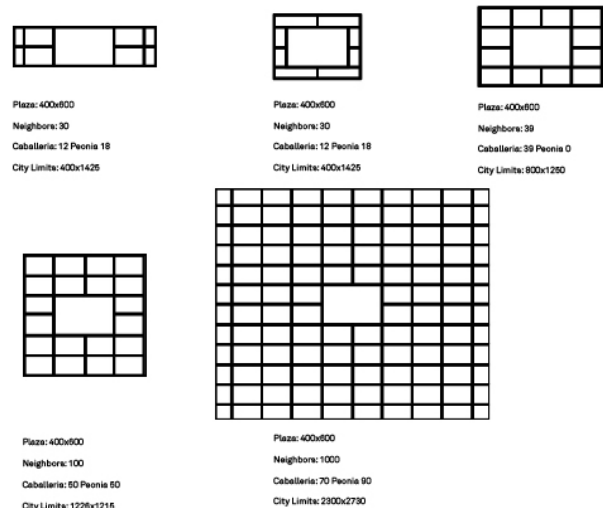
93-98. (These ordinances deals with various topics ranging from town officials, nearby mines, to taxes on items carried along to start a new town.)

99. Those who have made a commitment to build the said town, who after having succeeded in carrying out its settlement, as an honor to them and to their descendants [and in] their laudable memory as founders, we pronounce them *hijosdalgo* [illustrious men of known ancestry]. To them and to their legitimate heirs, in whatever place they might reside or in any other part of the Indies, they will be *hijosdalgo*, that is, persons of noble ascendancy and known ancestry.

100. Those who should want to make a commitment to building a new settlement in the form and manner already prescribed, be it of more or less than 30 neighbors, (know that) it should be of no less than twelve persons and be awarded the authorization and territory in accordance with the prescribed conditions.

101. If there is no person with the duty to select a site for a new settlement and there are enough married men who agree to create a new settlement wherever they are directed to locate it, as long as they are no less than ten married men they can do it and will be given land and boundaries accordingly and they will have the right to choose among themselves mayors and yearly councilmen.

102. Having chosen a site for a new settlement, as a colony, a frontier town, a town proper, a district seat, or a village, the Council and the Indies governor will not be satisfied by the mere fact of possession and continuity of rule and order from the start and will make them responsible for its development.



Diagrams of Cities: José Manuel Almodóvar Melendo, Juan Ramon Jimenez Verdejo

103. After the governor sites a new settlement of the proper hierarchy, the city or people who settle it will also settle with each of the persons that had registered or comes to register for the new settlement, and the person responsible for the town must select urban lots, farm, and pasture lands for the person willing to populate the town, who shall receive the amount of peonias and caballerias on which he is willing and able to build as long as no one is awarded more than five peonias nor three caballerias if given the latter.

104. A peonia is an urban lot 46 feet wide and 92 feet deep, land that will yield 156 bushels of either wheat or barley, 15.6 bushels of corn, land sized for two days of plowing for a vegetable garden, land sized for eight days of plowing to plant unirrigated trees, and pasture land for ten fertile sows, twenty cows, five mares, one hundred sheep, and twenty goats.

105. 105. A caballeria is an urban lot 92 feet wide and 184 feet deep, and the rest is equivalent to five peonias which is land that will yield-



780 bushels of wheat or barley for bread, 78 bushels of corn, land sized for ten days of plowing for a vegetable garden, land sizes for forty days of plowing to plant unirrigated trees, pasture land for fifty fertile sows, one hundred cows, twenty mares, five hundred sheep, and one hundred goats.

106. The caballeria, both the urban lots and the pasture and farm lands should be clearly marked and surveyed in a defined area and the peonias, both the urban lots and farm lands shall be marked and divided, and the pasture land will be common to all.

107. Those who accept settlement in the caballerias and peonias must build in their urban lots and live in their homestead and select the planting cycle of their farmlands and plant them and populate the pastures with cattle within the assigned time period and shall declare what will be accomplished within each period or they will lose their lots, lands and a monetary fine for the state, and must publicly accept these terms by way of a performance bond.

108. (This ordinance continues to elaborate upon requirements for maintaining caballerias and peonias.)

109. The governor who authorizes the settlement of a new town or concedes rights for an existing town to be populated anew, by means of his own authority or by making a request, should ascertain that those who have made a commitment to settle in a new town comply with the taking of seat in a proper manner. This should be done with great diligence and care. Also, the magistrates and Council procurer should initiate due process against the settlers who are bound up by a specified term and who have not complied with it to make them meet the terms, and those who might have left should be prosecuted(continued)-

seized, and brought back to the town in order that they comply with the terms of settlement, and if they were in another jurisdiction, a requisitioning order should be issued in order that justice be done under penalty of Our Lord.

110. Having made the discovery, selected the province, county, and area that is to be settled, and the site in the location where the new town is to be built, and having taken possession of it, those placed in charge of its execution are to do it in the following manner. On arriving at the place where the new settlement is to be founded - which according to our will and disposition shall be one that is vacant and that can be occupied without doing harm to the Indians and natives or with their free consent - a plan for the site is to be made, dividing it into squares, streets, and building lots, using cord and ruler, beginning with the main square from which streets are to run to the gates and principal roads and leaving sufficient open space so that even if the town grows, it can always spread in the same manner. Having thus agreed upon the site and place selected to be populated, a layout should be made in the following way.

111. Having made the selection of the site where the town is to be built, it must, as already stated, be in an elevated and healthy location; [be] with means of fortification; [have] fertile soil and with plenty of land for farming and pasturage; have fuel, timber, and resources; [have] fresh water, a native population, ease of transport, access and exit; [and be] open to the north wind; and, if on the coast, due consideration should be paid to the quality of the harbor and that the sea does not lie to the south or west; and if possible not near lagoons or marshes in which poisonous animals and polluted air and water breed.



Fortified Spanish Town(Wikipedia)

112. The main plaza is to be the starting point for the town; if the town is situated on the sea coast, it should be placed at the landing place of the port, but inland it should be at the center of the town. The plaza should be square or rectangular, in which case it should have at least one and a half its width for length inasmuch as this shape is best for fiestas in which horses are used and for any other fiestas that should be held.

113. The size of the plaza shall be proportioned to the number of inhabitants, taking into consideration the fact that in Indian towns, inasmuch as they are new, the intention is that they will increase, and thus the plaza should be decided upon taking into consideration the growth the town may experience. [The Plaza] shall be not less than two hundred feet wide and three hundred feet long, nor larger than eight hundred feet long and five hundred and thirty feet wide. A good proportion is six hundred feet long and four hundred wide.

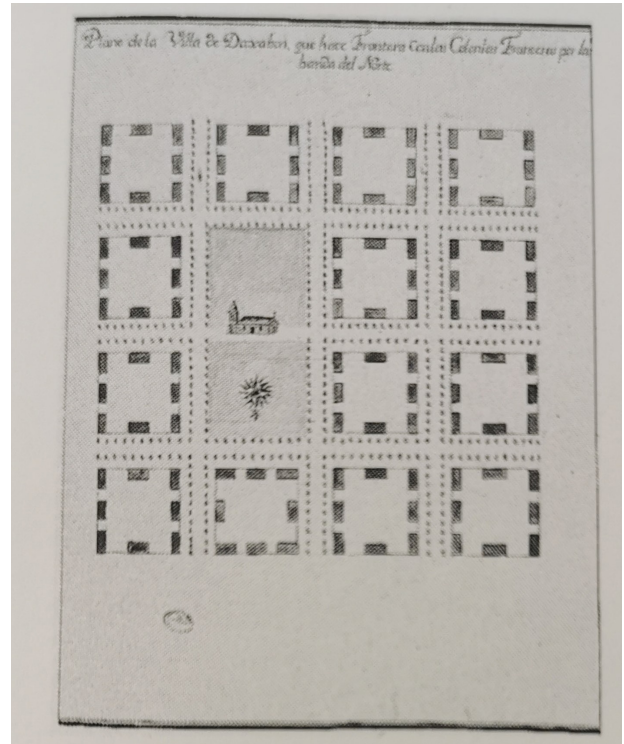
114. From the plaza shall begin four principal street: One [shall be] from the middle of each side, and two streets from each corner of the plaza; the four corners of the plaza shall face the four principal winds, because in this manner, the streets running from the plaza will not be exposed to the four principal winds, which would cause much inconvenience.

115. Around the plaza as well as along the four principal streets which begin there, there shall be portals, for these are of considerable convenience to the merchants who generally gather there; the eight streets running from the plaza at the four corners shall open on the plaza without encountering these porticoes, which shall be kept back in order that there may be sidewalks even with the streets and plaza.

116. In cold places, the streets shall be wide and in hot places narrow; but for purposes of defense in areas where there are horses, it would be better if they are wide.

117. The streets shall run from the main plaza in such manner that even if the town increases considerably in size, it shall not result in some inconvenience that will make ugly what needed to be rebuilt, or endanger its defense or comfort.

118. Here and there in the town, smaller plazas of good proportion shall be laid out, where the temples associated with the principal church, the parish churches, and the monasteries can be built, [in] such [manner] that everything may be distributed in a good proportion for the instruction of religion.



"The new impulse of the 18th century. The new city of Guatemala, founded in 1776, is a good example of this period which is characterized by a diminution of the size of the blocks and their division in a larger number of lots. New types of squares (occupying two or even four blocks) appear." -The New City

119. For the temple of the principal church, parish, or monastery, there shall be assigned specific lots; the first after the streets and plazas have been laid out, and these shall be a complete block so as to avoid having other buildings nearby, unless it were for practical or ornamental reasons.

120. The temple of the cathedral [principal church] where the town is situated on the coast shall be built in part so that it may be seen on going out to sea and in a place where its buildings may serve as a means of defense for the port itself.



121. Next, a site and lot shall be assigned for the royal council and cabildo house and for the custom house and arsenal, near the temple, located in such a manner that in times of need the one may aid the other; the hospital for the poor and those sick of noncontagious diseases shall be built near the temple and its cloister; and the hospital for the sick with contagious diseases shall be built in such a way that no harmful wind blowing through it may cause harm to the rest of the town. If the latter be built in an elevated place, so much the better.

122. The site and building lots for slaughter houses, fisheries, tanneries, and other business which produce filth shall be so placed that the filth can easily be disposed of.

123. It shall be of considerable convenience if those towns that are laid out away from seaports, inland, be built if possible on the shore of a navigable river, and attempts should be made to place the town on the side from which the cold north wind blows and that buildings that cause filth be placed on the side of the river or sea below the town.

125. The same plan shall be observed in any inland place without shore, taking considerable care to ascertain the availability of those conveniences that are required.

126. In the plaza, no lots shall be assigned to private individuals; instead, they shall be used for the buildings of the church and royal houses and for city use, but shops and houses for the merchants should be built first, to which all the settlers of the town shall contribute, and a moderate tax shall be imposed on goods so that these buildings may be built.

127. The other building lots shall be distributed by lottery to the settlers, continuing with the lots closer to the main plaza, and the lots that are left shall be held by us for assignment to those who shall later become settlers, or for the use that we may wish to make of them, and so that this may be ascertained better, the town shall maintain a plan of what is being built.



Santo Domingo  
1502  
Agricultural Sites  
Located Across  
River

128. Having made the plan of the town and having distributed building lots, each of the settlers shall set up his tent on his plot if he should have one. For this purpose the captains should persuade settlers to carry them, and those who did not bring one should make their huts of easily available local materials, so that they may have shelter, and everyone as soon as possible shall make a palisade or ditch encircling the plaza so that they may not be harmed by Indians or natives.

129. Within the town, a commons shall be delimited, large enough that although the population may experience a rapid expansion, there will always be sufficient space where the people may go to for recreation and take their cattle to pasture without them making any damage.

130. Adjoining the commons there shall be assigned pasture ground for the work oxen and for the horses as well as for the cattle for slaughter and for the usual number of cattle that the settlers must have according to these Ordinances, and in a good number so they can be admitted to pasture in the public lands of the Council; and the rest [of the adjoining land] shall be assigned as farm lands, which will be distributed by lottery in such a number that the [farm lots] would be as many in number as the lots in the town; and if there should be irrigated lands, lots shall be cast for them and they shall be distributed in the same proportion to the first settlers according to their lots; the rest shall remain for ourselves so that we may assign it to those who may become settlers.

131. In the farmlands that may be distributed, the settlers should immediately plant the seeds they brought with them and those they might have obtained at the site; to this effect it is convenient that they go well provided; and in the pasture lands, all the cattle they brought with them or gathered should be branded so that they may soon begin to breed and multiply.

132. Having planted their seeds and made arrangements for the cattle in such number and with good diligence in order to obtain abundant food, the settlers shall begin with great care and efficiency to establish their houses and to build them with good foundations and walls; to this effect they shall go provided with molds or planks for building them, and all the other tools needed for building quickly and at small cost.

133. They shall arrange the building lots and edifices placed thereon in such a manner that when living in them they may enjoy the winds of the south and north as these are the best; throughout the town arrange the structures of the houses generally in such a way that they may serve as defense or barrier against those who may try to disturb or invade the town, and each house in particular shall be so built that they may keep therein their horses and work animals and shall have yards and corrals as large as possible for health and cleanliness.

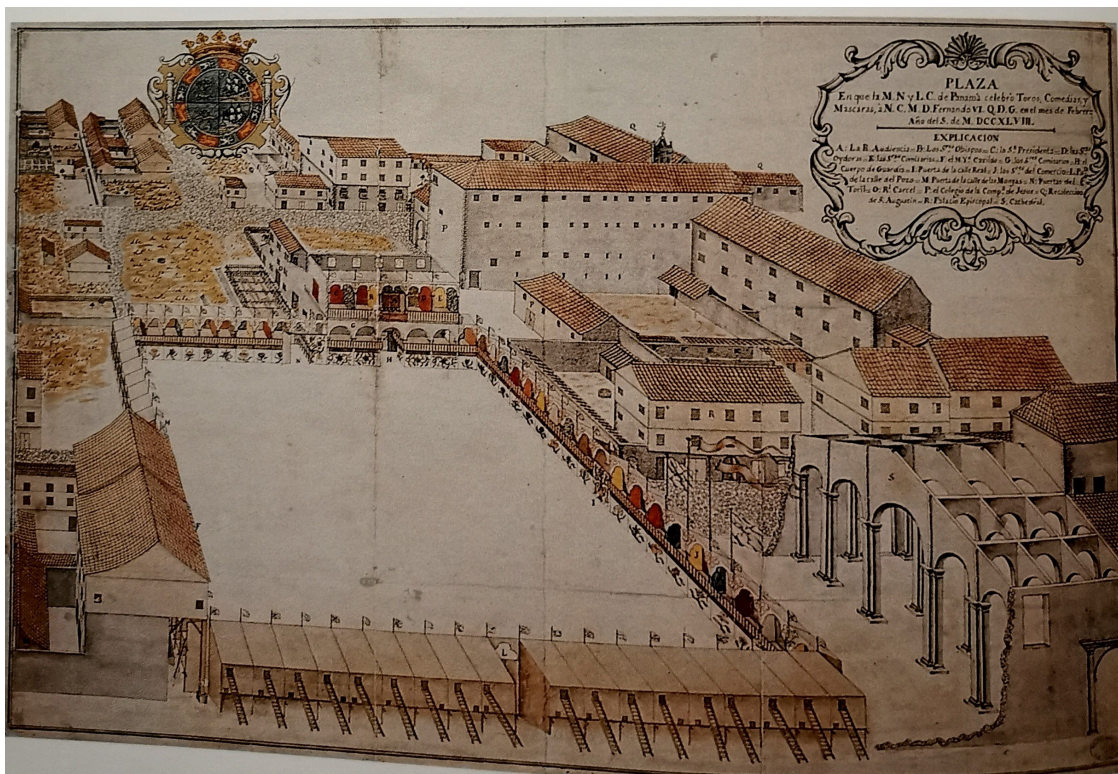
134. They shall try as far as possible to have the buildings all of one type for the sake of the beauty of the town.



135. The faithful executors and architects as well as persons who may be deputed for this purpose by the governor shall be most careful in overseeing that the above [ordinances] be executed; and they shall hurry in their labor and building so that the town may be completed in a short time.

136. If the natives should resolve to take a defensive position toward the [new] settlement, they should be made aware of how we intend to settle, not to do damage to them nor take away their lands, but instead to gain their friendship and teach them how to live civilly, and also to teach them to know our God so they learn His law through which they will be saved. This will be done by religious, clerics, and other persons designated for this purpose by the governor and through good interpreters, taking care by the best means(continued)-

available that the town settlement is carried out peacefully and with their consent, but if they [the natives] still do not want to concur after having been summoned repeatedly by various means, the settlers should build their own town without taking what belongs to the Indians and without doing them more harm than it were necessary for the protection of the town in order that the settlers are not disturbed.



Plaza Mayor De Panama(Wikipedia)



138. Having completed the erection of the town and the buildings within it, and not before this is done, the governor and settlers, with great care and holy zeal, should try to bring peace into the fraternity of the Holy Church and bring on to our obedience all the natives of the province and its counties, by the best means they know or can understand, and in the following manner:

139. Obtain information of the diversity of nations, languages, sects, and prejudices of the natives within the province, and about the lords they may pledge allegiance to, and by means of commerce and exchange, [the Spaniards] should try to establish friendship with them [the Indians], showing great love and caressing them and also giving them things in barter that will attract their interest, and not showing greediness for their things. [The Spaniards] should establish friendship and alliances with the principal lords and other influential persons who would be most useful in the pacification of the land.

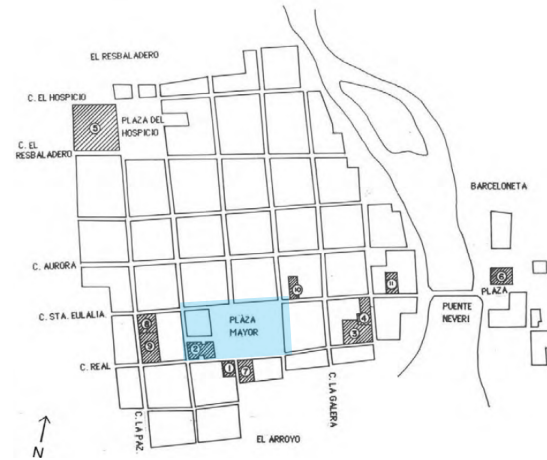
141-147 (These ordinances further deal with the conversion of the native Indian population).

148. The Spaniards to whom the Indians are entrusted [encomendados], should seek with great care that these Indians be settled into towns, and that, within these, churches be built so that the Indians can be instructed into Christian doctrine and live in good order. Because we order you see to it that these Ordinances, as presented above, be incorporated, complied with, and executed, and that you make what in them is contained be complied with and executed, and never take action or move against them, nor consent that others take action or move against either their content or form, under penalty of our Lord.

Dated in the Woods of Segovia, the thirteenth of July, in the year fifteen hundred and seventy-three, I the King; the Licenciado Otalaza; the Licenciado Diego Gasca de Alazar; the Licenciado Gamboa, the Doctor Gomez de Santillán.

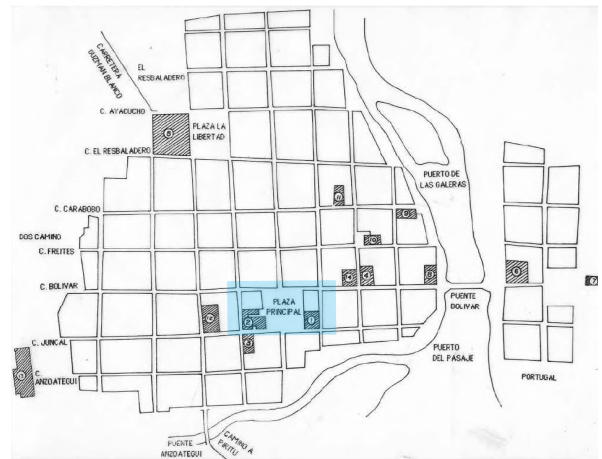


Ciudad de Ovito Plan(Wikipedia)



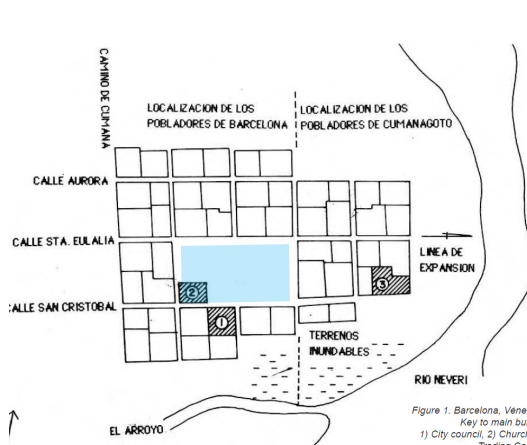
(Rodriguez, fig#. 9)

Barcelona, Venezuela. (1750-1850)



(Rodriguez, fig#. 10)

Barcelona, Venezuela. (1850-1900)



(BingMaps, fig#.)

Plaza Boyaca  
-Original Town Square

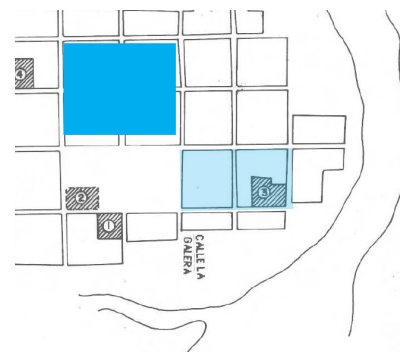


Figure 2. Barcelona, Venezuela. 1700-1750.  
Key to main buildings in the map: 1) City council, 2) Church, 3) Gulpuzcoana Trading Co., 4) Catalunya Trading Co., 5) Covent.

Figure 1. Barcelona, Venezuela. 1671-1700.  
Key to main buildings in the map: 1) City council, 2) Church, 3) Gulpuzcoana Trading Co., 4) Catalunya Trading Co., 5) Covent.

Barcelona, Venezuela. (Today, 2018)

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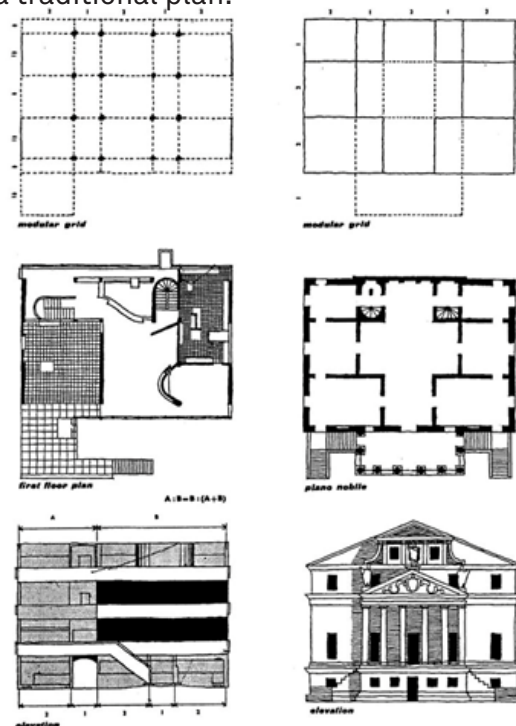


# *Mathematics of the Ideal City*



A more in-depth study beyond the obvious urban geometric similarities in town planning using the Laws of the Indies must be analyzed. There were other factors in town planning that formed these towns. The two other components that helped build these towns were due to construction knowledge and cost control. Early on, the Laws of the Indies established a pattern that made these towns repetitive and familiar to make, which allowed the villages to be developed and proliferate. As with any architectural work, the geometries came into play in more ways than meet the eye. The Spanish crown and its urbanists were extremely keen on following geometric patterns for reasons relating to the familiarity of building concepts and materials, speed of building the new cities, and above all, cost.

There is a definite correlation in many plazas not only in plan but also in facades, monuments, roofs, and church's built to complete the new world cities. In the Architectural Review of 1974, Colin Rowe makes similar comparisons to the 16th Century Villa Malcontenta and Le Corbusier's Villa Garche from 1920. The geometries were both designed as cubes with the same dimension at  $8 \times 5.5 \times 5$  per unit and the Same ratio on the exterior at  $2:1:2:1:2$ . The Structure at Villa Garche was a column supported open plan while villa Malcontenta was a bearing structure with a traditional plan.



*Comparison of classical facade proportions and modern proportions  
Colin Rowe, Mathematics of the Ideal Villa)*



The facades for Villa Garcke was series of horizontal strips as Villa Malcontenta has 3 horizontal divisions: with a base piano noble and attic. All in all the geometries are almost identical which proves that the basic premise of this type of architecture was a replicated many times over in different architectural styles. In conclusion, historical studies have shown that there is a notion of an “ideal villa,” that has been repeated in regards to architecture and proportions, similarly the Spanish sought to create the “ideal square,” within the “ideal city.” There is a resounding similarity in many facets of the design in everything from the town plaza to colonnades, which stitch these cities into an architectural type that grew from the southern tip of Argentina to what is modern-day Los Angeles.



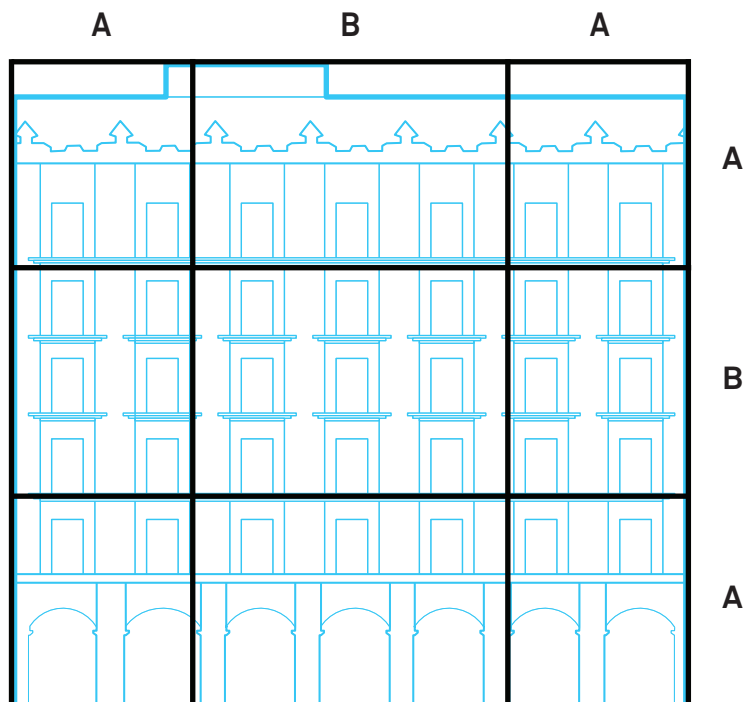
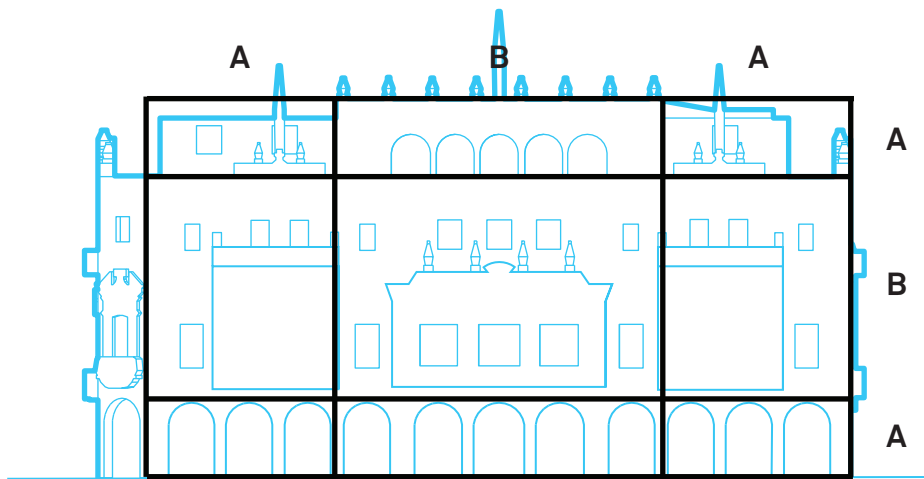
*Structural Arch (Dreamstime.com)*



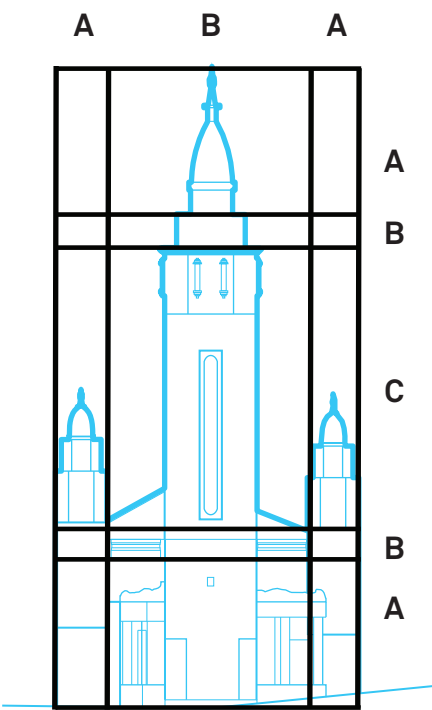
*Cordoba, Argentina (Dreamstime.com)*



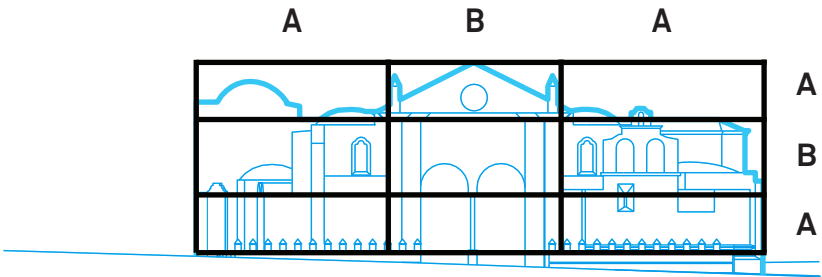
*Santa Barbara, California (Dreamstime.com)*



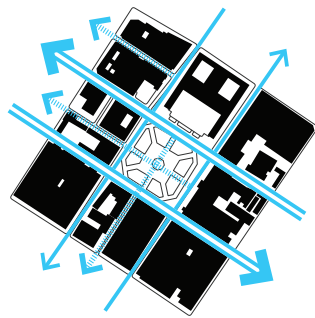
The classical proportions that exist throughout monuments in Europe are translated into the construction of the new colonial plazas.



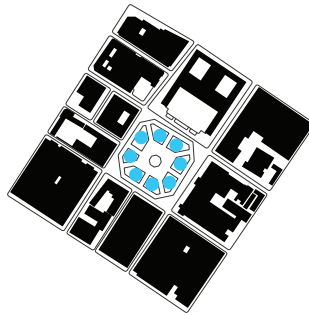
Panteón Nacional, Caracas, Venezuela



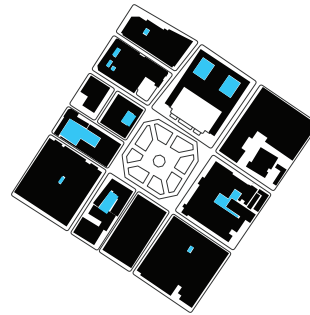
Catedral de Santo Domingo, Santo Domingo, Dominican Republic



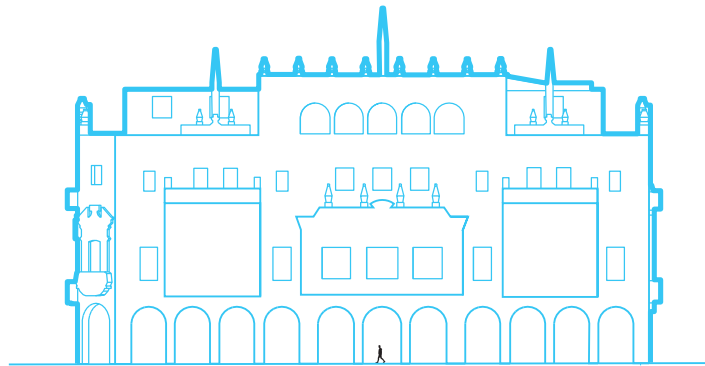
typical circulation



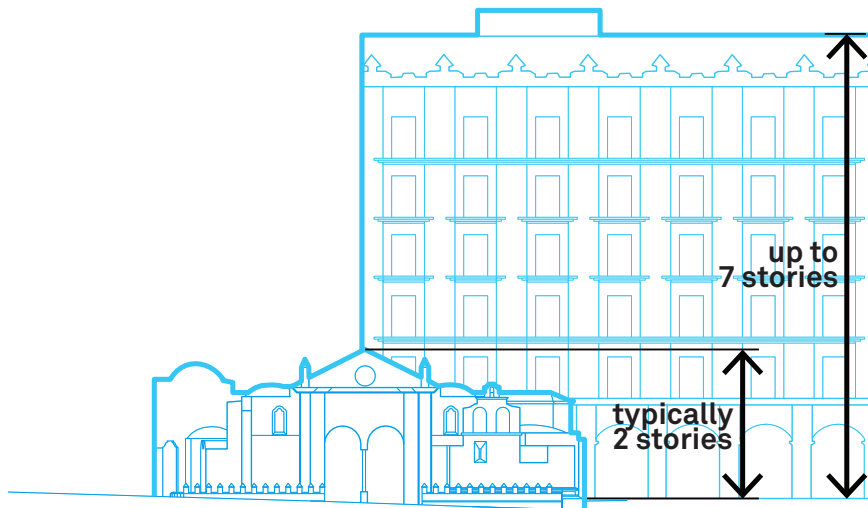
urban park

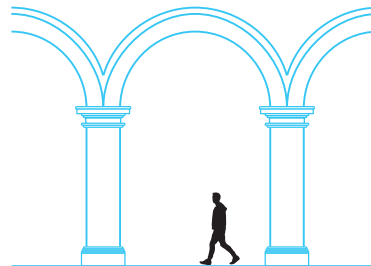
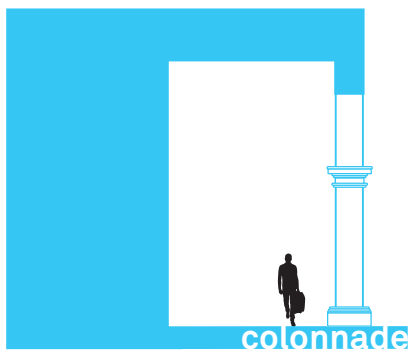
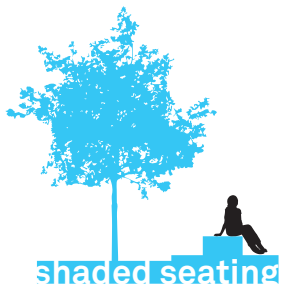
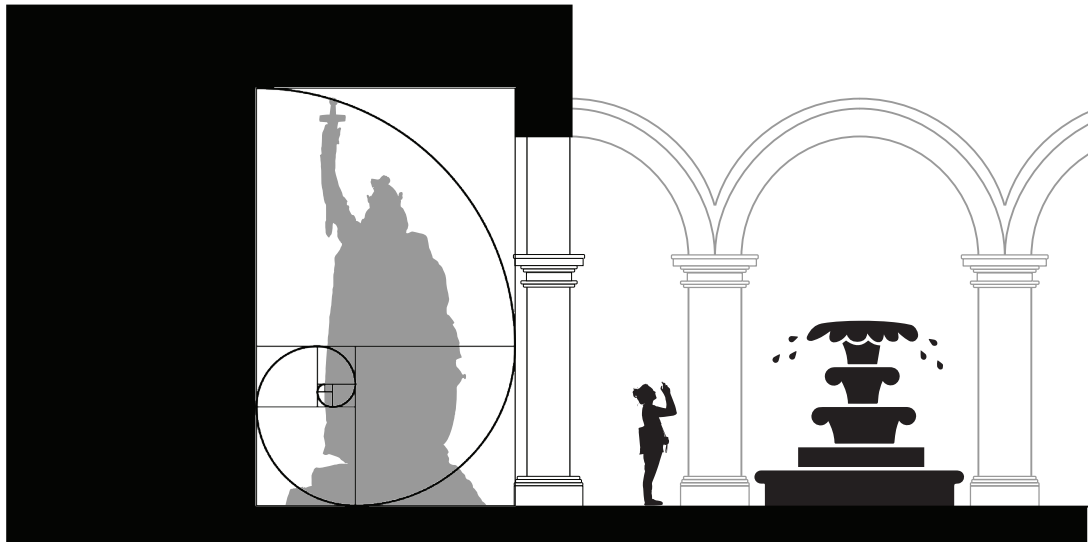


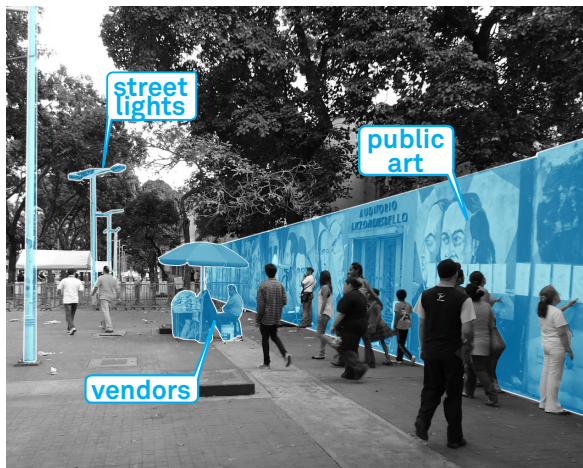
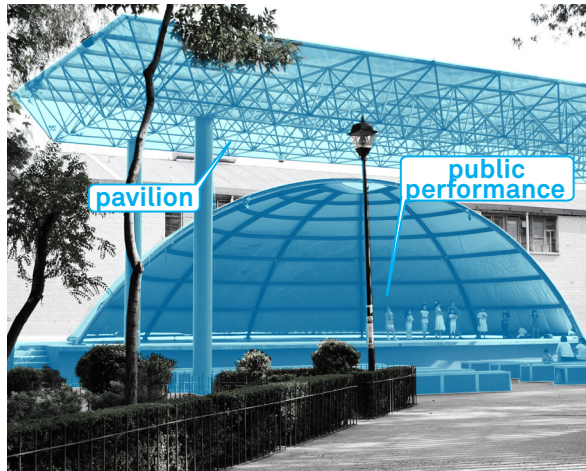
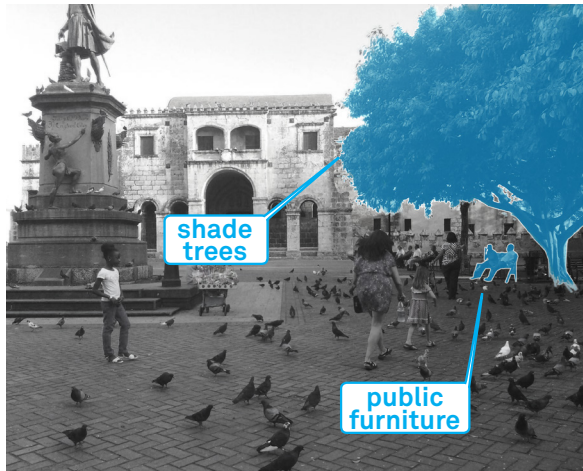
interior courtyards



typical colonial elevations include a colonnade facing the main plaza



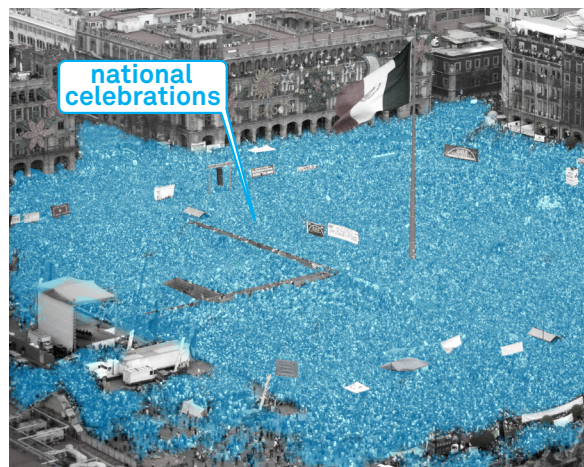








## Functions and Characteristics



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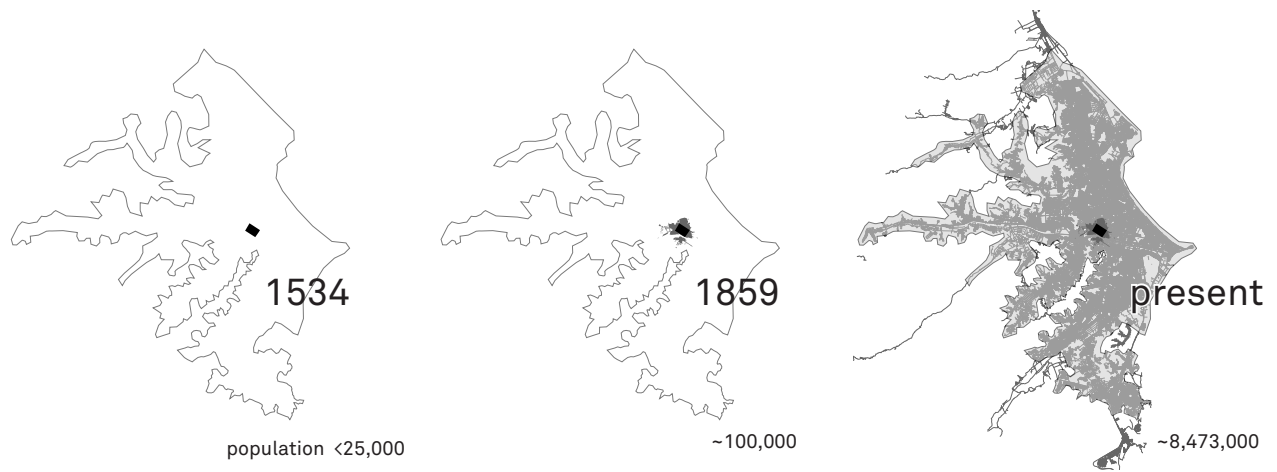
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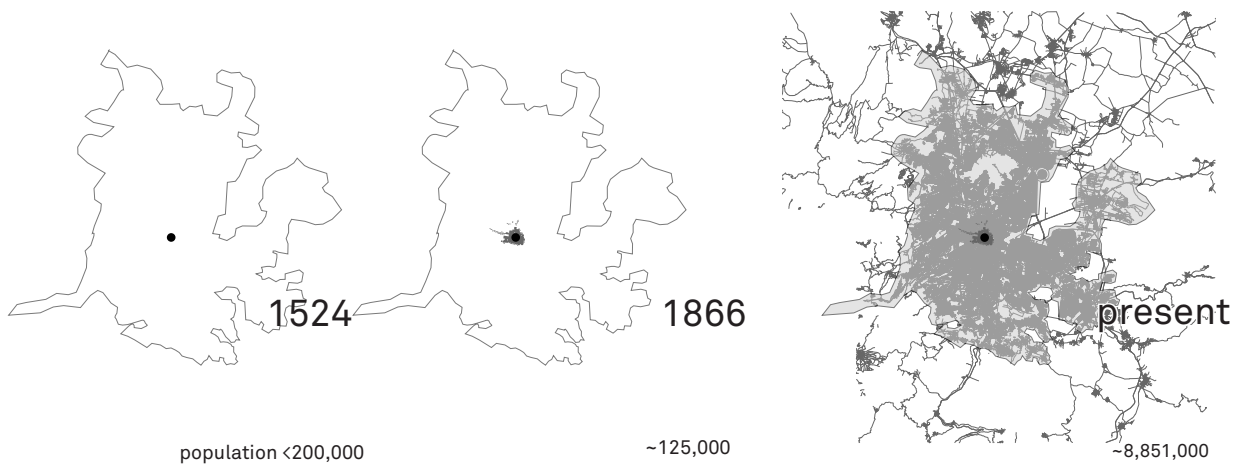


# *Population Growth & Urban Expansion*

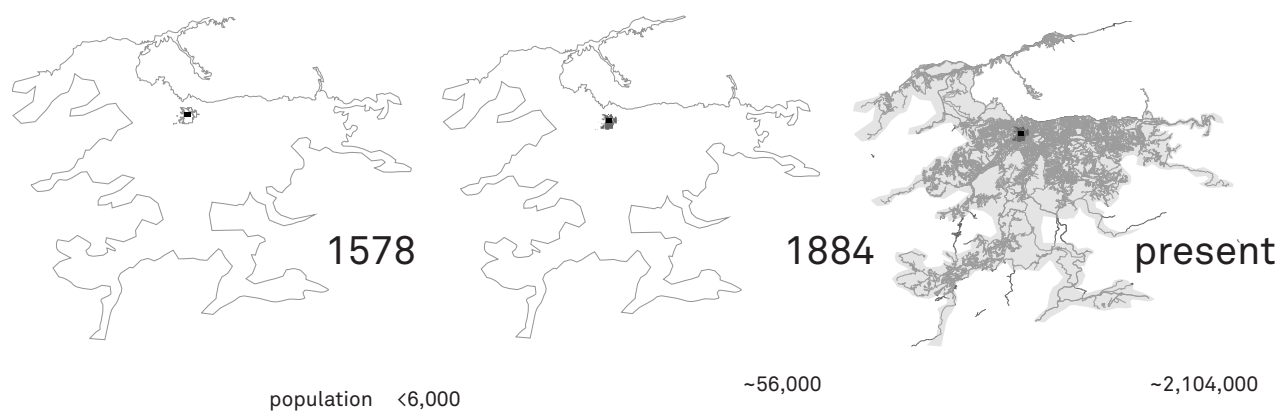




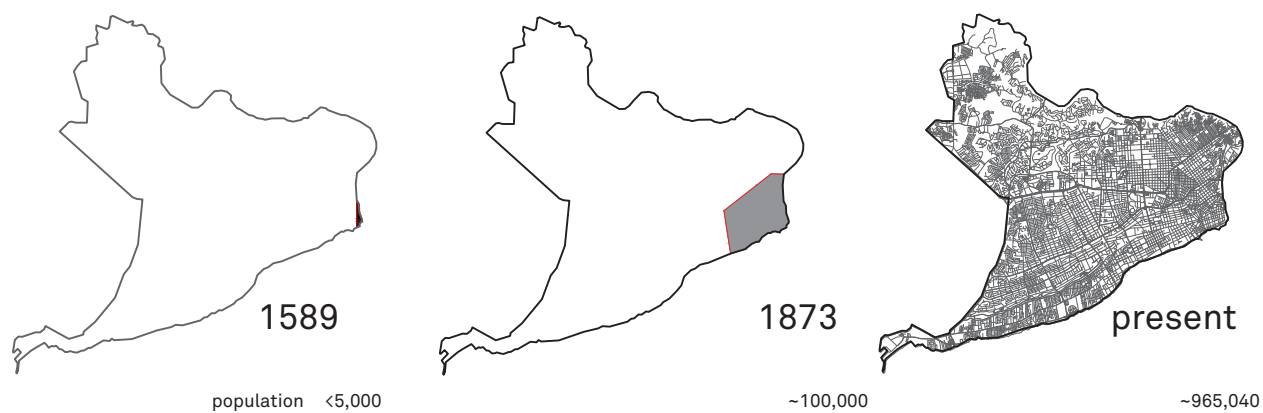
**Lima, Peru, Population Growth 1500s-present**



**Mexico City, Mexico, Population Growth 1500s-present**



### Caracas, Venezuela, Population Growth 1500s-present



### Santo Domingo, Dominican Republic, Population Growth 1500s-present





*Aerial of Santo Domingo*

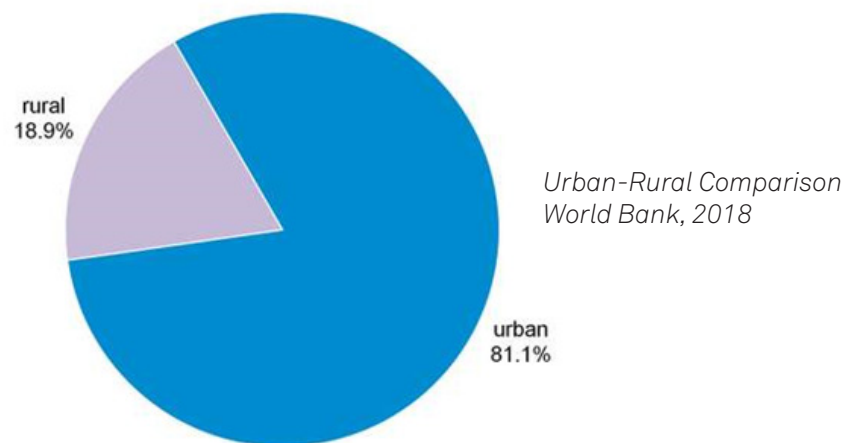




The Dominican Republic developed on the eastern two-thirds of the island of Hispaniola, with Haiti on the remainder of the island, formerly known as Santo Domingo. In pre-Colombian times the island was inhabited by Tainos natives, an Arawak-speaking people. The island was occupied by the Taíno natives, an Arawakan people, who variously called their island Ayiti, Bohio, or Quisqueya (Kiskeya). The Taíno people referred to the island Quisqueya (mother of all lands) and Ayiti (land of high mountains). When Columbus arrived, the island's territory was split between five ruling communities: Marién, Maguá, Maguana, Jaragua, and Higüey. These were each governed respectively by caciques Guacanagarix, Guarionex, Caonabo, Bohechío, and Cayacoa.

In 1492 C. Columbus discovered the island and claimed it immediately for the Spanish. The Spanish Crown organized the first Spanish colony in the Western hemisphere in Santo Domingo. The Treaty of Ryswick gave the western part of Hispaniola to France and the eastern part (present-day Dominican Republic) to Spain. Columbus named it “The Spanish Island “ or “La Hispaniola” and subsequently made his son Diego its governor. Dominican’s fondly refer to the Island as Quisqueya, and Ayiti was translated into Haiti in the French/Creole phonetic translation.

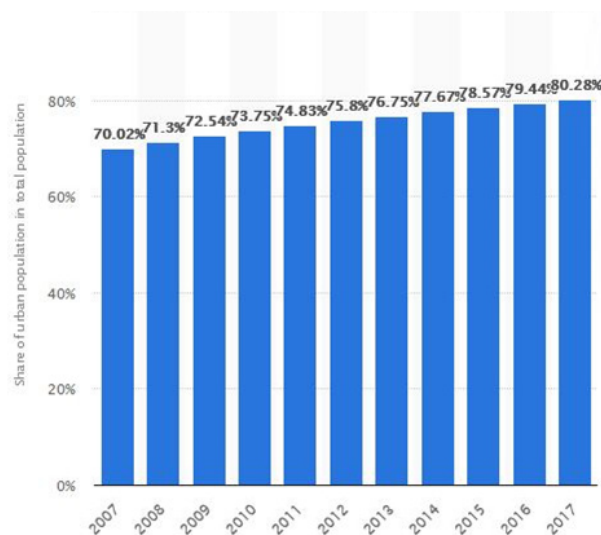
**Dominican Republic urban-rural (2018)**



With the conquest of the American mainland with the particular gold-filled conquests of Mexico and Peru, Hispaniola quickly declined. Most Spanish colonists left for the silver mines of Mexico and Peru, while new immigrants from Spain bypassed the island with a lack of hype in riches.

Agriculture was not profitable, there were no slave imports for work, and everyone lived in poverty. That is to say that free blacks, slaves, and white colonists alike lived in poverty, forever weakening the European racial hierarchy and aiding intermixing, resulting in a population of predominantly mixed Spaniard, African, and Taíno descent. The city of Santo Domingo, managed to maintain some exCrown with the Crown and its allies, other Dominican maritime ports relied on contraband for trade, which, was second to livestock as they were the only sources of commerce and business for the Dominicans.

Tragedy struck in 1586 at the hands of Sir Francis Drake, who captured the city of Santo Domingo in the act of piracy. Drake collected a ransom frCrowne Spanish Crown to keep it as a colony. Drake and his pirates destroyed a third of the city, which lay in ruins. This was deliberate as most all of the cities infrastructure in terms of civic, military and religious structures had been damaged or destroyed. There was a famous story about Drakes ruthless ways and negotiating skills. During Drakes occupation of Santo Domingo, he sent a young boy, who was black, with a message to the Crowns governor. A Spanish nobleman who was standing by considered this an insult and ran the boy through with his sword. Drake was infuriated and proceeded to where the murder had happened and hung two friars. He gave a stern message to the governor that he would hang two more friars every day until the murderer had been executed. Later on, the murderers own countrymen hanged the murderer.



As a brief history of administration, The Spanish Captaincy General of Santo Domingo was established in 1493 and lasted until 1821. It would become the Dominican Republic; except for a time, it became a French colony from 1795 to 1809. Migrants from the Canary Islands settled in Hispanola By the middle of the eighteenth century on the northern part of the colony and sustained itself by planting tobacco in the Cibao Valley, and importation of slaves was renewed. At this time, the population of Santo Domingo grew from close to 6,000 in 1737 to nearly 125,000; this would be in the days surrounding 1790. The class and racial makeup was broken down into 40,000 white landowners, 25,000 mulatto freedmen, around 60,000 slaves. While this seemed like a mix that had a typical colonial hierarchy in terms of wealth and race, the colony remained poor, which had residual effects. The colony languished in poverty and neglected for the most part. Meanwhile, its French neighbor Saint-Domingue became the wealthiest colony in the New World and had half a million inhabitants. The French unified the Hispaniola island with Haiti from 1822 until 1844. Dominican independence happened in 1844, and it was proclaimed a republic, known as Santo Domingo. After this came a short Spanish occupation from 1861 to 1865 and occupation by the United States from 1916 to 1924.

*Slums in  
Santo Domingo.  
(Wikipedia)*



Today the Dominican Republic has been politically stable and while its past was heavily concentrated on an agrarian economy by 1800 with 86.5% of its inhabitants depending on a rural lifestyle with only 19% urban. Today the island nation has a 19.35% rural population (% of total population) whilst the urban population (% of total population) in the Dominican Republic was 81.07% as of 2018.

With a threshold of over 80%, which is the highest value in over the past 58 years, there are certain ramifications for migration to cities and the urbanist solution required to house the population in shift. If you could put this statistic into context, the urban population was 30% in 1960 just 60 years ago. There has been a popular shift to urbanization in the Dominican Republic, especially in Santo Domingo. The causes are common as they are around the world.

The Dominican Republic was overwhelmingly rural for the first 450 years of its existence; 80 percent of its population lived in the countryside in 1920, 75 percent still did by 1950. The enormous amount of rural to urban began in the mid-1950s, it gained significant momentum in the 1960s and 1970s as agricultural workers sought jobs in the larger cities. Expansion was on the move as the shift to urban growth rates were higher than the birth rate. The urban population expanded at 6.1 percent annually during the 1950s, 5.7 percent annually during the 1960s-70s, and 4.7 percent annually through the mid-1980s.

By the early twentieth-century provincial capitals and smaller cities dominated the country. The fact that the smaller towns were growing was a sign of what was to come. All city dwellers accounted for 80 percent of the population lived in cities with fewer than 20,000 inhabitants in 1920. Santo Domingo had only a bit more than 30,000 residents, which accounted for only 20 percent of all people in the Dominican Republic's cities. Later on, by 1981, the capital Santo Domingo accounted for nearly half of all city dwellers. Santo Domingo rose to more than double the total population of all smaller cities that had more than 20,000 people living in them. The trend was clear with towns with less than 20,000 inhabitants had nearly 80 percent of the population in 1920 with regards to the urban population. This trend constituted a shift to less than 20 percent of inhabitants of the total population in small cities versus Santo Domingo by 1981.

Santo Domingo grew exponentially by doubling its population every decade between the long stretch between 1920 and 1970. The real expansion actually happened in the 1950's as the shifts in rural migration to urban areas grew into larger percentages. The growth in industry and urban construction, along with Trujillo's expropriations of rural land, fueled the 'urban megacity' concept.

Santiago de los Caballeros (Santiago), the country's second largest city and La Romana, the third-largest city, also exploded in population from the 1960s and the 1970s. Santiago, the center of traditional Hispanic culture, got its urban migrants from the densely inhabited Cibao farmlands. La Romana, on the other side of the island, had the sugar industry which drew workers. There was a ripple growth effect with tourism that grew as Gulf and Western began to develop the vast sugar planted lands into tourist resorts, thereby providing a new industry which further grew the need for rural economic migrants. In La Romana, a third industry, which would later become one of the country's most significant industries, was the birthplace of the Dominican Republic's first industrial free zone factories.

Population growth due to rural migration tested cities' capacities to provide housing and amenities in many ways. Nevertheless, in 1981 nearly 80 percent of city dwellings had access to potable water; 90 percent had some type of sewage disposal, and roughly 90 percent had electricity. The proportion of homes with piped or secure access to clean water, however, actually declined by nearly ten percentage points in the 1970s. By the mid-1980s, there was an estimated housing deficit of some 400,000 units. The need was most significant in the National District. Squatter settlements grew in response to the scarcity of low-cost urban housing. In the Capital, Santo Domingo, the illegal settlements were concentrated and proliferated around the banks of the "Rio Ozama". The Ozama river, and its prominent river banks, is situated at one of the main entries to the city. The auto constructed urban squatters' homes have caused condemnation on the one hand, but many also see the growth of this informal housing as an urban development that has gotten out of the government's control.

In contrast, rural zones around the globe tend to have agriculture as their main source of employment, some disruptive factors that would cause economic migration to move to an urban area include drought and famine, conflicts and disputes, the decline in subsistence farming as a result of the development of commercial agriculture, poverty, lack of proper amenities and services.

Beginning in the late 1950s, Trujillo began constructing housing for middle-class government employees. From the 1950s to the mid-1980s, many agencies were involved in massing housing construction.



These agencies include The Technical Secretariat of the Presidency (Secretaria Técnica de la Presidencia), which produced many projects in central Santo Domingo. The main financier of these housing projects were The Aid and Housing Institute and the National Housing Institute. Decentralization in planning had hampered efforts combined with extremely concentrated decision-making.

While these public works were intended for the poor, those who received the benefits were not from the lowest income level in the country. The public housing projects were solely intended for those making the lowest minimum wage, which put their income above those of many of the most extremely poverty-stricken in the country.

The economy of the Dominican Republic has experienced one of the fastest growth rates in Latin America over the past few decades. With a booming urban infrastructure and steady industrial growth and development, the country has become the largest economy in the Caribbean. However, foreign policy measures, such as tariffs reduction and trade agreements with the United States, have led to an overwhelming urban growth that has resulted in a drastic reduction of the rural population. These developments not only threaten to increase rural desertification rates in the future, but have also led to the emergence of overcrowded urban neighborhoods that could result in the continuing marginalization and downward mobility of poor city residents. As a result, the lack of farm profitability forces agricultural workers to move to urban spaces in search of opportunities.

After significant political and social turmoil between 1930 and 1970, the Dominican Republic began a process of economic growth based on a close relationship with the United States. Having occupied the country twice (1915 and 1965,) the United States began influencing Dominican politics in the 1980's with the purpose of opening up trade and foreign exchange for their advantage. However, the economic benefits of the forthcoming trade regulations and agreements have left a significant void on social mobility and overall social welfare. In fact, in spite of "one of the highest growth rates in Latin America and the Caribbean, the Dominican Republic has been suffering a sustained labor crisis for over three decades"

In 1980, President Joaquín Balaguer began adopting new regulations to create an attractive investment environment for foreign companies. From duty-free access to wage freeze initiatives, these new policies were designed to build a new type of economic landscape that was primarily based on the “exchange of foreign investment and cheap Dominican labor”. In fact, during this time, “wage levels sunk to the lowest levels in the Caribbean without much change ever since”.

In addition to new trade regulations and lower tariff states that the United States influence in the country helped foment further policy changes that would seem unlikely today. For instance, in 1978, the United States successfully pushed the Dominican Republic and Haiti to eliminate most of the pigs on the island for fear of the spread of the Asian Swine Flu (ASF.) Nevertheless, this particular policy proved fatal for many Campesinos. The reality was that “the pig eradication program was disastrous for the area, as it dealt a devastating blow to small pig farmers. It definitely contributed to out-migration from the region since a large number of Baniqueros who started to make their way to Santiago in the 1980s, “seeking jobs in the trade zone”

Furthermore, considering other population control policies implemented at the time, one could speculate that the pig eradication program was part of a larger scheme intended to center a large portion of the population on new urban industrial areas for the benefit of the new industrial investments made by foreign actors. For instance, during this time, President Balaguer and US allies implemented emigration policies to curtail left-leaning groups from rising in the country. One way of obtaining that goal was by sending them out of the country. Therefore, many political dissidents were granted visas by the American consulate in the country, and were directly dispatched to the United States. In fact, while in 1959, 19,631 people applied for a passport and only 1,805 got one, in 1969, every petition out of the 63,595 that applied received approval,” which then led to an increase in visa approvals and overall emigration from the country (Hernández 94.) Considering this, some argue that the real purpose of these regulations, as well as the pig eradication program, was to create a population movement that would pave the way for a reduction of educated professionals, which would, in turn, leave room for a relocation of the many Campesinos abandoning the rural areas as a consequence of these two parallel events.

On the other hand, given the low costs of tariffs and trade incentives that foreign products benefited from, farmers and agricultural workers in rural areas could no longer compete with low priced imported goods. In fact, “researches and policymakers alike believe that while urban populations might benefit from lower prices of imported goods, rural residents suffer depression of profits and wages in the long run,” contributing to a significant reduction of local agricultural outputs and profits. For instance, in the four years following the implementation of the CAFTA agreement between the Dominican Republic and the United States in 2007, there was a 21% wage decrease in paid agricultural work in the country

Similarly, a CAFTA risk assessment study before its implementation concluded that the agreement would be devastating to farmers, especially in the southern areas of the country, where rice and grains were the primary crop produced.



Slums In Santo Domingo

The authors of the study claimed that a free trade agreement between an underdeveloped country like the Dominican Republic and a powerful country like the “United States” could increase the number of farmers displaced by grain and agricultural dumping from the U.S.” given the differences in magnitude and trade agreement implementation development. Also, there is evidence concluding that the United States has dumped farm commodities on international markets, in violation of World Trade Organization agriculture rules, hurting farmers over the world, and there was no evidence suggesting this trend would stop. As a result, the lack of farm profitability forces agricultural workers to move to urban spaces in search of opportunities.

Given these points, it is evident how rural abandonment has led to a transformation of the rural landscape in the Dominican Republic. Recent studies show that the total rural population in the country is at an all-time low, with no signs of slowing down. To illustrate, it is worth comparing three different points of statistical reference across a variety of social, historical, and political landscapes:

- 1950, rural population 76.2%: during Trujillo’s dictatorship. Beginning of industrial development in conjunction with the first few American companies
- 1991, rural population 39.3%: social upheaval after over 12 years of dictatorship under Joaquín Balaguer[6] and economic crisis due to internal corruption and oil crisis of 1990
- 2012, rural population 20%: democratic government and economic instability after the 2008 crisis

As shown above, the social and political landscapes have been, for the most part, very similar across the different statistical points of reference. Even though the country has suffered significant transformations, especially in the political sphere, it has not necessarily gone through any major event or catastrophe that might explain the drastic changes in the rural population rate. As a consequence, it is arguable that these trends could be a result of the trade regulations that have taken place in the country, especially after 1960.

It is equally important to understand the implications of lower tariffs and trade agreements beyond the agricultural setting. The critical point here is to have an idea of what happens to rural-urban migrants once they settle in and around urban areas.

According to the evidence presented in this study, there is a significant correlation between the reduction of agricultural production and the growing free trade zone industry in urban areas. Therefore, understanding how these two trends are inter-connected is vital for any assessment of trade risks in the country. Furthermore, a clear assessment of these two social phenomena could lead to a better understanding of possible upward mobility limitations, as well as the scope of freedom of movement around the country.

Unfortunately, the rural-urban movements of peoples and growing industrial development have not generated significant social wellbeing and economic prosperity for the majority. For the most part, wages and individual upward mobility are stagnant among free trade zones workers, especially women. So we can argue that, in the Dominican Republic, the free trade zones are recognized for having among the poorest of conditions. Furthermore, experts conclude that “free trade zone employment alone does not supply women with significant economic gains,” leading to additional limitations to their freedom of movement and upward mobility. From wage discrimination to sexual harassment in the workplace, women working in free trade zones or “zonas francas” do not have an adequate labor platform to advocate for changes to their working conditions

As illustrated above, living in a slum environment is prone to future health and financial hardship, safe urban development, and social wellbeing. These rural migrant workers are not only cutting ties with a rich cultural rural culture and familial bonds, but they are also presented with incredibly limiting options for upward mobility, healthy lives, and future stability for them and their children in these new urban settings.

Additionally, the lack of urban development and investment in social welfare has led to the overcrowding of the areas where the majority of the migrants live. The living conditions of the barrios surrounding “zonas francas” are among the worst among the urban areas of the country. These new urban makeshift neighborhoods are not only overcrowded but do not count on the necessary safety regulations and services adequate for healthy and prosperous living environments. For instance, there is a significant lack of water pipes which affects peoples ability to maintain proper hygiene. In a similar way, lack of electrical circuits can sometimes affect educational and commercial activities, leading to a decrease in the overall production of these areas.



The lack of garbage collection in these areas contributes to the spread of diseases and overall unsanitary conditions that would be considered scandalous in developed countries. The majority of rural-urban migrants living in makeshift city barrios lack the proper conditions to develop successful upward mobility in compensation for their movement. Furthermore, studies show that many of the workers in free trade zone factories have little to no agency to prevent further exploitation. In fact, a recent study conducted to assess upward mobility limitations determined that the majority of households “headed by industrial workers expect less health coverage, higher rates of hospitalization and illness, and less “usage of preventive medicine,” as a consequence of the working and living constraints they face in cities.

It is also worth assessing how tariffs reduction and trade agreements have benefited the country overall. While national statistics show drastic economic growth during the past few decades, some argue that the country is actually in a worst economic position than thirty years ago. A study suggests that “even though these trade agreements and tariffs reduction stimulated trade, investment and growth in the Dominican Republic, the growth rate was not large enough to transform the economy and dramatically reduce “poverty rates,” concluding that the negative consequences of these regulations could outweigh their positive results. In other words, the study argues that despite reported economic growth over the past few decades by typical financial reference points, there are more people in poverty today than there were three decades ago.

Rural abandonment and urban overcrowding are two parallel phenomena dependent on each other. Trade deals and low tariffs have led to unprecedented levels of both rural desertification and urban marginalization of former rural residents that predicts to be unsustainable in the absence of proper urban and rural planning.

Unemployment rates have remained stagnant after the CAFTA trade deal, leading to the conclusion that economic growth statistics do not properly assess overall upward mobility for the majority of the population.

On the other hand, lack of urban planning and appropriate distribution of resources to account for the relocation of rural agricultural workers have led to damaging levels of overpopulation and poor working conditions in urban settings. Barrios, especially the ones surrounding zonas francas, lack most of the essential services and entities that could guarantee free movement and prosperity for the current and future generations of former agricultural workers.

Barrios, especially the ones surrounding zonas francas, lack most of the essential services and entities that could guarantee free movement and prosperity for the current and future generations of former agricultural workers. Similarly, the neglectful enforcement of work safety regulations as a consequence of the desire to continue to attract foreign investment has resulted in terrible working conditions, especially for the women who work in new industrial factories.

Similarly, it is also important to assess how these new rural-urban migration trends could potentially lead to risky rural desertification levels. On the one hand, rural deserts could be seen as an opportunity for multinational corporations to exploit natural resources without significant consequences. Given the lack of government enforcement of laws and regulations concerning particular industries, companies could pour into the country in search of monetary gains at the expense of the vulnerability of these areas. In addition, immigration control might become more difficult to enforce, considering the already inadequate administration of border control between Haiti and the Dominican Republic. It is equally important to consider how a lack of rural productivity could reduce overall state productivity, which could lead the country to neglect the obligations established under trade agreements, especially those related to the agricultural field. In other words, the rural population reduction resulting from rural desertification would ruin agrarian productivity, which would, in turn, destroy the country's ability to fulfill its trade contracts.

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# *Eco Border*

*an even distribution of city growth around  
Santo Domingo's borders*



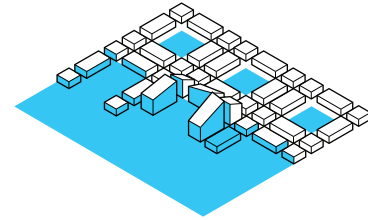




**1** define green band around city



**2** grow in to city



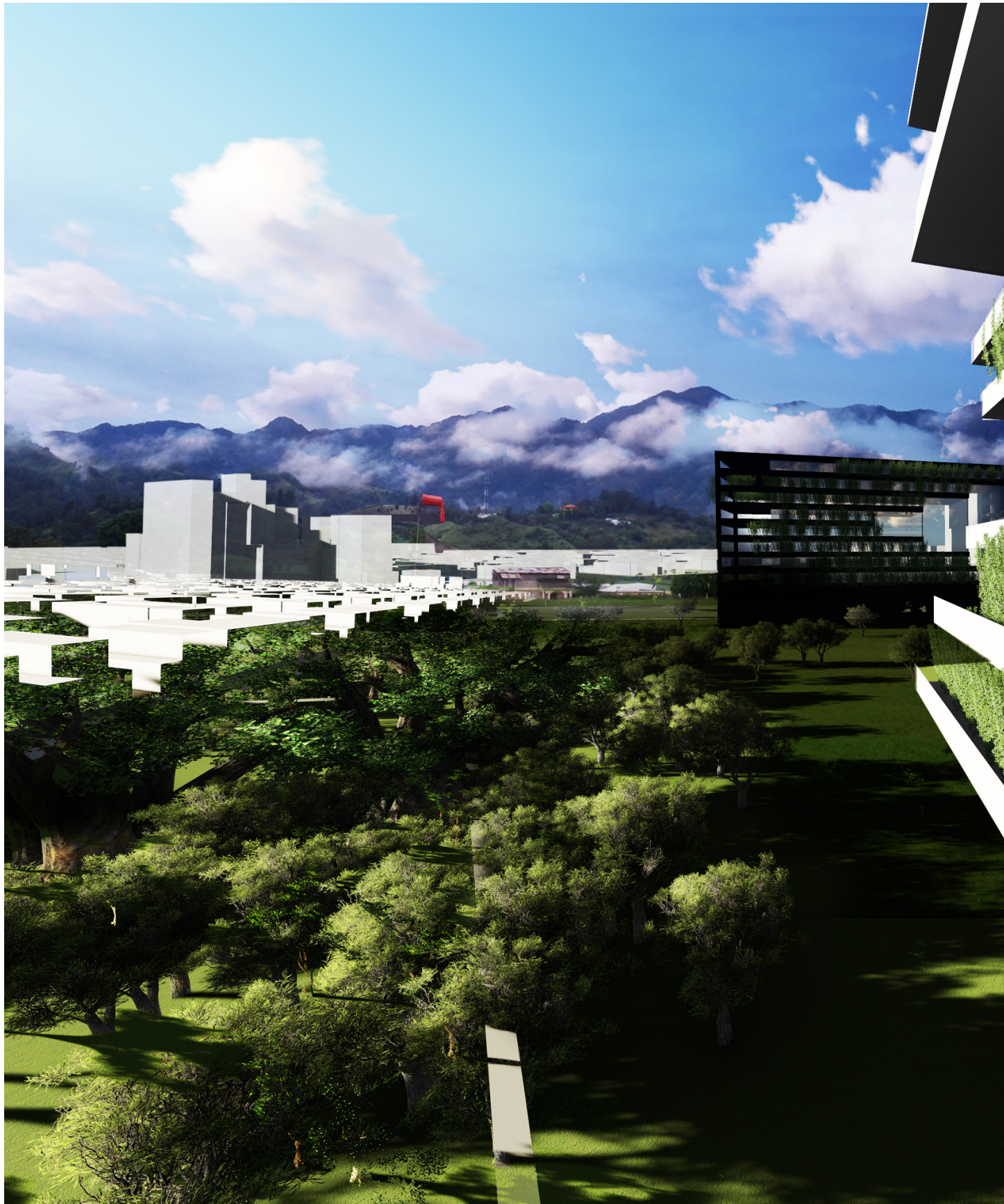
**3** interfering structures become part of greenscape

The Eco Border is an urban plan closely related to the land available at the edges of the city. The peripheral edge of Santo Domingo is abundant in empty property that is currently being used for agricultural purposes. The idea in this scheme was to expand this idea of an ecological border and urban development coexisting in a controlled plan. Much like the Law of Indies, the addition of a planning scheme law, s, would seek controlled growth with expansion in its future.

Santo Domingo has a city plan where

the informal and formal neighborhoods in the city coexist side by side. With this being said, there is an opportunity to weave them together and implement a functional eco-border. This scheme would not include in- situ upgrading for the slums. The current lines for formal and informal parts of the city can be adapted into a viable city plan for all.

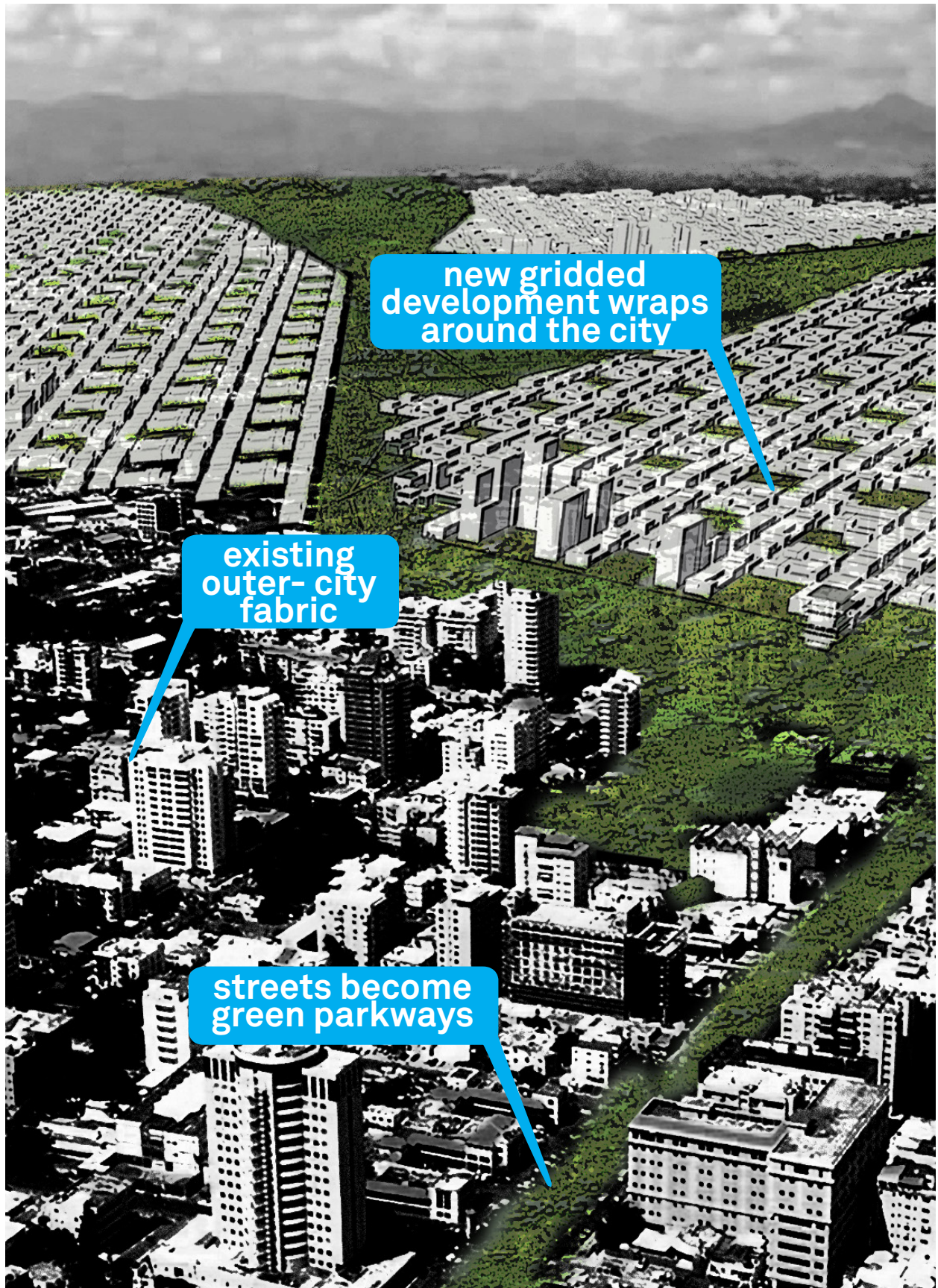


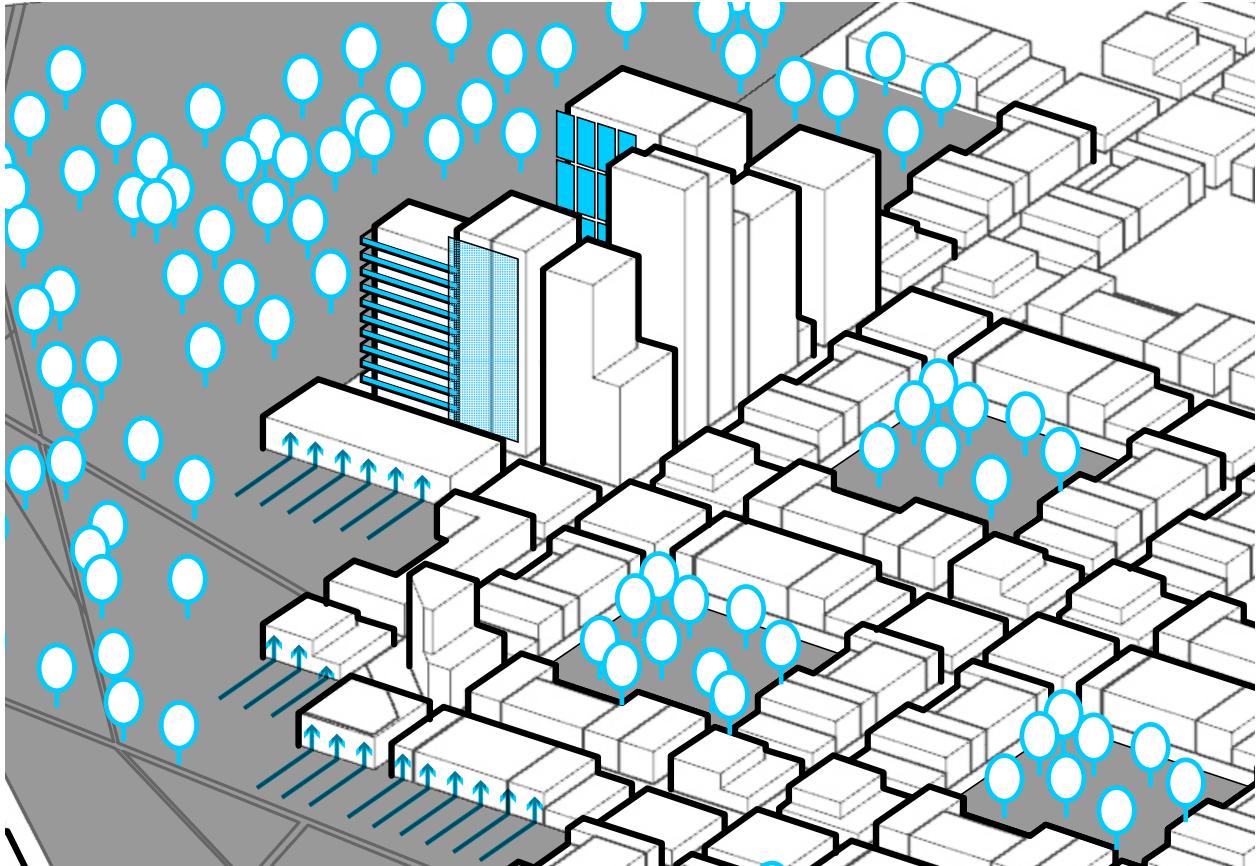






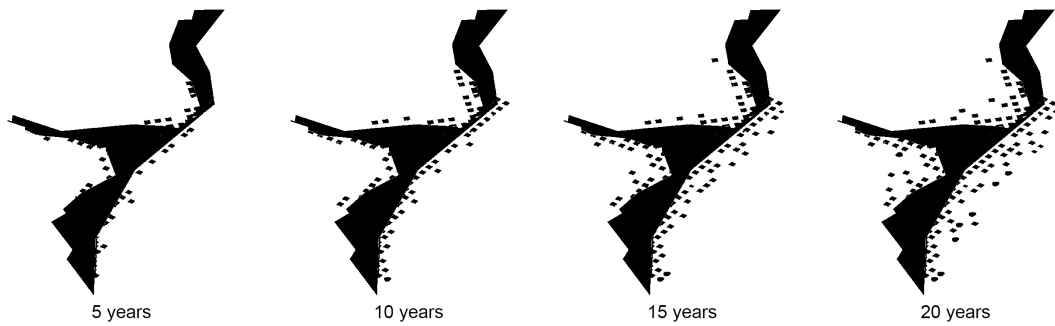






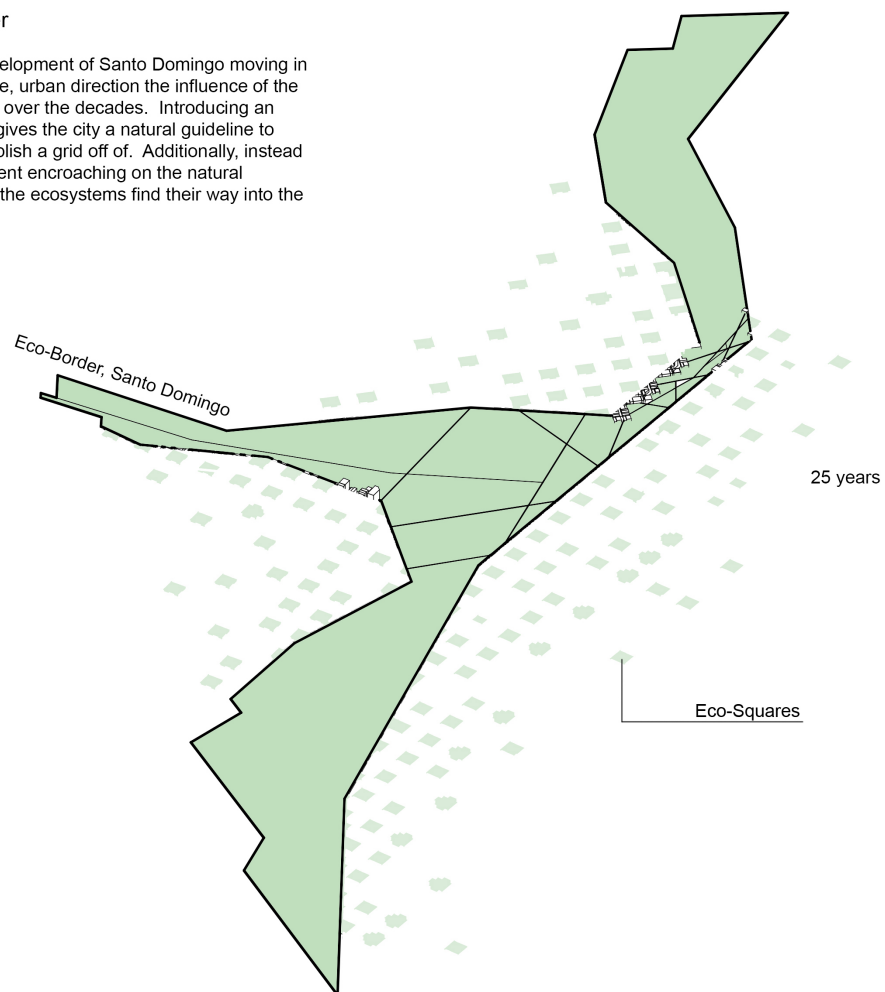
Great care would be taken in studying the needs of the developments, as in the Laws of the Indies, to establish well being and urban harmony amongst those in the environment. The Eco Border would include urban parks and utilize existing urban spaces that pocket the current slum conditions. Infrastructure and urban hygiene would improve with the incorporation of essential services that are not available in the slums today, such as health clinics, schools, and parks. It must be acknowledged that typically mass-produced housing delivered by the state is unsustainable and incapable of responding to the needs of low-income families.





### Eco-Border

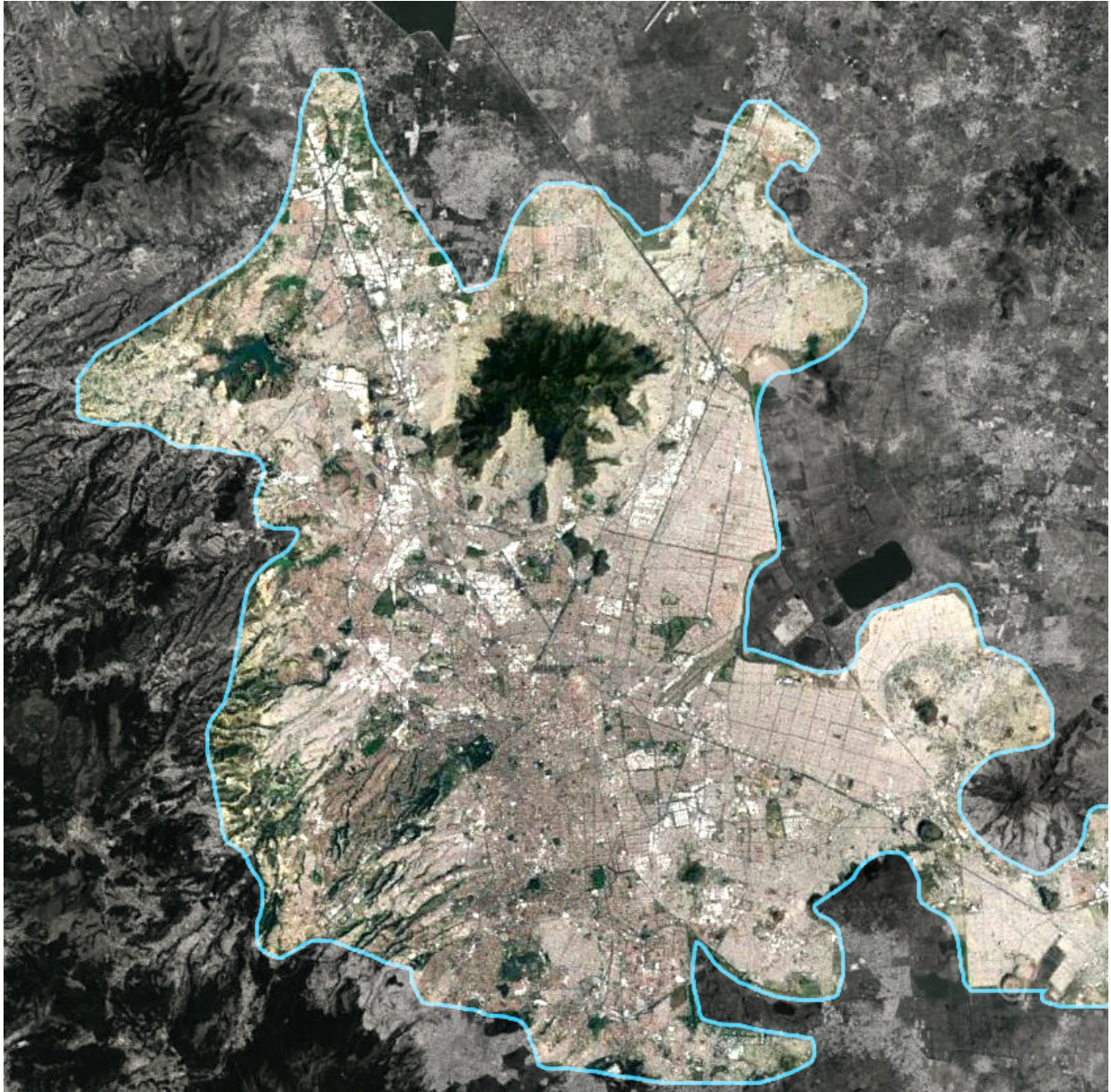
With the development of Santo Domingo moving in a more dense, urban direction the influence of the grid was lost over the decades. Introducing an Eco-Border gives the city a natural guideline to then re-establish a grid off of. Additionally, instead of development encroaching on the natural landscapes, the ecosystems find their way into the city fabric.











*Aerial of Mexico City*

The Mexica people founded the Aztec city of Tenochtitlan in 1325 as an altepetl (city-state) located on mountain island in Lake Texcoco, in the Valley of Mexico. Tenochtitlan was a sophisticated metropolis with large palaces and temples, ceremonial centers, homes of the political elite, religious priests, military servicemen, and capable merchants. The population estimate was at least 100,000 and perhaps as high as 200,000 in 1519 when the Spaniards first saw it. During the last stage of the Spanish conquest of the Aztec civilization, Tenochtitlan was attacked and destroyed. Hernán Cortés understood the moral significance Tenochtitlan had as far as strategic and symbolic importance as the Aztec capital. To completely conquer the metropolis, he built the Spanish capital of Mexico City on the same site. The symbolism to destroy the Aztec moral and culture was so strong that Cortez rebuilt the Aztec ceremonial and political center as the Spanish main city square, the Plaza Mayor, usually called the Zócalo.

The European version of Mexico City was originally founded by the Spanish Crown in 1524 at the same place as the Aztec capital, Mexico-Tenochtitlan. The Spanish were well versed at conquests since Christopher Columbus began to develop the Caribbean islands and what was the coast of Venezuela. By 1524 they had a blueprint in the Laws of the Burgos in 1512, which not only dictated town planning but the “fair” treatment of the natives. Mexico was established, and the town plans were set by 1524. Soon after 1524 the European plaza began to appear as the urban “seed” for colonial development. Mexico grew into one of the most sought after places for colonial rule as the spoils of silver and gold were abundant, as was the use of plenty of local native slave labor. Mexico went through rebellions and its own separation as a colony. After a brief period of monarchy (1821–23), called the First Mexican Empire, there was the founding of the Republic of Mexico, that established a free post colonial federal constitution in 1824. Mexico would no longer be called “New Spain” around 1824 when they received their independence from the Spanish Crown. Mexico City remained the name of the capital, and the name of the United Mexican States was set for the entire country.

## **POPULATION GROWTH AND DENSITY**

Mexico City grew from the outset of its Spanish conquest. It possessed the colony's largest concentration of people of European Spanish heritage that were both European-born peninsulares and colonial American-born criollos. It also had the largest concentration of mixed-race *casta* population in the colony. The Indians, by in large, lived in rural areas outside the city center. After independence in 1821, Mexico City remains the country's largest and most prominent city. After independence, Mexico City suffered a myriad of administrative issues. U.S. forces captured the city during the Mexican–American War followed by violence during its Reform War and followed by a French Intervention as well as its own Mexican Revolution.

By the 20th century, the city's population stood at about 500,000. The 20th and 21st centuries has brought an explosive dynamic in terms of population growth and the problems that have accompanied it. The city's recognizable center deteriorated. Consecutive government's have had problems keeping up with many basic services. One project that has worked was the Mexico City Metro, which has alleviated some systemic transportation issues. Smog is an ongoing health problem as the shanty towns have developed, formed by the poor from the rural areas outside Mexico City, migrating into the connected city. The 1985 Mexico City earthquake, which caused tremendous damage to the city center, efforts have been made to correct some of these problems.

## **MEXICO CITY PROFILE**

Mexico City's population was approximately 8.9 million in 2015, and but the Greater connected City of Mexico has more or less 22 million inhabitants since 2010. The city itself has a population density equal to one of the worlds largest cities, which would be Seoul, Korea. Tokyo has 14,616 people living per square kilometer, as does Mexico City. According to the UN, the Greater connected City of Mexico is sure to reach 23 million dwellers by the year 2030.

Mexico City, unlike Tokyo, has great social and economic inequalities, with many areas of affluence and conspicuous consumption existing juxtaposed directly against areas plagued with polluted water and soil and serious air pollution problems due to the fact that Mexico City sits in a valley with no outlet for clean air. The water pollution causes millions of people diseases per year while the air pollution causes respiratory illnesses being a major issue.

## **MAIN INDUSTRY/BUSINESS**

Mexico City is the financial and economic center of Mexico. The city contributes 17 percent of the national Mexican gross domestic product (GDP). Services or Tertiary sector industries comprise almost 90 percent of the annual GDP, with the city excelling in the commercial and financial sectors. Mexico City houses the Mexican Stock Exchange as well as the headquarters of most of the banks in the country. Other important service areas include media companies, transport (privatized airlines and bus companies), and government activities

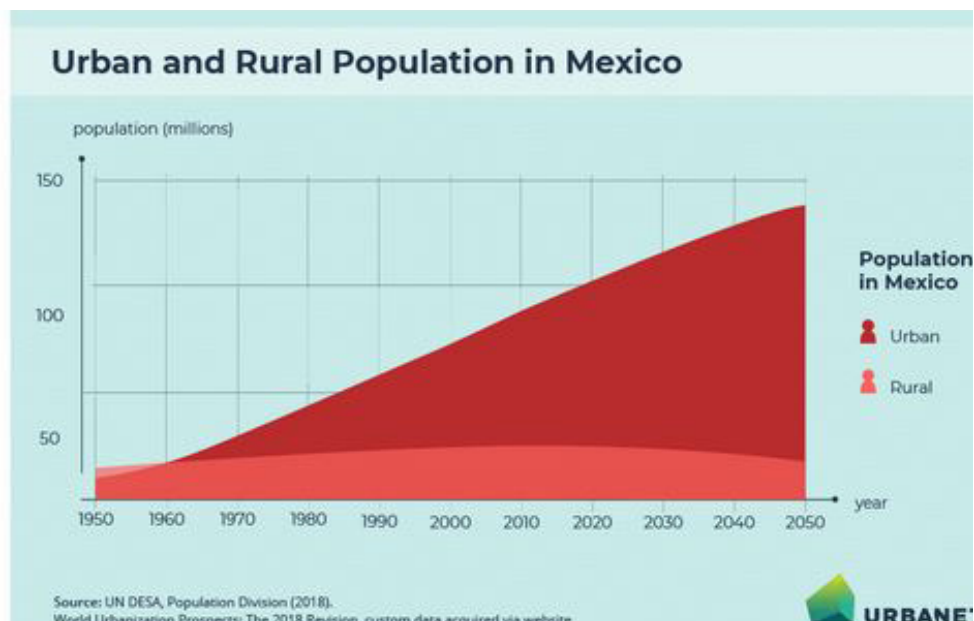
## **GOVERNMENT**

Mexico City's government is divided into 16 boroughs or "delegaciones", administratively. The boroughs are different in structure to municipalities, while they have administrative powers comparable to full-fledged municipalities. For instance, in each borough, the mayors ensure that all of the necessary services and utilities are being provided. But there is a disparity as the less affluent boroughs are inconsistently in lack of clean water, formalized housing, and standard medical services. The head of government, in turn, manages the boroughs also represents its executive branch, and all local councils must approve their budgets.

Today, 55% of the world's population lives in urban areas, a proportion that is expected to increase to 68% by 2050. Air pollution is a constant problem in Mexico City; it causes many health issues for its citizens. Statistics show that air pollution in Mexico City causes at least 35,000 hospitalizations and 1,000 deaths yearly. The fundamental cause of these problems is pollution due to road construction, dust, diesel trucks, and buses.



The Urban Development Plan of the state of Mexico has proposed several programs for controlling urban growth which have proven to be a failure and today. More than ever, Mexico City faces many obstacles for urban growth. The most important consideration to implementing any urban intervention would be to tackle a surmounting issues at hand that hamper urban growth. A strong trend of population growth and expansion of its territory have given rise to pressing issues, such as intense demand for natural resources, inequality and social marginalization, informal settlements, waste generation, degradation of natural resources, and pollution.



Rural population refers to people living in rural areas as defined by national statistical offices between total population and urban population. Aggregation of urban and rural population may vary because of different country coverages.

- Mexico rural population for 2018 was **25,041,300**, a **0.32% decline** from 2017.
- Mexico rural population for 2017 was **25,121,419**, a **0.27% decline** from 2016.
- Mexico rural population for 2016 was **25,188,375**, a **0.22% decline** from 2015.
- Mexico rural population for 2015 was **25,242,938**, a **0.16% decline** from 2014.





*Flooding, Mexico City, New Castle Herald, 2018*

Mexico city faces resilience challenges on environmental, social, and economic issues, given its geographic situation, the history of great social-environmental transformation, and social context. Having once been a lake, the city has become a megacity, one of the most populous on Earth. Rapid urban expansion and soaring population growth in the last few decades have added to problems resulting from insufficient long-term planning and weak metropolitan coordination, making it difficult to monitor and track important regional issues, such as water management, from a long-term sustainability perspective.

Mexico City's government is faced with multiple risks, both natural and man-made, impacts (hydro-meteorological and geological) and tensions (inequity, poverty, climate change) that put the population, the territory and its ecosystems at constant risk.



*Sunday Bike Day, Mexico City (LA Times)*

## URBAN DANGERS AND FUTURE DEVELOPMENT

Over time, Mexico City has experienced a great social and environmental transformation, becoming the center of economic, political, and social-cultural activities in Mexico. A strong trend of population growth and expansion of its territory have given rise to pressing issues, such as intense demand for natural resources, inequality and social marginalization, informal settlements, waste generation, degradation of natural resources, and pollution.

It is also well known that Mexico City is highly vulnerable to earthquakes. The 2017 Central Mexico (Puebla) earthquake struck on September 19, with an estimated magnitude of Mw 7.1 and strong shaking lasting for about 20 seconds. Its epicenter was approximately 55 kilometers south of the city of Puebla. The earthquake caused damage in the Mexican states of Puebla and Morelos and in the Mexico City area, including the collapse of 44 buildings and damage to more than 3,000 buildings in Mexico City alone.

Nearly 400 people were killed, including 228 in Mexico City, and more than 6,000 people were injured. Previously in 1985, also on September 19, an Mw 8.0 earthquake left more than 10,000 people dead, some 30,000 others were injured, an estimated 250,000 people were left homeless, 412 buildings collapsed and more than 3,100 buildings were badly damaged. In the aftermath of the 1985 tragedy, building codes were updated, an early warning system for Mexico City was installed, and building evacuation drills were implemented.

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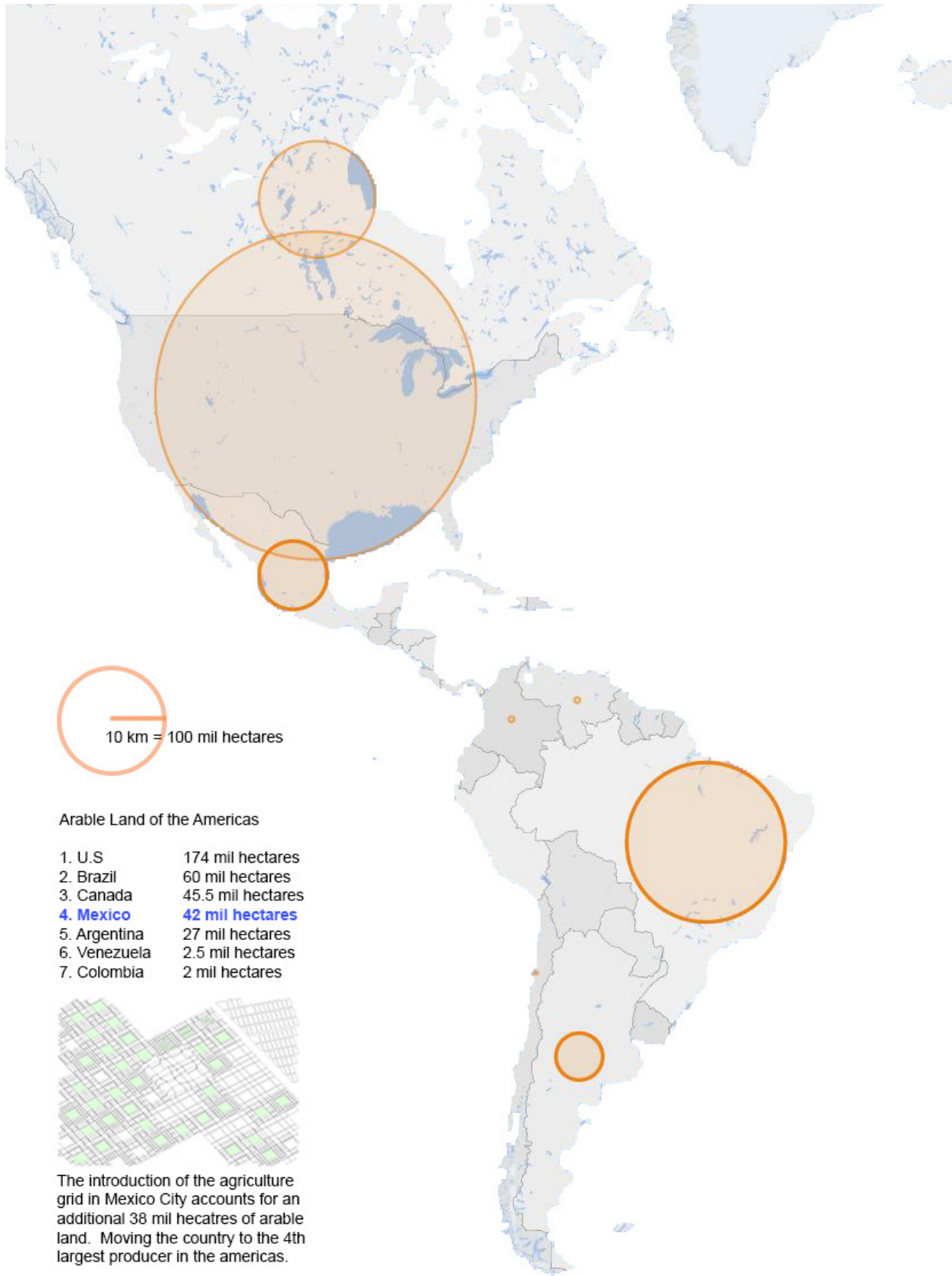
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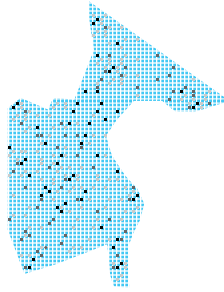
# *THE GREEN PLAZA*

*Housing Implemented Into Physical Voids  
Within the City*

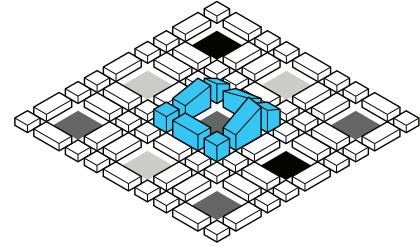




**1** social housing infill



**2** distribute urban farming variety



**3** insert civic nodes

This study aims to integrate the means of a safe, clean development with the use of the plaza as a generator for sustainable growth. Colonial squares are already dotted everywhere in Mexico as a country. The revitalization and implementation of new plazas, can be achieved in Mexico City in ways that can solve the urban sprawl problems and the lack of coordination that Mexico City has today. The agriculture grid is a novel solution that will resolve the slum culture as a new and integral part of Mexico City, further developing equality and bringing the slums closer to a universal standard. The newly adapted city grid may be attached at differing scales and sizes. It may be strategically placed in places where sun and water are or are not available and can act as a framework for future growth following the success of the initial communities constructed. The agricultural grid must be earthquake ready as a low lying building solution. A level typology of city grid was chosen as Mexico City's solution as the City of Mexico does have the flat space and earth resources to start farming communities. The fact that Mexico City has pollution problems and grows faster than any other major Latin American city makes it a prime candidate for the reintegration of green space, comprising half the component of any planned urban project. This urban model will help spread sustainable development, foster urban hygiene, and generate food for a group of people that need it to live sustainably.

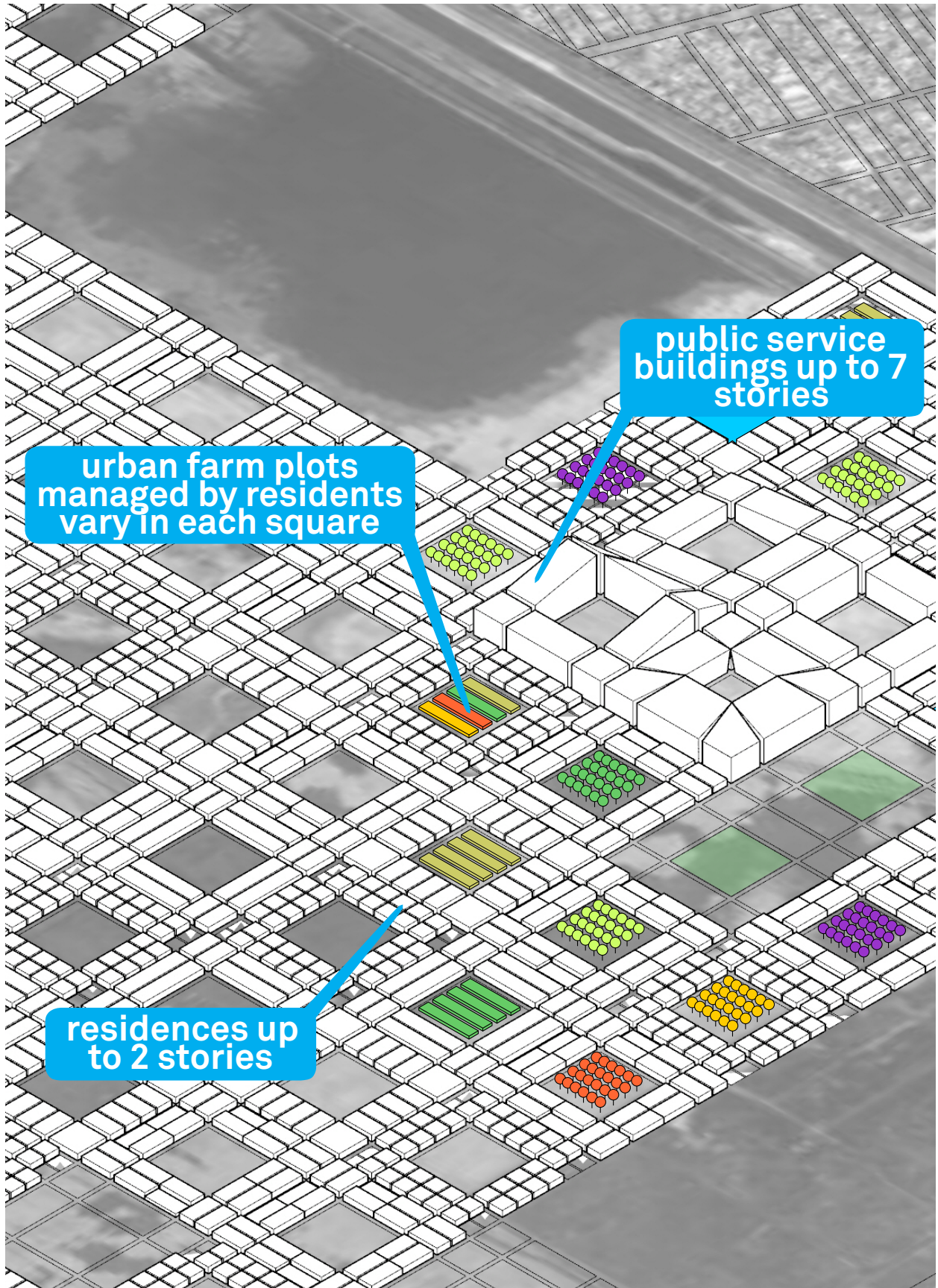


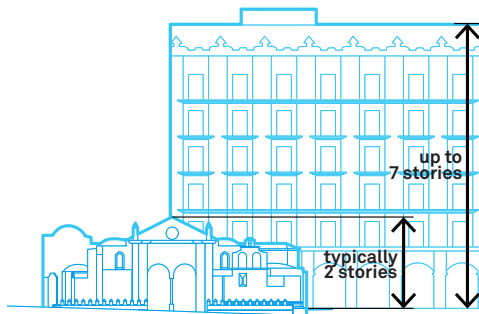
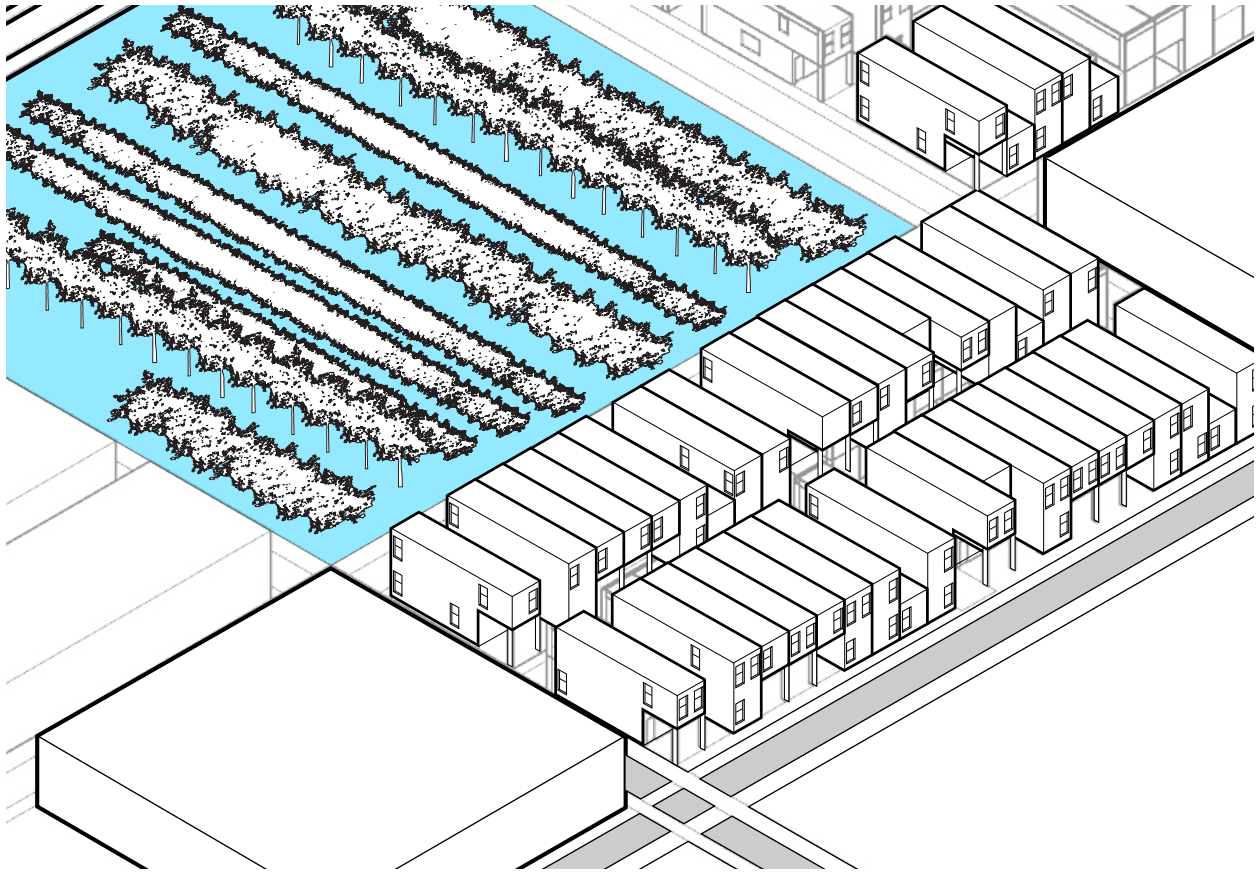












The plaza may yet become a familiar magnet to the people that use it and a great tool to restore the quality of life that all of Mexico City's inhabitants deserve.

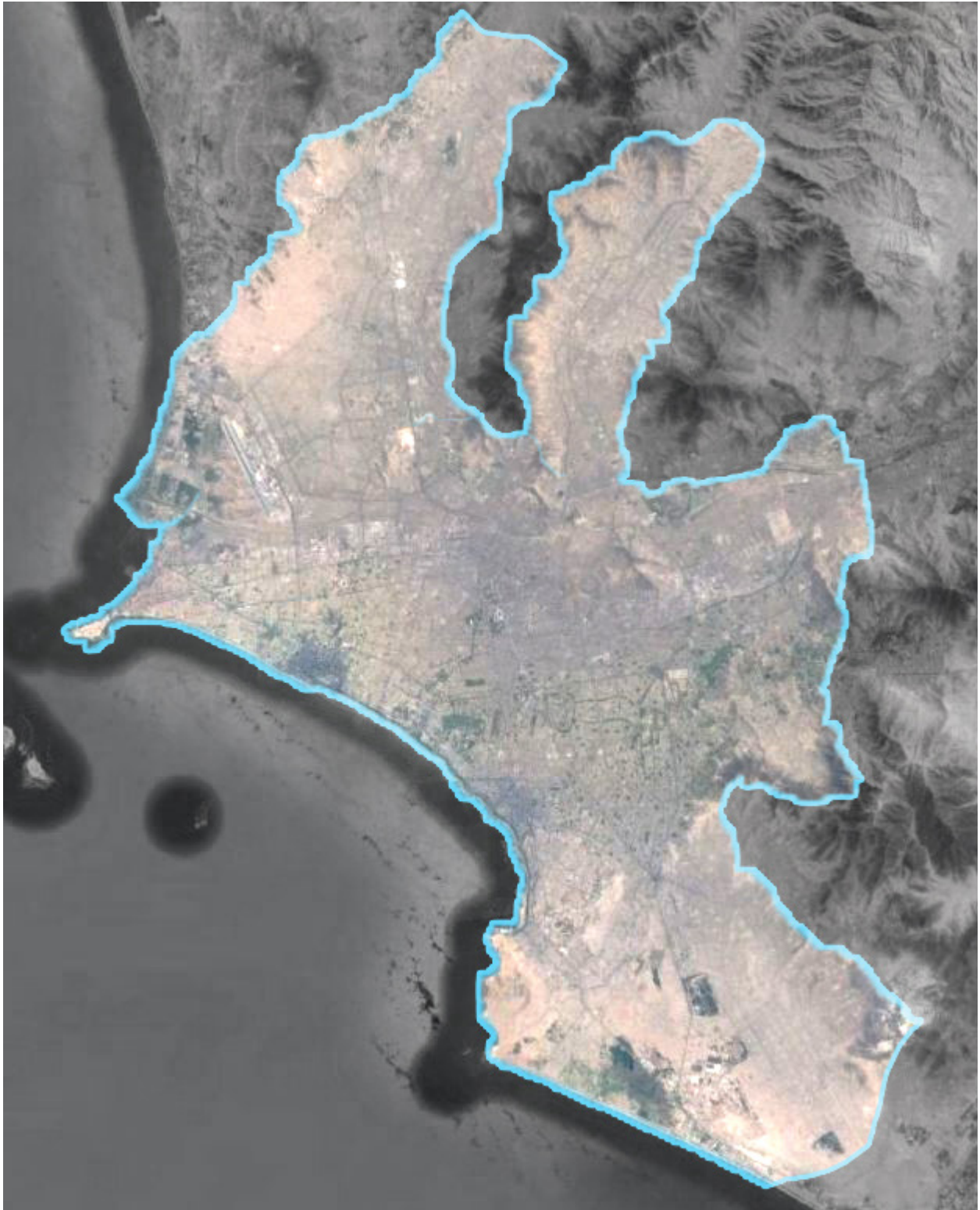








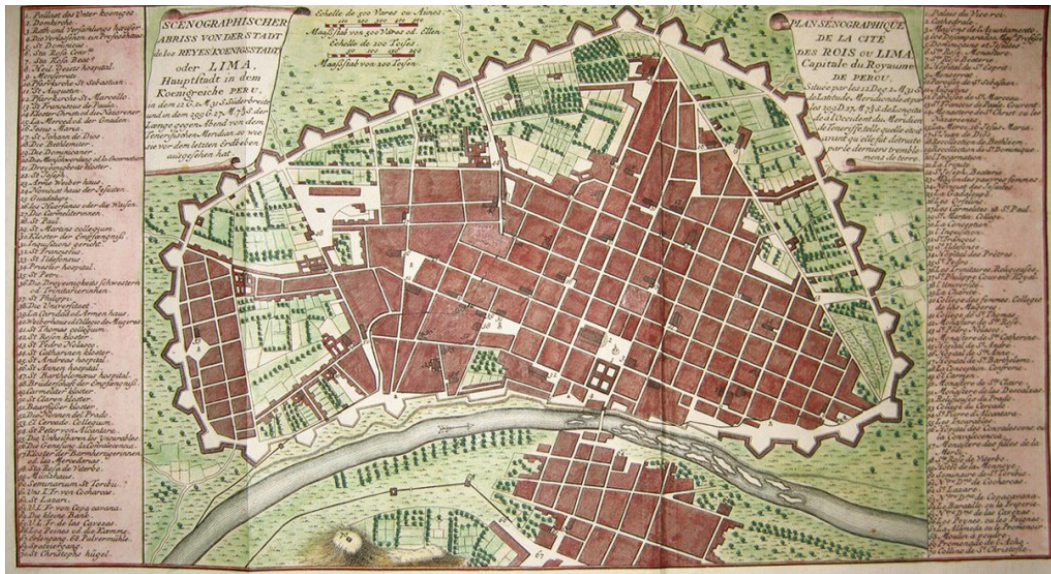




*Aerial of Lima, Peru*

Lima was founded for the Spanish Crown in 1535 by the conquistador Francisco Pizarro. Mr. Pizarro has been credited with toppling the Inca Empire. But a pre-Inca civilization had thrived here for a thousand years before the Spanish arrived, leaving behind many impressive huacas (enormous pyramids and monuments) as well as beautiful ceramics. The Spanish conquistador Pizarro, colonized Peru in order to gain power and westernize the territory, changing the dynamics of the land completely. Lima, The city capital of Peru, was called Ciudad de Los Reyes (City of Kings) in honor of the feast of the holy kings. The design of the city began with the church, where Pizarro put the first stone. The capital of the Viceroyalty of Peru was named Lima and founded on January 18th of 1535 for the Spanish Crown. The city was strictly designed for Spaniards in many ways. from its beginnings, the indigenous people were excluded from inhabiting the city, and were forced to live outside the city, in sections called “reductos” or indigenous towns designed for specifically for Spaniards. Traditional Lima was well planned and composed following the edicts set forth in the Laws of the Indies. The city plan was made up of orthogonal square urban grids for roads and traditional Spanish colonial homes. The city itself was small, and it maintained trade routes and networks with close towns like Chorillos, Magdalena, and the port of Callao. The Spanish urban grid is clear and imposing. The grids impact on the shape size, design, and form of Lima went unchanged for many years. Even after Peru’s independence in 1821, the grid derived from the Laws of the Indies never changed due to the extensive city wall that surrounded the city. Initially, the wall was built in 1684 to as protection from pirates. The wall was finally torn down to make urban space available in 1869, which was 185 years later..

Lima developed many social ills early on. The native Inca Peruvians were marginalized and excluded from many parts of society by the Spanish Colonizers. In Lima and other important coastal cities, the Spanish fought against the “Criollos” who were Peruvian-born European descendants, in Peru’s Independence War. This conflict mostly ignored native Peruvians. And as a result, they were marginalized and seen as insignificant.



Peru's modern capital, Lima, was designed as a garden city in 1535 by Spanish Conquistadors to replace its ancient past as a religious sanctuary with 37 pyramids.

In his new book *Perú: Estado desbordado y sociedad nacional emergente*, the well-known anthropologist José Matos Mar addresses the coexistence of two Perus: the official Peru, made up by the relatively wealthy traditional families, with Spanish or foreign roots, living primarily in Lima and coastal cities; and the other Peru, whose uneducated and poor indigenous Andean and Amazonian families were outsiders to any kind of nationally inclusive vision.

After the Spaniards colonized, Peru was left decimated, as the Spanish brought diseases with them, killing over 90% of the Inca population. At this point, the Spanish Crown ordered and expansive construction of the Peruvian Colony. The Spanish king Philip II's Law of the Indies, expanded in the 17th and 18th centuries, established strict rules for the establishment of new towns in the New World and the Philipines (named after Philip). A Vitruvian, or better, Roman *castrum* grid was the basis for other prescriptions about a central plaza and the location of City Hall facing it, among other things. At the same time, the Inca structured cities were decimated, and the important sites of the Inca Empire were battered. Today many of these sites are in ruins. Many Inca sites have been excavated, and many more exist to be discovered.





Pre-Columbian archeological site La Luz flanked by a private soccer field. (Wikipedia)

## MODERN LIMA

The 20th century brought change to the traditional urban plan. Lima began to look into the future and with grand plans in terms of urban planning and growth for the metropolitan area. At the time, Lima and greater Peru, for that matter, were dealing with two major events: one was the reconstruction period following the four-year Peruvian-Chilean war that ended in 1883 and the celebration of the 100 years of Spanish colonial independence.

Post-independence Lima began with construction efforts in the 1920s with the planning and development of some key parks and the widening of avenues, borrowing concepts from Anglo-Saxon urban ideals inherent to the Garden City. In 1948, Lima began its first Pilot Plan, which was conceptualized by Josep Lluís Sert, who had many visits to Lima. Mr. Sert was the urban designer and, at the time, future dean of the Harvard Graduate School of Design.

The administration in Lima embarked on many projects to design and implement housing, parks, transport, and infrastructure projects, including the Unidad Vecinal #3, the “Parque de la Exposición” or the expansive Arequipa Avenue.

At the same time, the Lima administration was performing these projects; urban Lima ended up constantly overwhelmed by the neverending influx of people from rural Peru, the first large influx happened in the beginning of the 1940s with a major climax throughout the decade of 1960.

## **CONTEMPORARY LIMA**

The real history of today's contemporary Lima, happens largely after 1940 when the trend of reverse urbanism became prevalent. The barrios or neighborhoods in Lima began in reverse with no formal planning: People occupied lands auto constructing what they could. The settlers then built or were provided facilities, public services, and utilities for living That were negotiated with the government. These services were obtained through organic collective work, and democratic participation of the community.

There was a moment of organic urban expansion, marked by mass migrations from the outer provinces and rural areas to Lima for much of the 1940s. The new urban dweller came mostly for opportunities, including better education and work. There were other issues that brought rural people to the city, which was the loss of lands and natural disasters like earthquakes and shifts in the economy. In the 1970's agrarian reforms devastated rural communities and a ripple effect started with mass urban migration. Other problems emerged connected to the Shining Path rebel movement that consumed rural areas around all of Peru

The decades from the 1940s to the 1990s have been described by anthropologist Matos Mar as the years of "desborde popular" (popular overflow), represented by the mass migration of the people of the "other Peru" towards the city that until then had belonged to the people of the "official Peru." The millions of people who arrived to Lima during these years created *barriadas* such as Villa el Salvador, Ciudad de Dios, and Ventanilla on the periphery of the traditional city, a process which continued until the 1990s.



Throughout the 1990s, under the Alberto Fujimori presidency, drastic public reforms stabilized and liberalized the economy. Several public services were privatized. Generalized lack of public control and regulation enabled the growth of an informal parallel economy totally overlooked by the traditional society. Informal markets, grocery stores, transportation companies, food trading, clothes manufacturing and other services boomed alongside the privatized economy. The government also adopted radical policies for dealing with the *barriadas* issue in Lima. During the early 1990s, more than a million families informally occupying state lands were granted land tenure and titles.

## **Development**

In the 1990s, President Alberto Fujimori's, set drastic public reforms to stabilize and liberate the Peruvian economy. Many public services went through privatization. The lack of regulation and public control started the informal and parallel economy totally bypassed traditional society. Illegal outdoor markets, stores, food companies, manufacturing and other services grew rapidly alongside the privatized economy.

Land titles were also handed to families who settled government lands in an effort to formalize them and bring them into the mainstream economy. This was seen as a way forward for the government as there was no way to undo the informal urban development that existed. By 1999 over one million families were given legal titles for the land they occupied.

This policy stemmed from the hope that families with legal ownership would start investing more money in their own houses and neighborhoods. In other words, along with the reforms that brought prosperity and money to the population, both formally and informally, the idea was also to create a platform that enabled citizens to self-invest in the city and, therefore, to "build city."

These reforms, which stimulated the immigrants' already strong sense of organization and community work, transformed the neighborhoods of Lima's periphery.



Before and after comparison of Ciudad de Dios, south of Lima, 55 years later (1955-

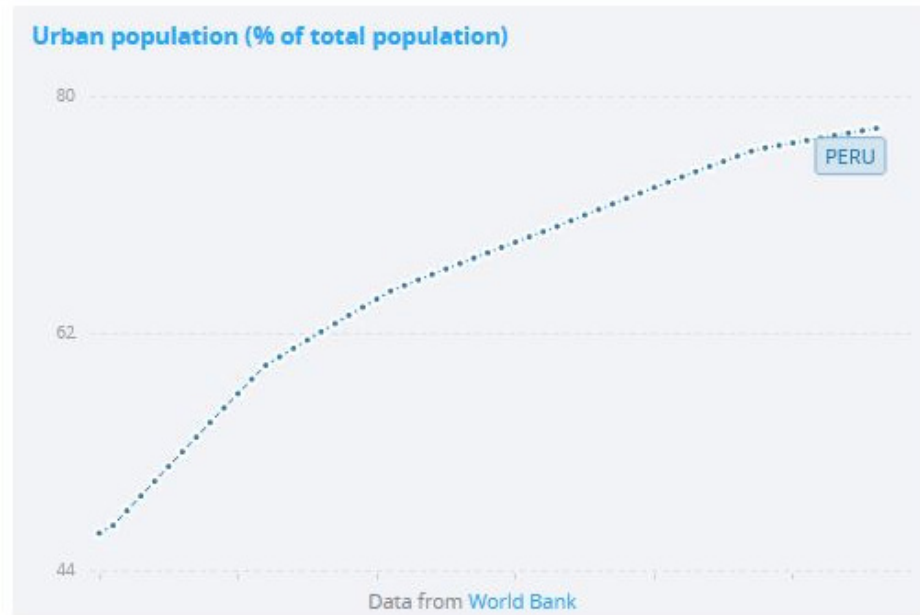
2010). Image source: Servicio Aerofotográfico Nacional and Google Earth.

Their originally flimsy appearance evolved into a more robust brick-residential urbanization filled with small local businesses. Nonetheless, major private services such as banks, schools, universities, clinics and shopping centers were still not interested in investing in these areas of the city, considering them too risky in terms of profitability.

## CONSOLIDATION

As a consequence of the political reforms started in the 1990s and the strategic macroeconomic decisions of the early 2000s, Peru's macroeconomic performance started to improve noticeably in relation to the Latin America region from 2005 on. Financial stability, low inflation rates, and private and state investment contributed to creating an environment of sustained economic progress easily noticed by the population. Between 2005 and 2011, the average GDP per capita increased annually by 7.9 percent, giving birth to the so-called emergent middle class, those with immigrant roots.

These emergent middle class families represent more than a quarter (28 percent) of the total urban population of Peru today, accounting for nearly 40 percent of the country's total income.



Their strong economic presence is no longer overlooked by private and formal enterprises which have now radically transformed their business strategies and are finally investing in the “emergent districts” of Lima. Today’s contemporary Lima is finally entering into a process of consolidation that has brought more equality to its citizens. It is perceived as an optimistic city that is slowly.



Slums on the edge of Lima(Wikipedia)





*Before and after comparison of Ciudad de Dios, south of Lima, 55 years later (1955-2010). Image source: Servicio Aer-*

Contemporary Lima has shown how reverse urbanism became a way of making city, bringing prosperity to citizens at moments when the official plans lost direction and were totally overwhelmed by reality. Nonetheless, reverse urbanism was a painful way of making the city. It was done at the cost of thousands of hours of hard work of its citizens in a context of huge inequality, segregation and fragmentation. Contemporary Lima was developed throughout the accumulation of small neighborhood patches that collectively became a fragmented city that today struggles to find its identity.



*Rapid urbanization fuels land grabs in Peru,*



Much work is still needed to articulate policies and services that guarantee justice, equity, and accessibility for all residents of Lima. However, in a world in which close to one billion people live in slums—the rapidly urbanizing product of rural-urban migration—Lima’s fifty years of intense reverse urbanism offer invaluable lessons that the rest of the world could use in other contexts.

Today Lima is the 14th-most-populous national capital by population (8,481,415). The top 10 national capitals by population are: Beijing, New Delhi, Tokyo, Manila, Moscow, Cairo, Jakarta, Kinshasa, Seoul, Dhaka.





## ISSUES WITH URBANIZATION

Land trafficking definitely rises with informal urban development. Peru has grown faster than all of its neighboring countries in the region. From 1908 until today, the population in Lima's doubled. Since 1965, the population living in urban areas as opposed to rural areas has gone from 50 to 80 percent. Along with the unstoppable urban growth in Lima, urban ills have fomented the growth of illegal settlements in Lima. Recent indicators and trafficking in Peru show how unchecked urban sprawl has fostered criminal enterprises that operate with official complicity from many players, including the government.

Weather is a major factor in development as rain is virtually nonexistent in Lima. Lima receives an average of 6.4 mm (0.3 in) of rainfall per year, or 0.5 mm (0 in) per month. On average there are 124 days per year with more than 0.1 mm (0.004 in) of rainfall (precipitation) or 10.3 days with a quantity of rain, sleet, snow etc. per month.

Many slums exist without roofs or partial roof shelter, so it is easy to build clandestine housing and commerce buildings developing full-scale auto constructed urban plans.

## **SPANISH URBAN IMPOSITION**

The remnants left from the Spaniards are perfectly intact and visible. They have a serious impact in Lima today and for its future. Much of the grid that was started and subsequently left by the colonialists urban plans that have been preserved and can still serve as a point of departure for new urban projects. The leftover grid can serve as a generator to resolve today's urban planning issues that still plague this city. The plaza may be planned in many ways to achieve many of the urban virtues that the Spanish towns in Europe enjoy today.

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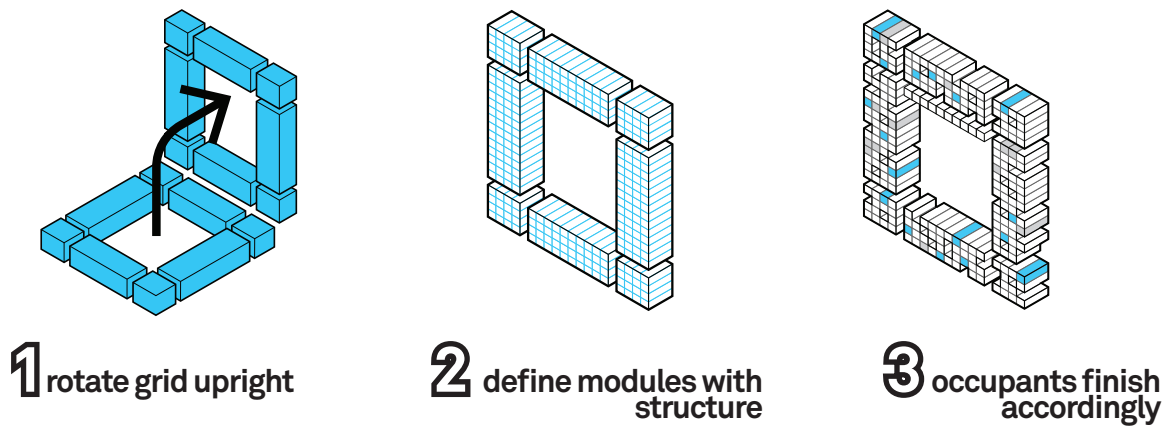
The Great American Grid – Map of Lima, Peru in 1750. <http://www.thegreatamericangrid.com/archives/2043>)





# *Upright Plaza*

*an upward growth of Lima where the  
city grid has been established*



As a result the most likely urban solution would be to develop the verticle plaza's where the grids exist and to enhance tourism, high value real estate and government buildings. On the other hand, the same solution can be used as an intervention to combat the overpopulation of the informal settlements of Lima which rest in the hills. In this approach the slums can remain as in situ-development so one day they may be formalized. This urban solution would provide proper housing, create elevated outdoor space, provide retail units, and allocate space for government services. The upright square would be a multifaceted solution for all. The urban intervention in Lima is manifested in a verticle plaza that shares the dimension of the existing urban grid itself. The grid in Lima is perfectly intact and functioning today as it was initially planned several centuries ago.

The combination of areas and spaces work on the verticle plaza as it does on the horizontal scale due to considerations of scale and the replication of the grid. The scale of the vertical plaza lets you make an urban intervention that takes advantage of the orthogonal grid providing spaces which include its own elevated plaza, housing, views and a reduced footprint that allows for more green space on the ground. While the urban grid is functional, it does not reach into the hill area's surrounding Lima. This is especially concerning as the majority of growth is in the hills surrounding Lima where the grid does not exist.



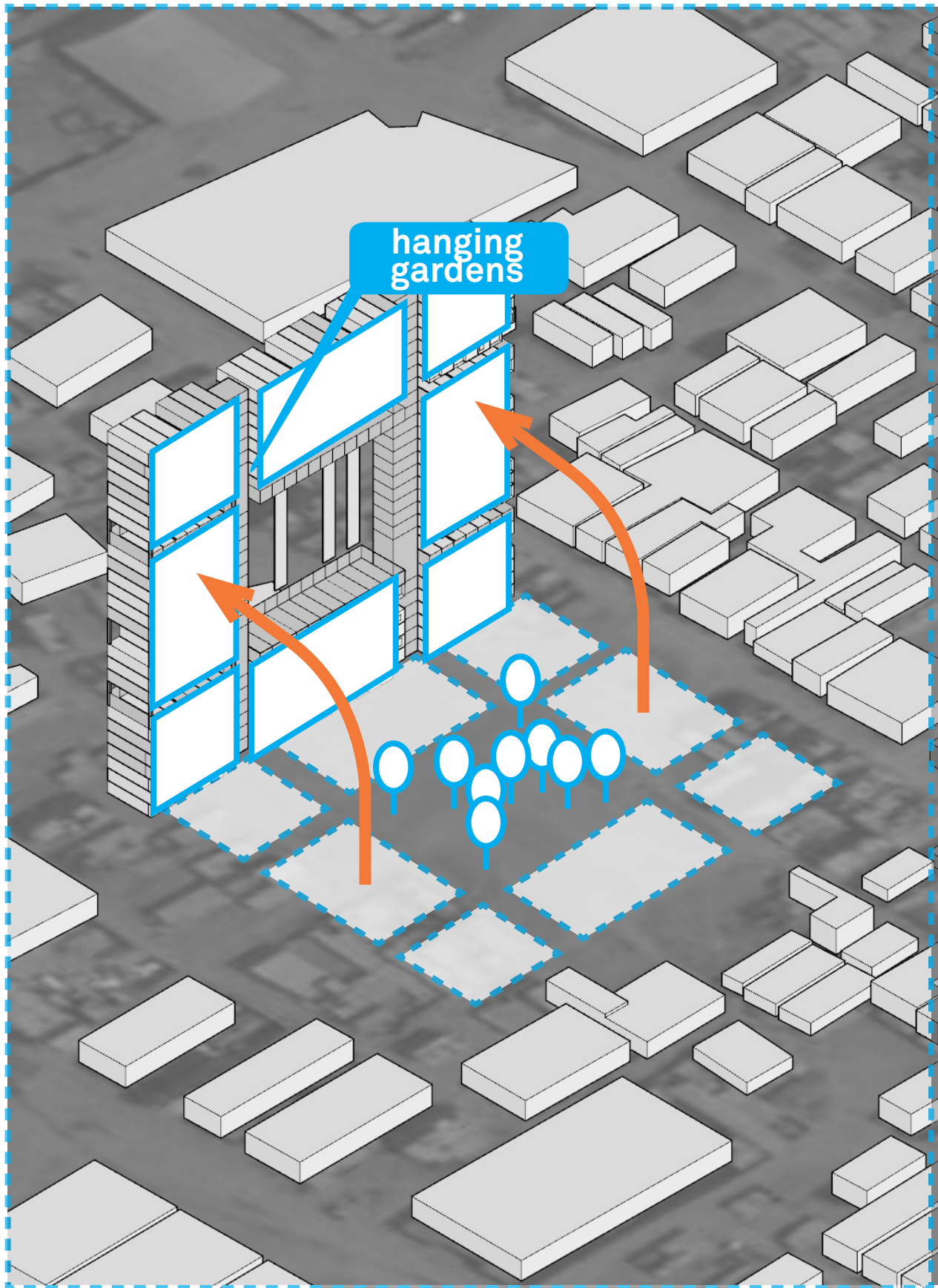


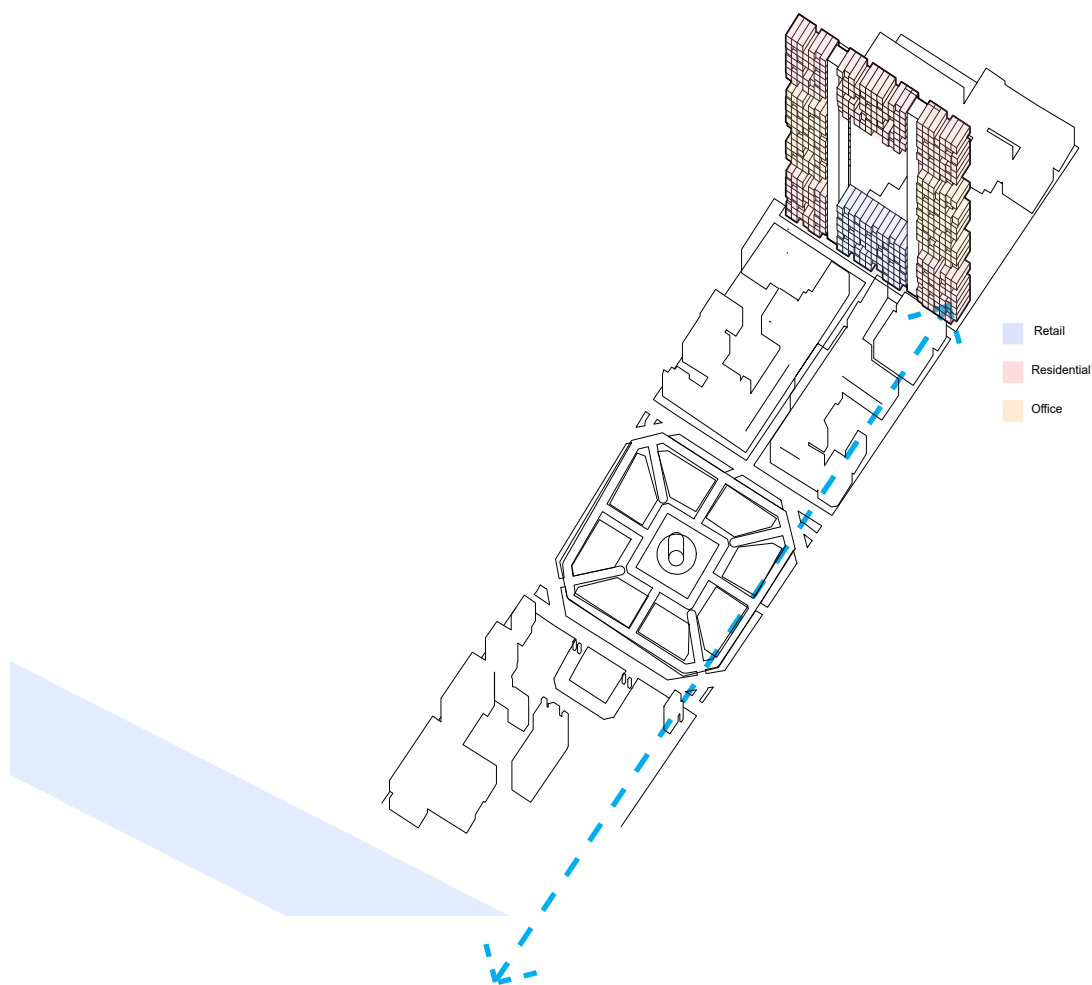




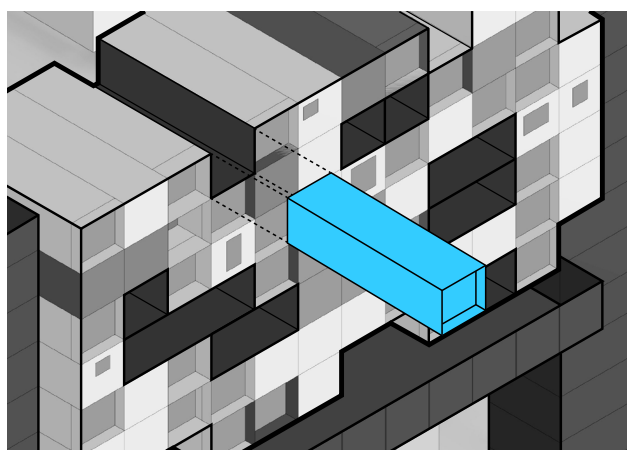




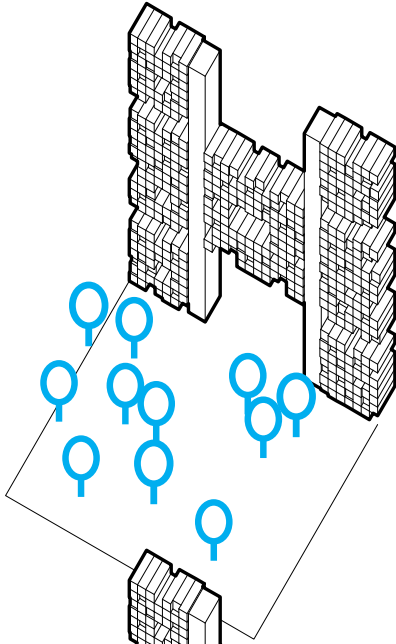




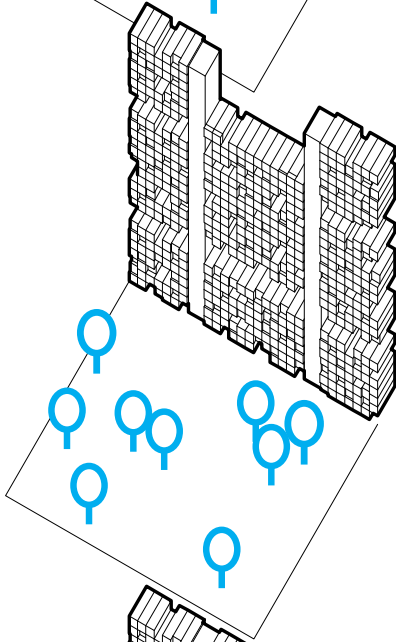
This study sees the further planning and design of these plaza's, verticle or horizontal, as an opportunity for planners to manipulate the plaza's geometry into many different landscapes in the urban fabric.



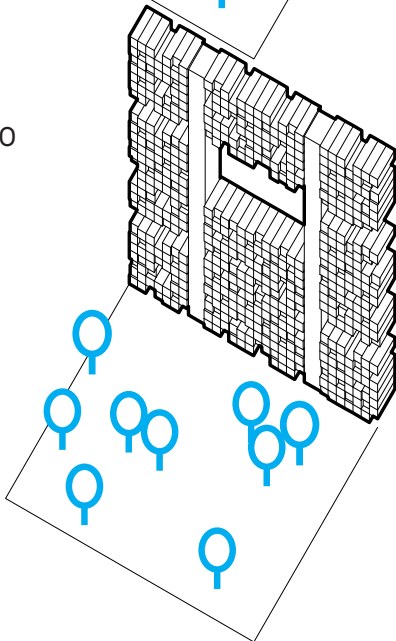
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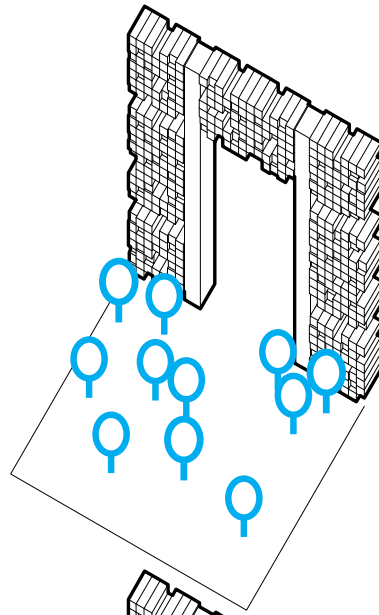
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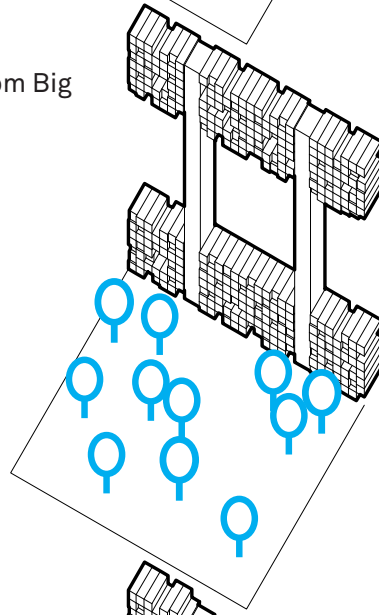
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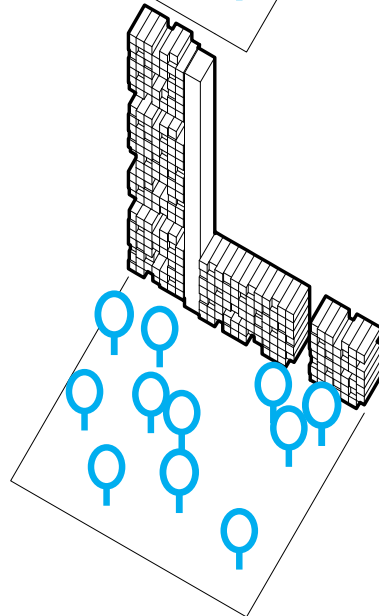
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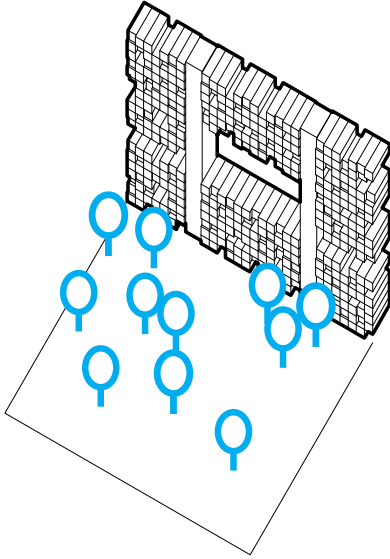
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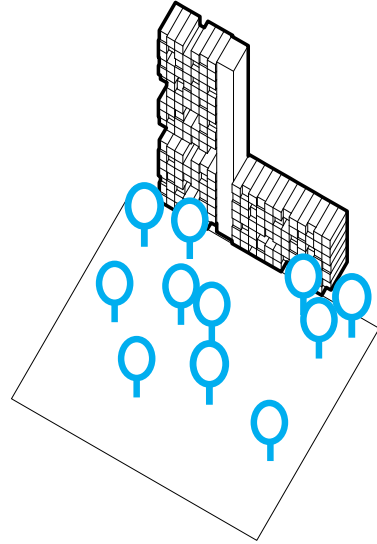
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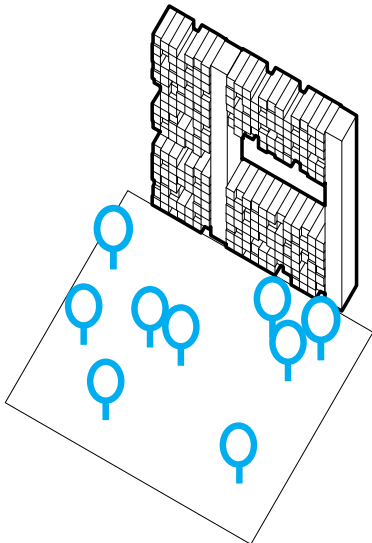
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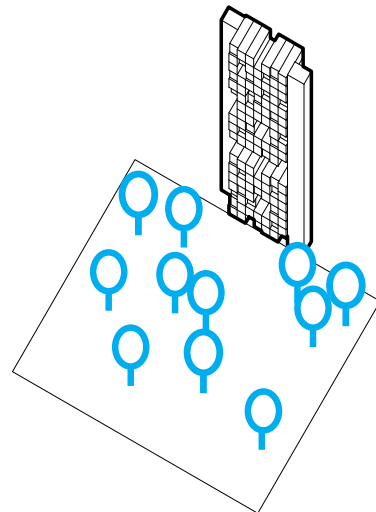
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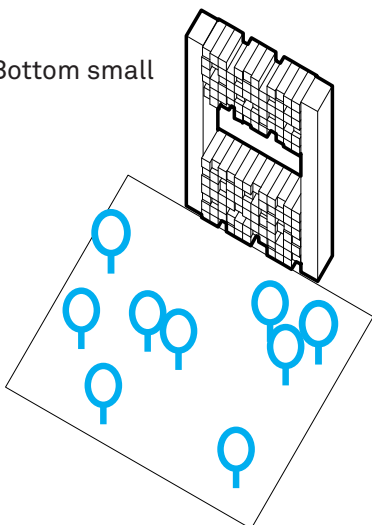
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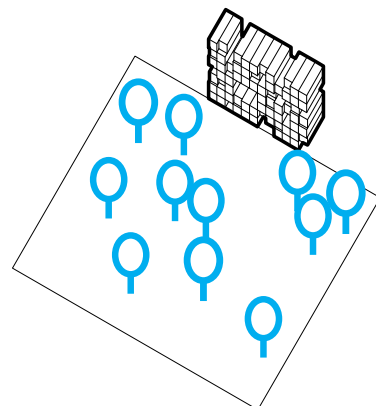
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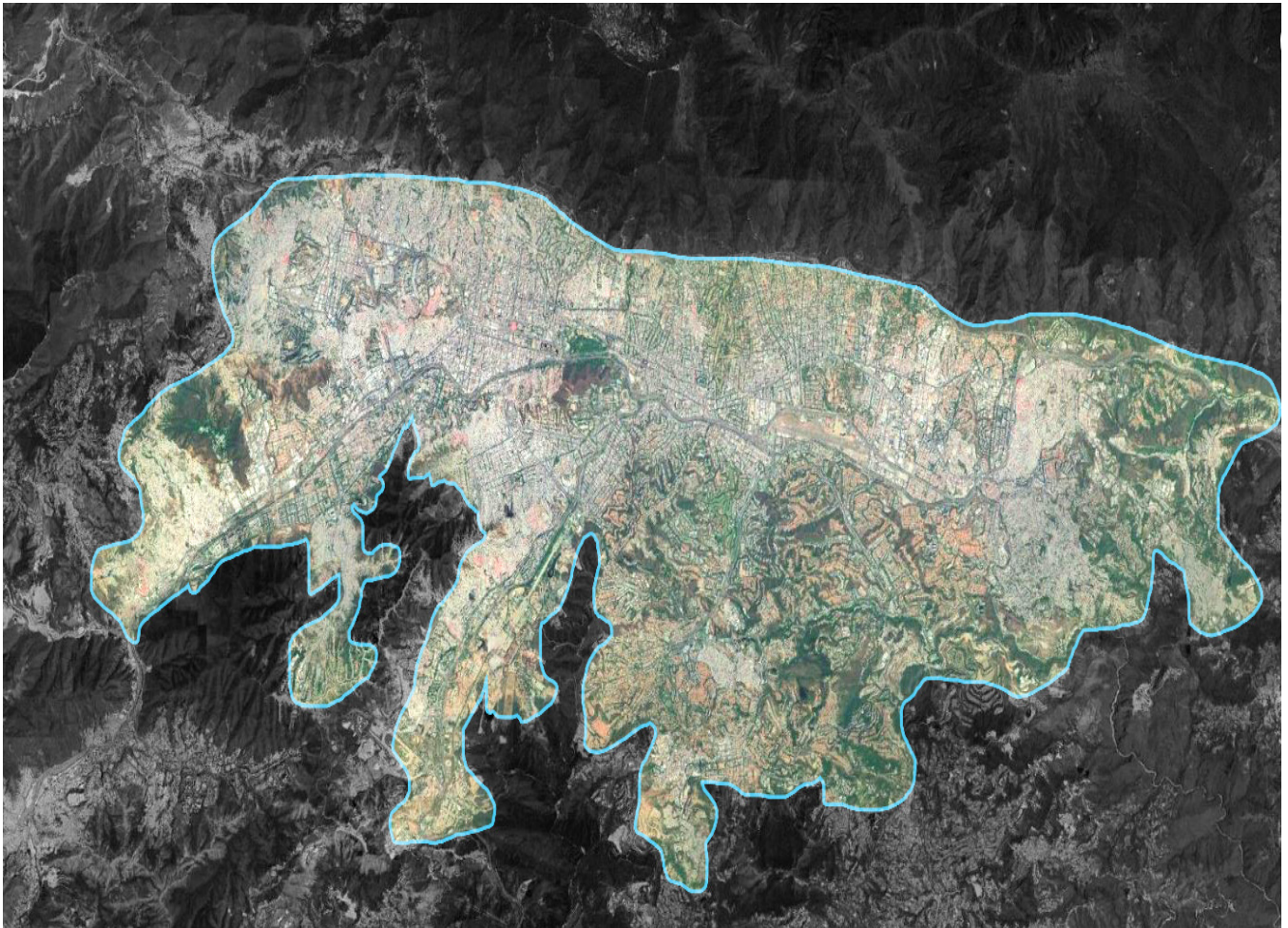


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*Aerial Photo of Caracas, Venezuela*

On Columbus' third voyage, He, along with Alonso de Ojeda, sailed to the coast of what would be today's Venezuela. These voyages were both in 1498 and 1499. Spain's first colonial attempt and exploit was for the collection of oysters for pearls in the famed "Pearl Islands". The city of Cumaná was the first Spanish established and permanent South American settlement in 1502. It was not until 1577 that Caracas became the capital of the Province of Venezuela. The colonization created danger and friction with the natives causing most of the surviving indigenous people had migrated to the south, where Spanish friars were active and protected them.

In the 16th century, Venezuela was contracted as a concession by the King of Spain to the German Welser banking family (Klein-Venedig, 1528–1546). Klein-Venedig, also known as Little Venice, was the only German colonization effort of the Americas, which lasted from 1528 to 1546. These concessions came as a form of payment from Spain's Charles I to the Augsburg-based Welser banking family as it obtained colonial rights in the Venezuela Province.

The economy of the 16th- and 17th-century colony was centered basically on the mining of gold and raising livestock for trade. Some farmers employed natives, others that enslaved them from different parts of Venezuela, and by the 17th century, African slaves were brought to work the gold mines. The Venezuelan territories were typically managed and governed at different times from the distant capitals. The first was the Captaincy of Santo Domingo; then it was of the Viceroyalties of New Spain and Peru. Venezuela suffered relative neglect during the 16th and 17th centuries. The Viceroyalties of New Spain and Peru that were in what is now Mexico City (Aztecs) and Lima Peru (Incas) were more prosperous in their natural source for gold-and silver-mines than in the hard to reach agricultural-based lands of Venezuela. Government as split as the governance for the Venezuelan territories shifted to and fro between the two Viceroyalties.

Cocoa plantations sprouted along the coast in the 18th century, worked by large importations of African slaves. Venezuela's principal export became cacao beans, and the Compañía Guipuzcoana de Caracas controlled 100% of the Cocoa bean production.

The natives migrated to the south, deeper into the jungle and rural lands. The European customs became localized, and local intellectual activity was prevalent with the white Creole elite. The university at Caracas became the center of post-colonial thinking. With political changes in the colonies at this time, the Crown's governance changed in 1717 with the title of the "Province of Venezuela" as included in the Viceroyalty of New Granada. This colony once again shifted its administrative title in 1777 to the Captaincy General of Venezuela.

As Spain was engaged in the Peninsular War, Independence struggles began in 1810. Venezuela's War of Independence began shortly after. Simón Bolívar would end colonial rule in Venezuela as the Republic of Gran Colombia became independent from Spain in 1821, and Venezuela itself separated from that Republic in 1830.

Santiago de León de Caracas was founded in 1567. The city did not have much growth until the 1940s when oil was discovered. The city expanded exponentially, with significant influence shaping the rest of the country. Caracas serves as the seat of government for the Capital District as well, made up of 167 square miles (433 square km) for the Capital District. The city itself is a considerable part of its area, resting in the state of Miranda, with a population of 1,836,032 in 2001 and 1,942,652 in 2011.

The physical setting of Caracas is impressive with steep coastal mountains, which rise immediately from the Caribbean Sea and traditionally had little value terms of urban growth. Beyond the mountains about seven southern miles inland lies the valley that Caracas was originally planned and developed formally.



*An aerial view of Caracas. Jeremy Woodhouse*

The center elevation of Caracas is 3,025 feet (922 meters), and its valley extends 15 miles (25 km) in the east-west direction. All of its original inhabitable area is urban. The verdant green valley green is now lined with streets and freeways. Caracas is subject to earthquakes, including notable ones in 1755, 1812, and 1967.

## **HISTORICAL COLONIAL DEVELOPMENT IN VENEZUELA**

Two stages can be identified in the process of the establishment and developing the Spanish settlements on the coast of Eastern Venezuela. The first settlement did not occur until 1596, when the formal establishment of the city of Cumaná was announced. Cumana became the capital city of the province of Nueva Andalucía. Considerable pearl resources fed the first settlement economically. From this moment, the second stage of the conquest began, which covers the entire functional development of the lands in Cumanagotos, and culminated with the establishment of Barcelona one century later in 1671. The territorial occupation of Eastern Venezuela, would culminate with the founding of the city of Cumaná in 1569 and Barcelona in 1671.

Venezuelan Barcelona was the most clear development under the Law of the Indies. The reticular urban pattern of Barcelona is found in the expansion which the city underwent from 1671 to 1884, at which time the urban structure suffered considerable modifications. However, this process cannot be understood unless the third premise, which deals with the geographical space over which the settlement would be founded, is analyzed.

By 1761, the city reached a population of three thousand (3,000) inhabitants, a population six times larger than its original ninety years earlier when it was founded. By the beginning of the 19th century, approximately forty years later, the city had quintupled its population, surpassing fifteen thousand (15,000) inhabitants in its independence period. During the third period from 1750 to 1800, the city underwent accelerated growth. At this time, the occupation of the present historical center was practically completed.

In the fourth and final period identified, reaching 1900, the expansion of the city spans the era of the War of Independence and the first half of the Republican Regime.



In the first twenty years of this period, war wrought massive destruction on the structure and morphology of the city. In the Battle of Barcelona, patriots used the Franciscan convent as a fort for defense; as a result, this building now lays in ruins, but would later be christened Casa Fuerte in 1817. The economic surge of the city in the second half of the nineteenth century, in conjunction with its standing in government in the new republic as well as with the improvements in the city's communication infrastructure substantially changed the structure and dynamics of its urban activities.

## COLONIAL CARACAS

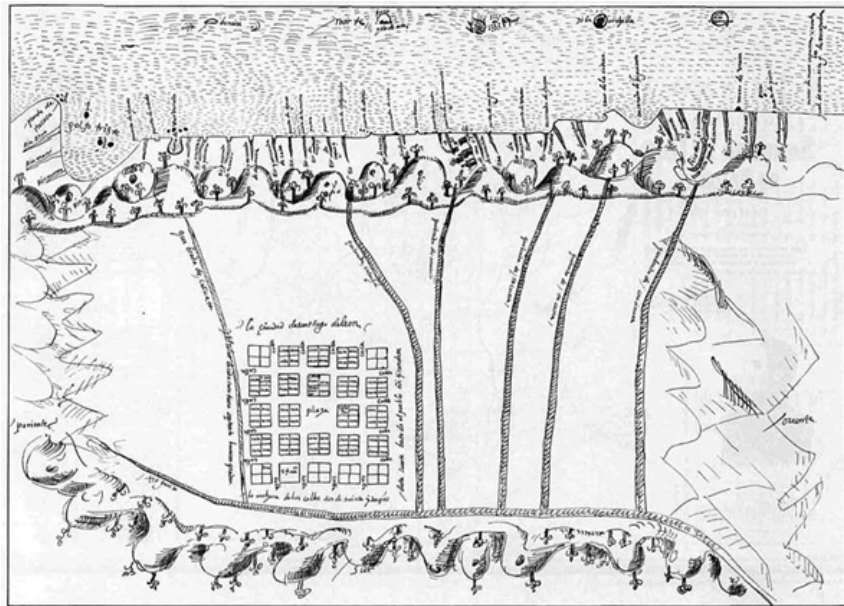
Colonial Caracas was planned half a century later in 1775, along with an urban plan named “A Plan for the City of Caracas”. The city was drawn on a series of perfect squares made up of 16×16 square blocks. The geometry resulted in 256 squares for blocks. The plan grew as it was imagined and the entire town was full and inhabited immediately.

The omnipotent grid was idealized and straightforward, but it made its mark as a successful urban tool. Every one of the blocks in this plan have the same length and shape, with no variations. The plan did not take into account nature. This was important as Caracas has a series of very important streams crisscrossing the Caracas valley. In the North and West of Caracas, there are some small symbols of mountains, which are actually a great part of the landscape that was missed with the rivers.



Figure Ground, Caracas(Wikipedia)

Historical  
Caracas  
Map(Colonial  
City)



Some customs developed from building the formal Caracas urban plan in the form of a bush cutting ceremony with a sword. The issue was that there was a thick, vast jungle growing everywhere around the new city, and without serious eradication, the jungle would claim the city back almost immediately. The branches could climb through windows, settle above rooftops or hide entire walls. The hardy cují (*Prosopis juliflora*) was abundant near the slopes to the east and south of the new city. This plant was so invasive to human development that its destruction was written into law, and citizens had a right to destroy it. It should be mentioned that the tree is a cause for the spread of malaria as mosquitos survive from eating the pods when there is drought. In addition, its roots can grow 150 feet below the ground it sits on. Therefore the cuji tree represented a hostile landscape that could potentially destabilize the new city plans for Caracas.

Caraca's natural setting had serious threatening considerations between city and nature as Governor Francisco Cañas y Merino ordered that all trees in Caracas were destroyed. He ran a sanitary campaign was ruthless. This campaign ran against the cují, the avocado, the plantain, and whatever orange trees that were present and needed to be cut down with it. A special unit was formed for the police that would

## CARACAS DIVIDED IN COLOR MAP 1775

The Caracas plan uses of colors in a representative way: Green was in the center marking the parish of Catedral, Orange was used for the parish of Altagracia, Blue was drawn for La Candelaria, and Yellow was painted on for San Pablo and Sepia for Santa Rosalia districts.

Every one of these “quarters,” kept the same proportions, functions and laws of growth as in the rest of the grid, including a square and church in its center. There is some kind of urban criterion of continuity, homogeneity and legibility between the parts and the whole. In the index, besides there are temples, convents, a university and a hospital. A variety of typologies begin to take shape, but these do not exist as autonomous entities but rather as marked and bounded by the blocks. Especially with the housing, whose shape and functions represent a microcosmos of the urban, the relationship between house and yard is much like that of blocks and central squares. The remodeling of the Plaza Mayor (Main Square) in 1753 by Governor Felipe Ricardos, who built fountains, staircases, porticos, and shop sites on the south-



Caracas City Grid (Colonial City)

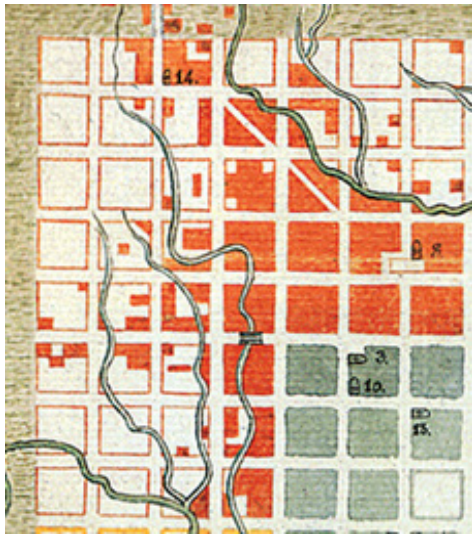
ern and western façades, according to engineer Juan de Goyangos's project, maybe the first one to reorganize public space in Caracas. In 1789, paintings and sculptures to stages, benches, and false façades that would give humble Caracas the aspect of a Big City. There was also a great deal of problems with the deplorable and lacking wastewater networks, lighting was substandard, and the state of roads in and out of Caracas were many times non-existent at best. The natural state surrounding Caracas was a formidable and robust adversary to urban development from the start.

Caracas was debating between what is beautiful, primitive, and hazardous. Caracas had four rivers coming down from the first mountain range and run through most streets and running through city gardens. These channels coming The Caracas represented in this 1775 plan had reached its maximum development as a modest colonial Spanish American city inhabited by an agricultural society who survived pests and the devastation of a major earthquake.

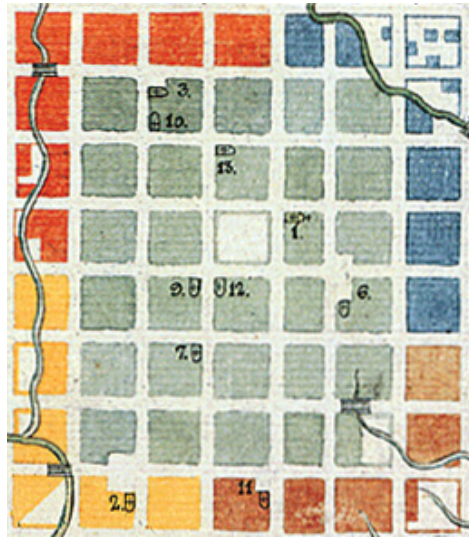
The colonial public powers that were separated and performed at different places before will slowly drift towards Caracas and coincide in it. In 1776 the Venezuelan state was created, ruling over administrative and fiscal matters. In 1777, these were The Captaincy General of Venezuela and in 1786 the Royal Audience of Caracas. Caracas, as a city, would no longer depend on Santo Domingo or Bogotá for administrative matters. This centralization of executive, military, judicial, and administrative power coincided with the boom of cacao and coffee trade.

Caracas was a second-rate capital of the Spanish empire. It did not undergo any major changes in the colonial era, which ended in 1821 with independence from Spain. There was an earthquake in 1812 followed by the independence uprising and several civil wars that kept the population at a standstill from a population of 30,000 in 1830 to almost 50,000 in 1873, a net of 20 thousand people only. This growth was checked by the first national census having taken place in 1873. The consecutive governments of Antonio Guzmán Blanco (1870–1888) were no different, Mr. Blanco Europeanized the architectural styles and urban traditions of the Colonial Spanish Crown cities. Caracas was the capital of a second rate republic that mainly exported coffee and cocoa to support themselves, Caracas was no more than an unimportant small city on the post-colonial stage until the discovery of oil in the 1920 which not only changed its economy but also changed it as a city. The demographic explosion manifested, with population jumping to 135,253 by 1926; at the same time, Caracas center became full of commerce and lower end tenant houses for workers, prompting the business class to migrate out of the city center and develop suburban sites to the east of Caracas. The city migration was further energized when the dictator Juan Vicente Gómez's 27-year rule ended upon his death in 1935.

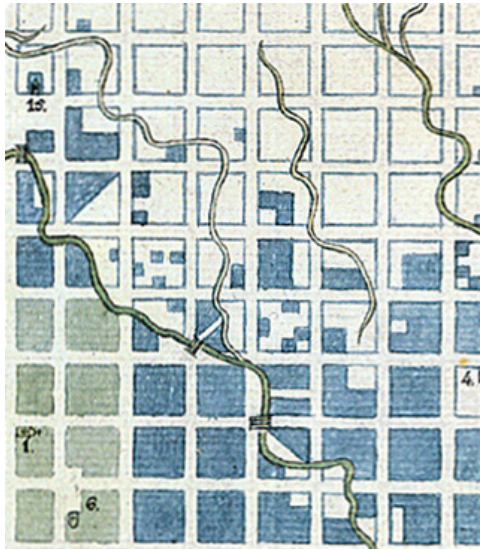




La-Pastora



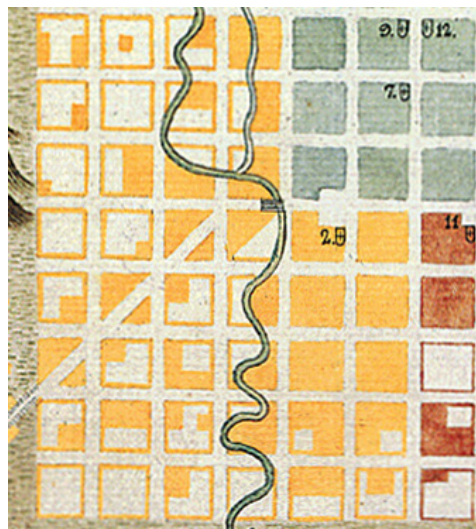
Parroquia-de-Catedral



Parroquia-de-Candelaria



Parroquia-de-Santa-Rosalía



Parroquia-de-San-Pablo

Caracas was fueled with urban growth from the petroleum economy that took over: the population exploded to 203,342, and the city extended itself in land size for 542 hectares by 1936. The rural to urban migrants boosted and increased in population by 45 percent in demographic growth.

By the 1950's Perez Jimenez dictatorship further enjoyed the economic wave of the petro economy as Caracas became an international migratory urban center. The city became a thriving metropolis modernized by massive investment in public infrastructure works. Growth did not stop there—the huge demographic growth from 1961 to 1981. The population in the greater Caracas metropolitan area grew from 1,336,464 to 2,879,468 urban dwellers. Hundreds of thousands of international immigrants came from southern and central Europe to the cosmopolitan capital, along with also a democratic refugee who came as exiles from neighboring Latin American dictatorships and conflicts.

In 1983 a financial crisis changed a long spurt of economic growth starting with Caracazo. In 1989 there were revolts against the neoliberal laws set forth at the start of Carlos Andrés Pérez's second term as president. There was economic and political turmoil in Caracas for 10 years until the Bolivarian Revolution launched by Hugo Chávez in 1999. Caracas became a violent metropolis torn by three specific tensions between capitalism, emerging socialism, and reactions to anti-globalism. Today in 2020, the instability spiraled out of control, and Caracas remains one of the most dangerous cities in the world.

## **RURAL VS URBAN CARACAS**

Today Caracas has 3,104,392 people. Caracas population drew many people from the rural interior of the country to Caracas and the urban points. The 1971 census recorded the population's movements as its indicators showed a bigger percentage of urbanites had come from another place within Venezuela. The census also proved that less than 30 percent of the population of Caracas had been born there, which is a clear indicator of rapid migration.

The population growth of Caracas by the 1970's was growing out of control over into Caracas peripheral towns and cities, which caused administrative upheaval as Caracas growth absorbed the small towns around it. The pressure forced the creation of a Metropolitan Urban Commission to be established by late 1973, which was responsible for all of the metropolitan city planning. Many plans and schemes were drafted. One of them in the late 1980s, was the rapid-rail transportation system connected the capital with some outlying towns. This was a way to relieve urban congestion around Caracas as the Caracas Metro (C.A. Metro de Caracas--Cametro) was established. It was an extremely modern subway system that served a limited area of the capital, thus finishing as a semi-failed project. The Metropolitan Urban Planning Commission failed in a sense as it had total disregard for illegal settlements, which were the largest growth areas that spun out of control.

The government tried to come up with other solutions and sought to encourage reverse migration, from urban to rural areas. The results proved disappointing. The National Agrarian Institute (Instituto Nacional Agrario--INA) initiated a program that provided incentives for rural mobilization and resettlement. Strangely enough, the more thriving economic settlements gained surging population growth that became new urban centers that developed the same problems that Caracas had come to get rid of. There were other programs as well where the government planted industry to attract people to a newly built city center. Ciudad Guayana was the best example of this type of publicly funded project that was planned in 1961 to house 300,000 people and was projected to have more than a million by the year 2000.

The government also tried many other ideas having the vast resource of oil at their economic disposal. The central government initiated a project to develop public land of the Orinoco Delta that had relatively no one on them. Swamps were reclaimed, and the government wanted to reclaim 1.6 million hectares usable for agriculture year-round. There were other programs that included the planned settlement of families along the country's frontiers in the state of Bolivar state, which borders Brazil.





Slums of Caracas:  
-Barrio Villa Zolia  
-Ajuro



Positano, Italy

The government knew it had a problem and did try to resolve it by Caracas continued to grow. And for many years the capital city grew at a rate of 7 percent annually. This became an uncontrollable problem as oil revenues began to fade. The years to come would prove economical and social problems. Crisis in terms of public services, urban planning, and urban infrastructure were common and growing worst every day.

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Venezuela was divided by a mosaic of culture. Caracas was a cosmopolitan city with modern, sophisticated amenities. This contrasted the Venezuelan cowboys or llaneros from the plains who lived a simple farming lifestyle. To further the divisions between Venezuela's citizens, the large numbers of conservative Andean peasants who had their own ideas and customs that had nothing to do with the "Caracacenos" or "llaneros". The country was truly divided in terms of culture and customs.

The effects of rapid urbanization are shockingly apparent in the poor barrios of Caracas, with their disposable ranchos (Shanty auto-constructed home). A recent census has shown that most of the rancho dwellers came from larger urban towns across Venezuela or were born in Caracas locally, this was now an obvious change as the urban growth was not from outside Caracas but from within the metropolis or other major cities in Venezuela. Residents of the ranchos have been noted to be younger than Venezuelan society as a whole, which shows that the growth in population is concentrated in these rancho barrios. To make matters worst, "the average family of four children was overwhelmingly the product of informal unions, and many of the children were not recognized by their fathers. In fact, in cases where the father left to form another family or disappeared altogether, prevailing social attitudes held that the mother should support the child herself, perhaps with some assistance from her own family". (Country Data.com) The informal urbanism, informal construction, informal infrastructure, and informal family units have proven to be a toxic mix of forces that drive the slum growth that is virtually unstoppable now.

The slums of Caracas have developed as a result of rapid urbanization, and this hillside development is reminiscent of Italian hillside towns such as Positano. Our study theorizes that if appropriately organized, the slums of Caracas can one day develop into a significant economic and social center over the next several hundred years.

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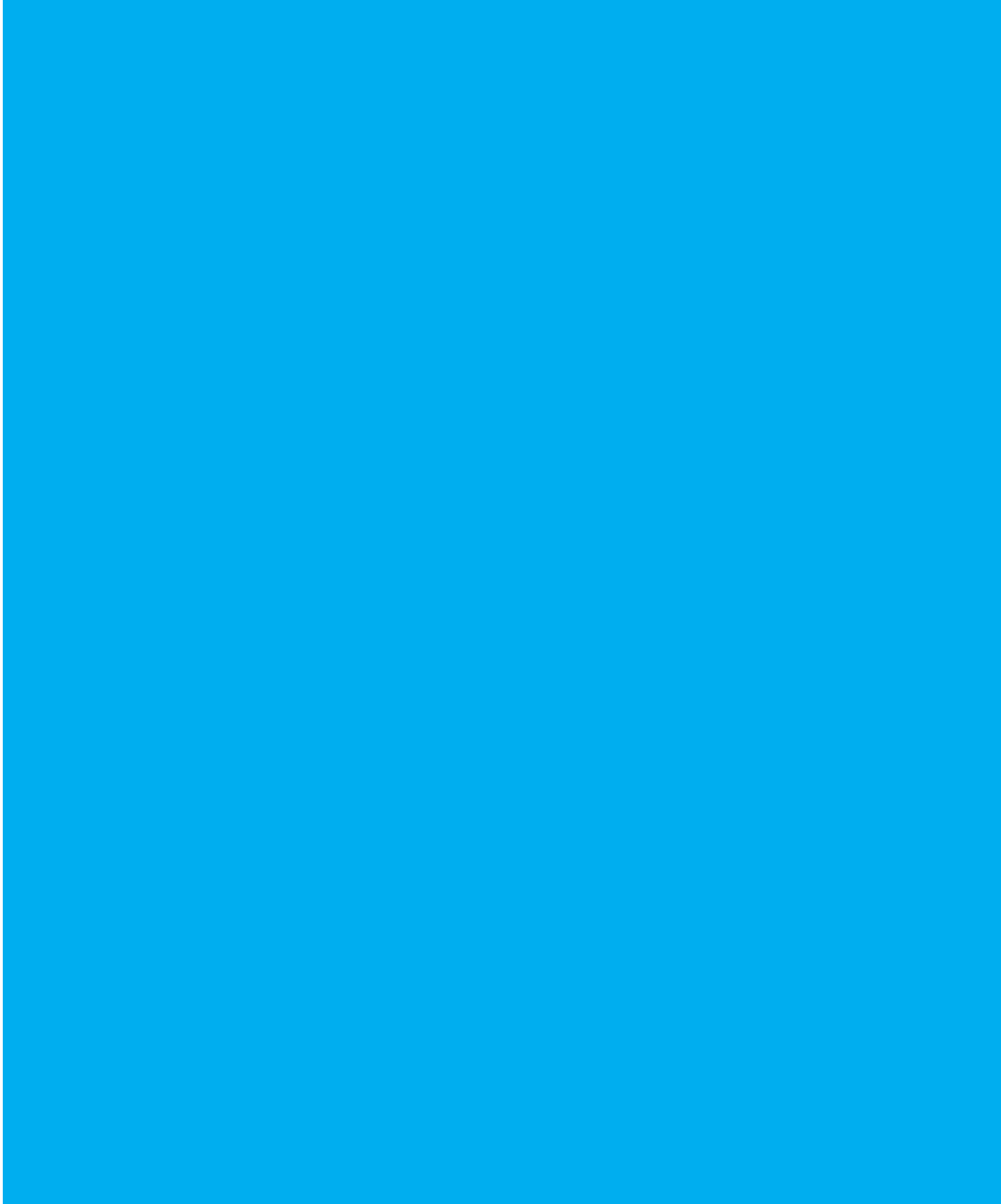
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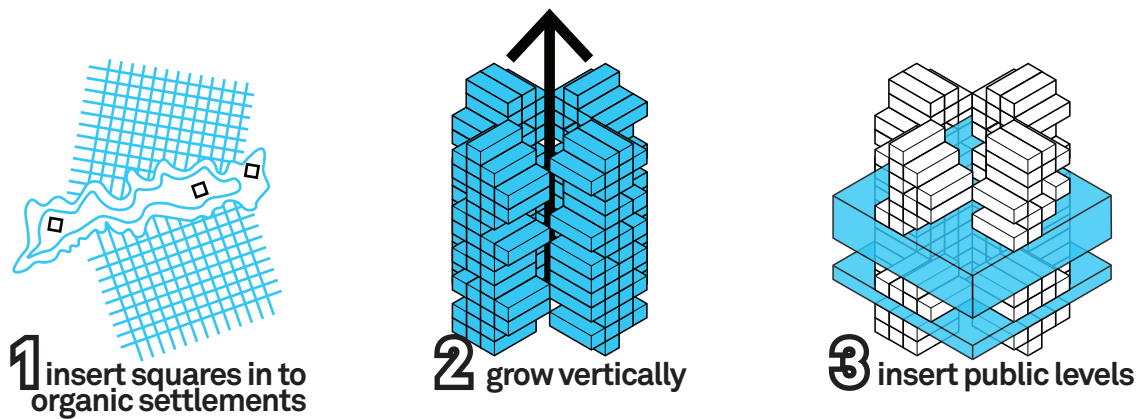






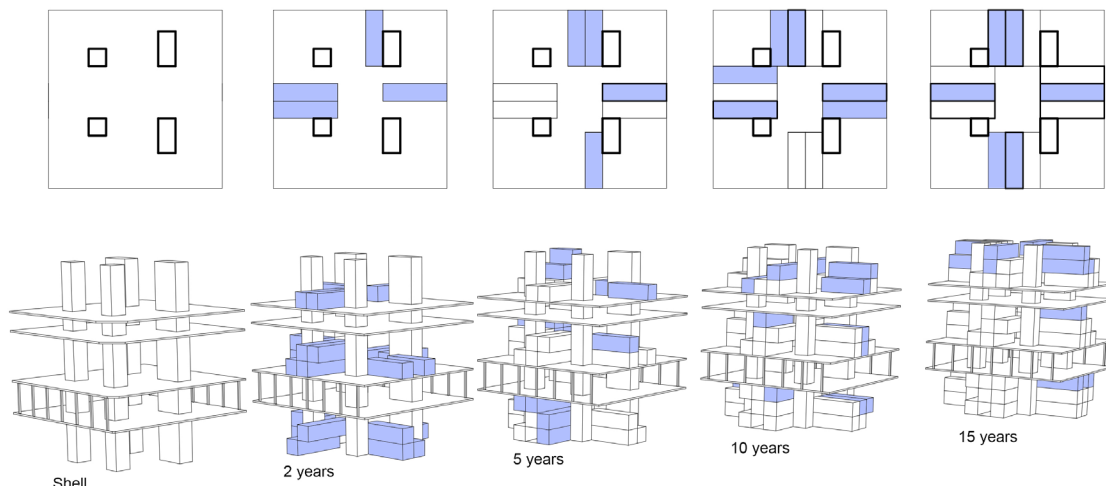
# STACKED PLAZA

*urban centers in informal settlements  
that create order and provide centrality*



## THE STACKED PLAZA

For Caracas, the times have yielded a long struggle for identity among other things, that comes as a result of turmoil in the political system. Today, Caracas faces overwhelming issues with overcrowding, urban hygiene, inadequate homes, lack of planning, and crime, to name a few of the perils that exist there. The introduction of the plaza injected into many of the slum area's can bring about a renaissance for urbanism and reach millions of voiceless people that live in substandard conditions in hillside slums. Our study puts forward the stacked plaza, which will interact and complement the surrounding hillside slums. Examining Italian hill towns, these urban layouts exist as models to unplanned design taken from the needs of the people who built them over time. The stacked plaza can have plaza's within the towers creating many of the intimate spaces available in old-world European plaza's or colonial plaza's, which still exist and operate as city centers.







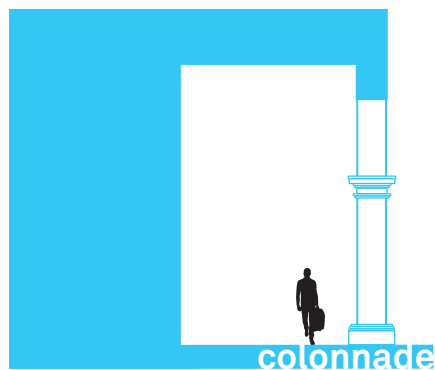
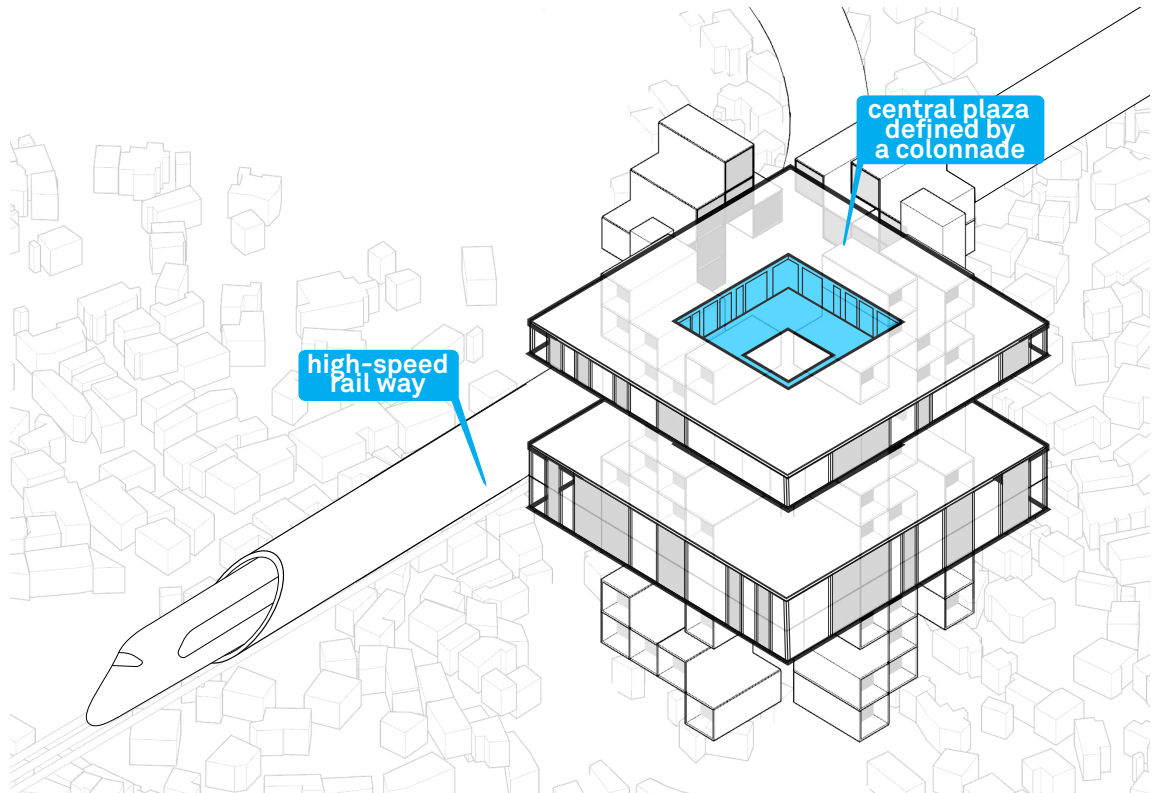












The stacked plaza can vary in height and adapt itself to varying hillside or flat districts, freeing space for green areas and connection to mass transit. This would allow for the organic growth of the slums which one day will transform into vibrant parts of the City of Caracas.



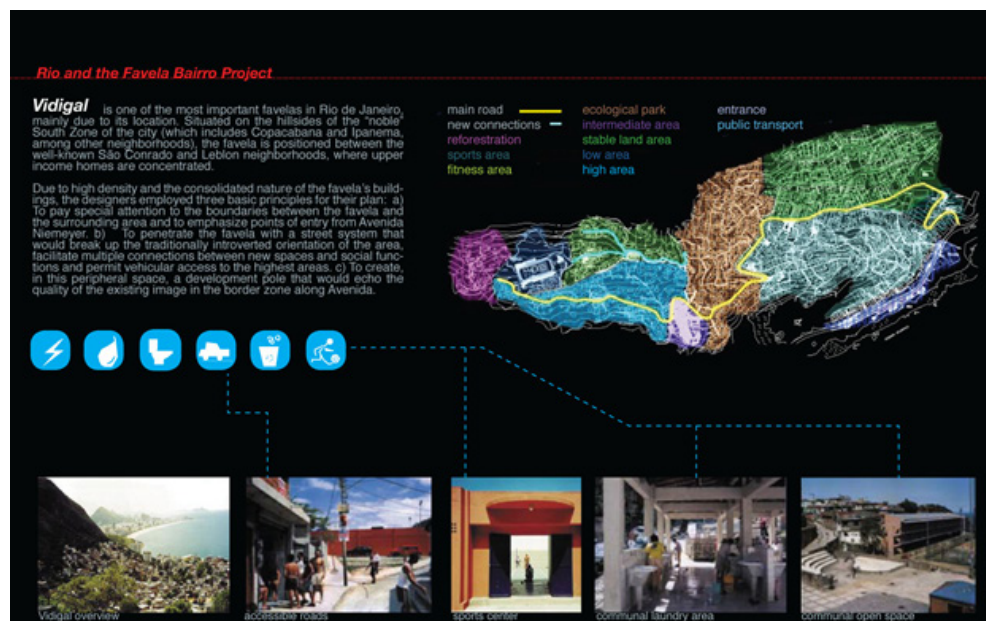


# *Conclusion*

## Conclusion

Urban Squares were the birth of European urbanism in the Americas and the Phillipines. The effort to build them was the largest human urban planning project in the history of mankind. Where there is still land and there is little to no urban settlement the plaza can be a perfect seed for the birth of an urban living room. The plaza's and the cities that they have created have grown in a disproportionate fashion to which urban plans must be addressed to combat the many issues that plague the former Spanish colonies (and Portugese colonies as well). In the Caribbean, the Phillipines, South, Central and North America population levels have exploded out of control with informal settlements commonly known as slums. Slums are not disassociated parts of the former Spanish Colonial cities. They are integral with any city. They present a different paradigm and show that diverse urban spaces may coexist, provided inequities are overcome and adequate living standards are universalized. The planning principles and urban form of the Square can be a generator for continued growth.

The relationship between the state and slums of Latin America has always been characterized as opportunistic, incomplete, and temporary. There must be policies in place to see that this characterization must not continue.





There are two ways to resolve the urban dilemma and growth in the slums. One way to resolve this would be the redevelopment of parts of the slums and insert some formalized urban plan with the proper infrastructure while the other would be to upgrade the existing slum “in situ” much like Italian hill towns.

In situ slum upgrading is organic. One example was developed between the mid-1990s and early 2000s through the Favela-Bairro programme in Brazil (Urban Net, Itamar Silva), is, until today, considered an effective approach to delivering more adequate living standards to informal settlements.

Slum upgrading initiatives recognize the right of the poor to live in urban land, whilst also acknowledging that mass produced housing delivered by the state is unsustainable and incapable of responding to the true heterogeneity of low-income families’ demands.

In situ slum upgrading often consists of some level of land regularization and improvements to the existing infrastructure up to a satisfactory standard. Typical upgrading projects provide improvements on streets and footpaths, street lighting, drainage, and roads, and often water supply and limited sewerage.

Usually, upgrading does not involve home construction, since residents are expected to be able to do that themselves. In this way, in situ slum upgrading acknowledges people's capacity to produce (or procure) and manage their own shelter and that, given some kind of security' of tenure to land, households tend to invest their savings, however small, in housing development – a lengthy and sometimes never-ending process”.

New Redevelopment would take parts of the slums and inject an urban intervention in the urban form of the square to resolve this issue. Europe itself went through times of population explosion and tackling problems of Overcrowding, disease, crime, and unrest. For example, the center of the old Paris in 1845 Emperor Napoleon III commissioned Georges-Eugene Haussmann (Baron Haussman) between 1853 and 1870.

*Haussmanns Paris*



Napoleon III instructed Haussmann to bring air and light to the centre of the city, to unify the different neighbourhoods with boulevards, and to make the city more beautiful. The Avenue de l'Opéra, created by Haussmann, painted by Camille Pissarro (1898). (Wikipedia)

Haussman's plan included the demolition of smaller, medieval neighborhoods that had been labeled a health hazard by city commissioners at the time. Following the demolition, the construction of large avenues, urban parks, installation of new sewers, plumbing, and irrigation systems. Haussmann's urban proposal was highly criticized and he was eventually let go by Napoleon's party however the proposal was put into application until 1927. The avenues and parks that make Paris so famous today are all due to the work that Haussman had laid out 150 years ago.





Napoleon III instructed Haussmann to bring air and light to the centre of the city, to unify the different neighbourhoods with boulevards, and to make the city more beautiful. The Avenue de l'Opéra, created by Haussmann, painted by Camille Pissarro (1898). (Wikipedia) Much in the way that Haussman was able to redevelop Paris in the 1850's the plaza and its urban plan can restructure the former Spanish Colonial Cities. New redevelopment introduced into the slums or on virgin land would also bring a formal or partially formal solution, in the case of existing urban slums, to urban expansion.



New redevelopment introduced into the slums or on virgin land would also bring a formal or partially formal solution, in the case of existing urban slums, to urban expansion.

The future of these cities is clear that growth is inevitable. This study shows multiple ways that slums may be redeveloped into viable cities. A return to the fundamentals of the square can be the savior for the cities future.

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