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urban planning & development

ANALYSIS FILE - THE GREATER PUEBLA

METROPOLITIZATION AND HISTORICAL CENTER

A SUSTAINABLE, OPERATIONAL AND COLLECTIVE DEVELOPMENT



INTRODUCTION

This analysis file is part of a series of documents released by « Les Ateliers » for Puebla workshop. It aims to give the participants an overview of the territory they will work on during a two week intensive workshop.

The following analysis was made through interviews with actors from the City and from Puebla Government, from the civil society, unions and universities, as well through academic research and through analysis in the field. Despite all our will to stay as objective as possible, this work may reveal a personal point of view. Thus, it may include mistakes, given that its authors are neither Poblanos nor Mexicans. That's the reason why we worked intensively and rigorously, during one month and a half, to collect the needed information and to write one document as complete and worthy as possible.

During our research/investigation, we faced some hindrances: overall trouble to access the information here in Puebla, trouble caused by the lack of coordination between the several governance strata (the Federal State, Puebla Government and the City), as well as the gap between planning and operational implementation. Both the workshop topic and Puebla City is complex. The stake of consistency of the metropolitan-scale thought stresses the necessity to implement a process that associates every governance stratum. Such necessity might be one condition so that the workshop results in concrete actions.

The current situation in Puebla illustrates the relationship between metropolization process and the city-center. The city is actually growing and sprawling whereas the city-center is depopulating. Then, among other goals, the workshop aims to discuss the spatial organization and the urban strategy one should implement in order to develop the territory. Let's keep in mind that the territory, namely Puebla city-center, is included a Mother-City or metropolis, itself included in a 2,5 -million-inhabitant and a 38-city State. One striking point in urban development process is the leading role of the private sector. As far as housing is concerned, illustrations of such role are on the first hand informal urbanization and on the other hand the huge development of the "fraccionamientos cerrados", large condominiums that are spreading in the suburbs. Like in many Latino-American cities, private assets play a predominant role in urbanization, urban development and the provision of services (whatever their quality). In fact, condominiums, that create closed spaces, are not proper to Puebla. They are a fast-growing phenomenon in Mexico as well as in other countries and are the spatial consequences of a search of safety in the city. As a result, the city proves to be socially and spatially fragmented. Let's note that the subject "Metropolization and the historic city-center" is the result of common reflection and agreement made "Les Ateliers" and the City's Authorities on the occasion of "Les Ateliers" team

visit in November 2011. Then, the team met the Government authorities, the civil society figures and many other figures. Thanks to those meetings, the main topics of the "amazement report", that was conducive to the document released in February 2012 to introduce the stakes of the workshop.

On the basis of that former work, an international call for application was launched and 178 candidates answered, quite an outstanding figure for "Les Ateliers". Then it was necessary to make a hard selection among so many highly interesting candidatures. Now the new professional of the city, namely the selected candidates, will have to imagine proposals and projects for Puebla City. The workshop, organized at mid-term of the three-year term of the City's Council, should build a framework and suggest reflections and actions on different time and space scales, to address the future organization of the territory.

Finally, we should keep in mind that the workshop couldn't take place without the preparation and combined efforts of Puebla city and the French Embassy in Mexico (IFAL), and with the financial support of our partners CITELUM and the federal SEDESOL, without which it would have been impossible to organize the workshop.

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Only black chapters have been translated to English. French and Spanish versions are available in <http://www.ateliers.org/content/metropolisation-et-centre-historique>

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CHAPTER II
THE GREATER
PUEBLA

URBAN PLANNING IN THE METROPOLIS

Given the urban process and flows between Puebla and the neighbor urban areas, it seems that the question of the definition of Puebla metropolis is complex. There are today several examples of definition or attempts to define Puebla metropolitan area.

People have tried for some years to define Puebla metropolis and have tried to implement a metropolitan-scale urban planning policy too, without any success. The important gap between every attempt of definition of the metropolitan zone shows how much the topic is complex. Depending on the cases, the metropolitan zone includes from 24 cities to 94 cities. At least, in every case, the metropolitan zone spreads beyond Puebla neighbor cities.

Among the definition studies of the metropolitan zone, we have just studied the case of the metropolitan zone Puebla -Tlaxcala. In 2003 the Program for the conurbation area Puebla-Tlaxcala was established ("Programa de Zona Conurbana Puebla - Tlaxcala"). Then, in 2009 the Program for the metropolitan zone Puebla - Tlaxcala and the Territorial urban planning project of the metropolitan zone Puebla - Tlaxcala were established ("Programa de Zona Conurbana Puebla - Tlaxcala"). Finally, in 2010, a global planning model ("modelo de Planeacion Integral") was established. None of the plans were implemented. Let's note that a new plan is said to be under work. All of those projects attempt to propose large-scale strategies for Puebla metropolis.

THE METROPOLITAN ZONE ADMINISTRATION

Despite the trouble to define a consistent metropolitan zone and to implement metropolitan-scale planning tools, there is today a regulation office for the metropolitan zone ("ZMPT"), called the Office for the metropolitan development of the "ZMPT" (Consejo para el Desarrollo Metropolitano de la Zona Metropolitana Puebla-Tlaxcala). It was created on October, 2nd, 2009. The metropolitan zone was jointly defined by the SEDESOL, the CONAPO and the INEGI. The office includes teams from the State and from the Federation. They aim

to define priorities, policies and strategies one should carry on for the metropolitan zone. The Office has different purposes, among which:

- To design plans, studies, programs, projects (especially concerning infrastructures and facilities), to get funds from the Metropolitan Fund ("Fondo metropolitano"). Then, the projects have to be consistent with the Development National Plan ("Plan nacional de Desarrollo").
- To choose to give priority to certain projects,
- To deal with other projects or programs in favor of the metropolitan zone development,
- To establish criteria to define the consequences of the measures implemented in the metropolitan zone.

The Metropolitan Office is funded by the "Fondo Metropolitano", itself funded by the Federal State. As a result, the Metropolitan Offices have to inform the Federation about their activities. The Offices are composed of representatives from the States of Puebla, from the State of Tlaxcala and from the Federation (Illustration 2).

Let's note that, in the 2009 Agreement, there is no reference to the potential participation or integration in the Office of the cities that are part of the metropolitan zone or of the IMPLAN (the Planification Institute of the City).

1 Programa Nacional de Desarrollo Urbano y Ordenación del Territorio 2000-2006 (PNDUyOT). Iracheta, Alfonso.

2 Programa de la zona metropolitana; 2009. Hernández, Castillo, Órnelas.

The Office members meet periodically. Their title as member is honorific and they don't earn any salary. The Office is composed of Secretary of States and of deputy Secretary of States.

On the occasion of the late Office meeting that took place in March 2012, the Governors of Puebla and Tlaxcala States signed collaboration agreements. The mayors of Puebla and Tlaxcala Cities were present at the meeting. The discussed projects deal with the recuperation of Atoyac, Zahupan and Alseseca Rivers, the development of infrastructure networks (water, electricity), a crime-prevention program, the Malinche reforestation and the Puebla-Tlaxcala railway link project.

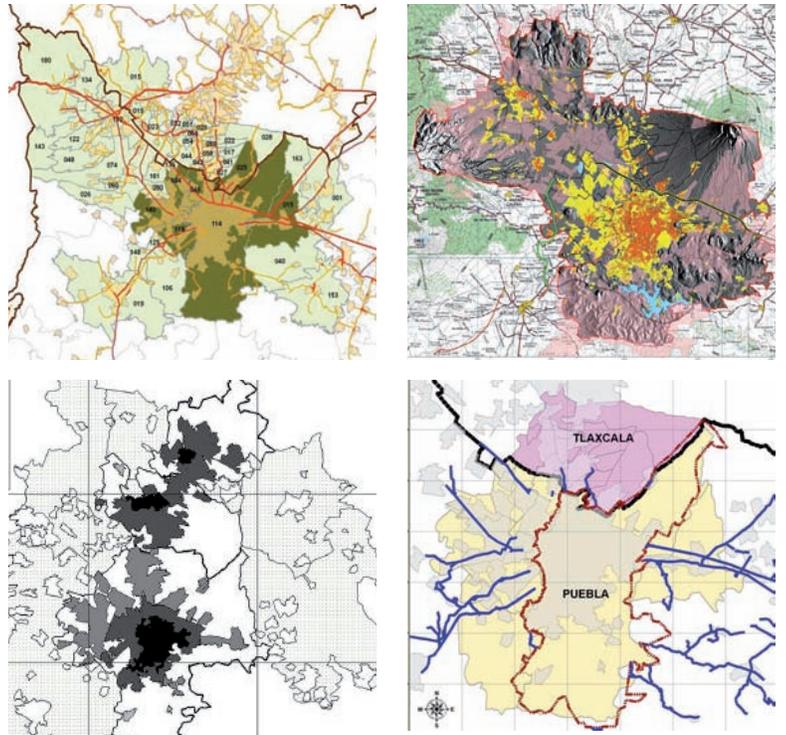


Illustration 1 The Greater Puebla: the different limits
Sources: Benítez, Óscar. http://www.scielo.org.mx/scielo.php?pid=S0188-46112011000200008&script=sci_arttext



Illustration 2: the Metropolitan Office.
Sources: documents from the Agreements on October, 2nd, 2009.

POPULATION AND SOCIAL ASPECTS

The agglomeration is mostly spreading within the boundaries of Puebla State, and its population is mainly concentrated in the State capital.

POPULATION

The population distribution among all the metropolitan cities shows that two thirds of Puebla state population is concentrated in Puebla City. In Tlaxcala, the population is much more dispersed among the 22 cities of the State.

In the case of Puebla, there are two major features to explain how the population of the metropolitan zone is distributed:

- The population is mostly concentrated in Puebla (the biggest city of the metropolis) and the neighbor cities play the role of dormitory cities.
- The population is concentrated along industrial corridors that are not in a conurbation with the heart of the agglomeration. That's the case of San Martin de Texmelucan (industrial corridor of Quetzalcoatl), of Zacatelco in Tlaxcala, and of the cities located along the Puebla-Apizaco corridor. Moreover, there is no link between the limits of metropolitan zone and the logic of the areas of concentration of the population. For example, important poles such as Atlixco and Tlaxcala are not included in the "ZMPT". In addition, there is an important concentration of population in the center of the agglomeration, along the industrial corridor Puebla-Tlaxcala. Finally, there is a big pole in the northwest, in San Martin de Texmelucan.

HUMAN DEVELOPMENT INDEX (HDI) AND URBAN MARGINALISATION

The Human Development Index is a social indicator defined by the United Nations and that measures the quality of life and the human development of a population.

Concerning the metropolitan zone and its suburbs, the cities of Puebla and Tlaxcala show high HDI, which may be explained by their capital function. Other cities of the metropolitan zone show average HDI, like in countries such as Costa Rica or Lithuania. Let's notice that the cities in conurbation with Puebla City (Cautlancingo, Amozoc, Ocoyucan, Tepatlaxgo de Hidalgo, Juan Carlos Bonilla para Puebla y San Salvador Verde and Chiautzingo para San Martin de Texmelucan) show the lowest index.

This situation may partly be explained by the transformation of the cities into dormitory cities dependent of the center. Ocoyucan city, to the south-west of Puebla City, show the lowest index. The CONAPO created a tool that defined so-called "marginalization zones" through calculation that integrates several index like housing, education, and income.

The map showing the marginalization degrees (illustration 3) stresses the territory zones where the most deprived places are located. It emphasizes the fact that the highest marginalization rates are in urban peripheries (Puebla and San Martin de Texmelucan), as well as along main road axis. According to the SEDESOL of Puebla City, a good deal of these zones is in more or less rural zones where population is very low and where, as a result, it is not profitable to implement projects. The local SEDESOL tries today to get funds dedicated to so-called marginalized or highly marginalized people.

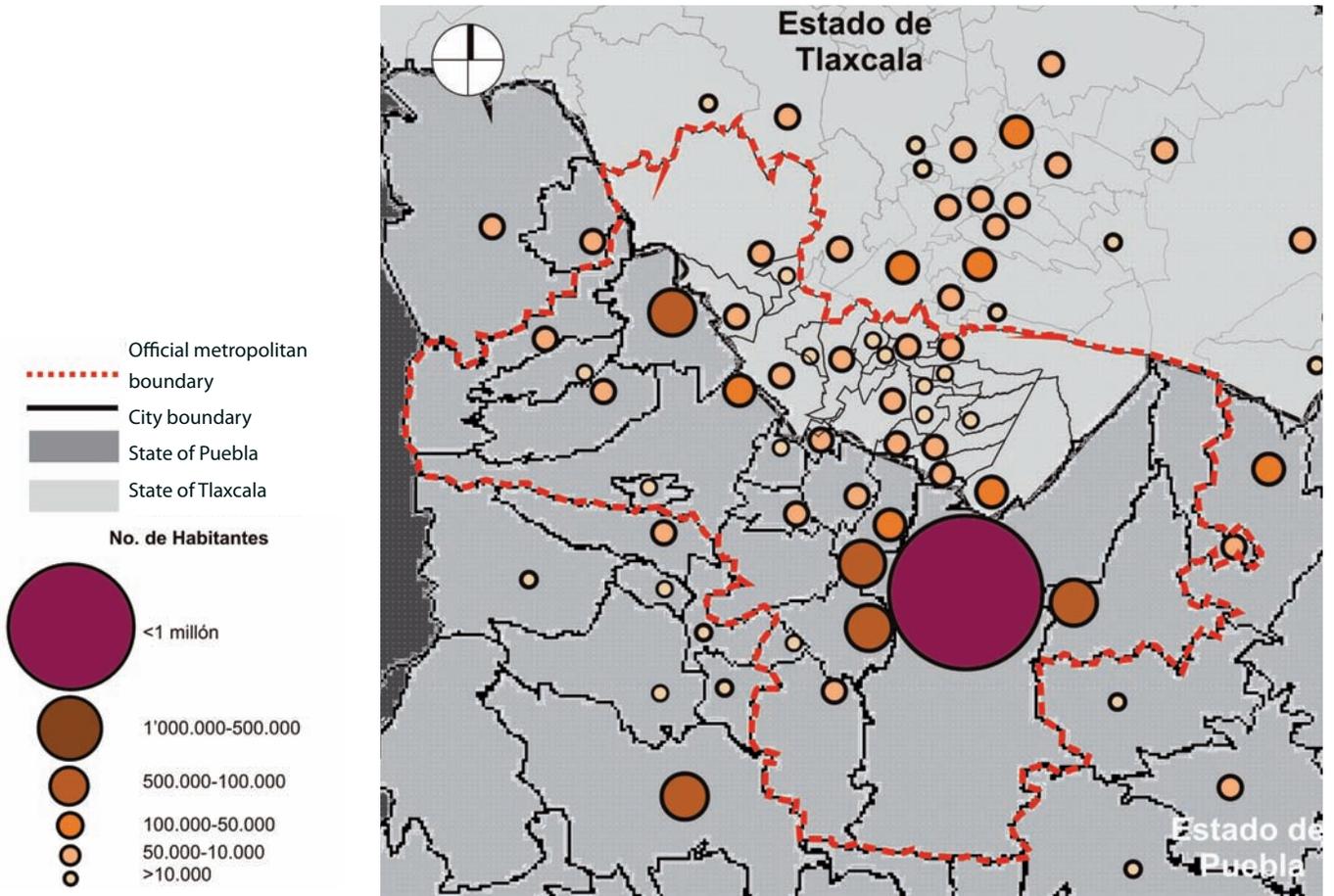


Illustration 1: Total population by city in Puebla metropolis. Source: population data from the INEGI (2010).

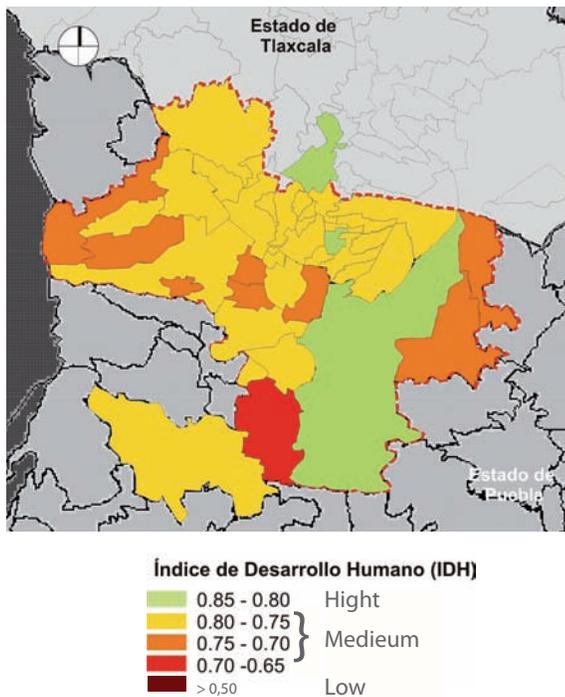


Illustration 2: HDI in the metropolitan zone and its suburbs. Source: data from the INEGI and the UNDP (2004)

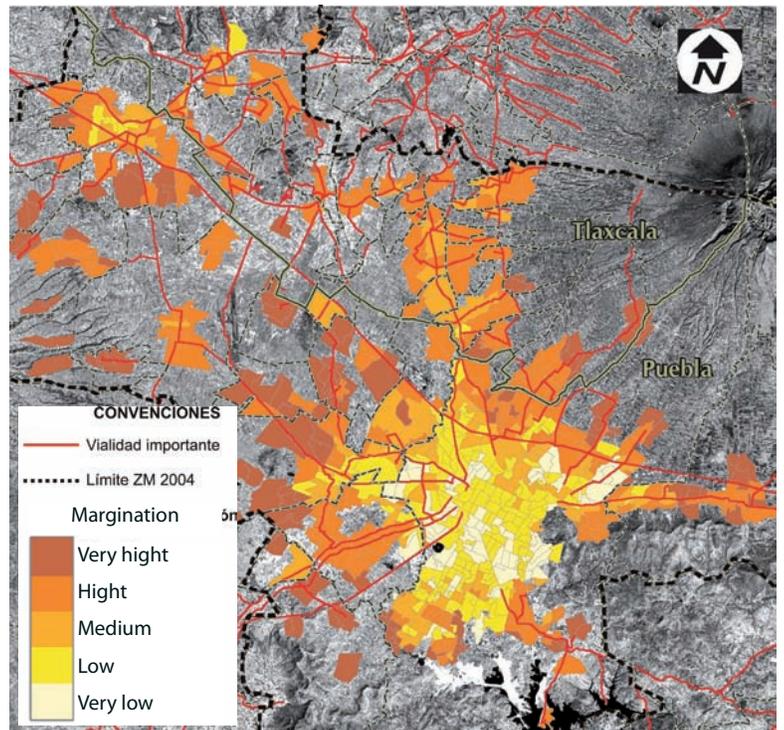


Illustration 3: Degrees of marginalization in the metropolitan zone Puebla Tlaxcala. Source: Modificado de http://www.conapo.gob.mx/Publicaciones/IMU2005/mapas/53-ZM_Pue-Txa.pdf

PRODUCTION, GNP AND EMPLOYMENT IN THE METROPOLIS

Economic centralities of the territory have developed through the historic development of industrial corridors that slowly morphed into service sector zones. Paradoxically, some cities near the production sector don't benefit this economic boom and show low GNP and lowest employment rates.

PRODUCTION

For the late five decades, the metropolis economic activities have transformed. From the sixties, rampant industrialization took place in industrial corridors, in Puebla as well as in Tlaxcala. That massive industrial development was the result of the "concentrated devolution" of Mexico City.

At that time, the industrial sector growth occurred at the expense of the agriculture sector, especially in Tlaxcala State, which used to have a high farming production.

Since the early eighties, Puebla economy morphed into a service sector economy. In Tlaxcala, such process occurred later (mainly from the nineties). Puebla city, that offers a high range of services, concentrates the major part of the production and, thus, maintains neighbor cities in a situation of dependence. Those upheavals of the territory vocation result in two problems. The first one concerns the loss of farming surfaces, which, combined with urbanization, results in growing food provision insecurity.

The second problem deals with a low innovative industry which creates almost no transformation products (Hernandez, Castillo, Ornelas; 111).

GDP IN THE METROPOLIS

The calculation of the GDP of every city included in the metropolitan zone, made by the SEDESOL in 2004, shows that Puebla creates the highest income of the metropolis. After Puebla, cities out of the conurbation, like San Martin de Texmelucan, Tlaxcala or Atlixco (out of the official metropolitan zone) have the highest GDP, whereas most of the cities in the conurbation around Puebla City have a lower GDP.

Cities which show the highest GDP are:

- San Andres y San Pedro Cholula, which concentrate important universities, and where the richest sector of the metropolis, Angelopolis, is located,
- San Martin de Texmelucan and Amozoc, where the industrial corridors are located,
- Tlaxcala, the State capital, which concentrates the infrastructures, services and activities of the State,
- Atlixco, which shows strong trading and service activity.

The cities with the lowest GNP are mainly located in Tlaxcala State, in sectors where the economy is mostly based on farming.

Let's note too that two cities in the conurbation with Puebla city, Cuautlancingo and Ocoyucan, show among lowest GDP and seem not to benefit from the economic dynamics of the agglomeration.

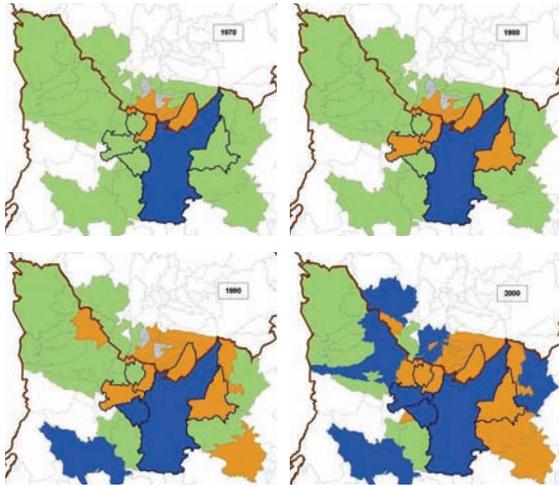


Illustration 1 Productive transformations at metropolitan area
Source: Benítez, Óscar.

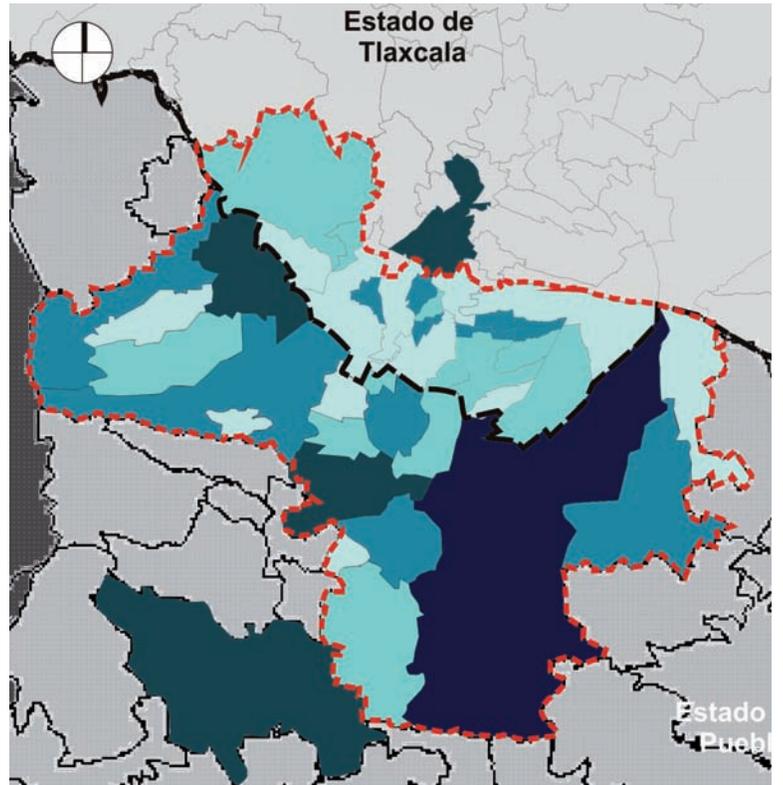


Illustration 2 GDP at the metropolitan area
Source: INEGI and PNUD 2004

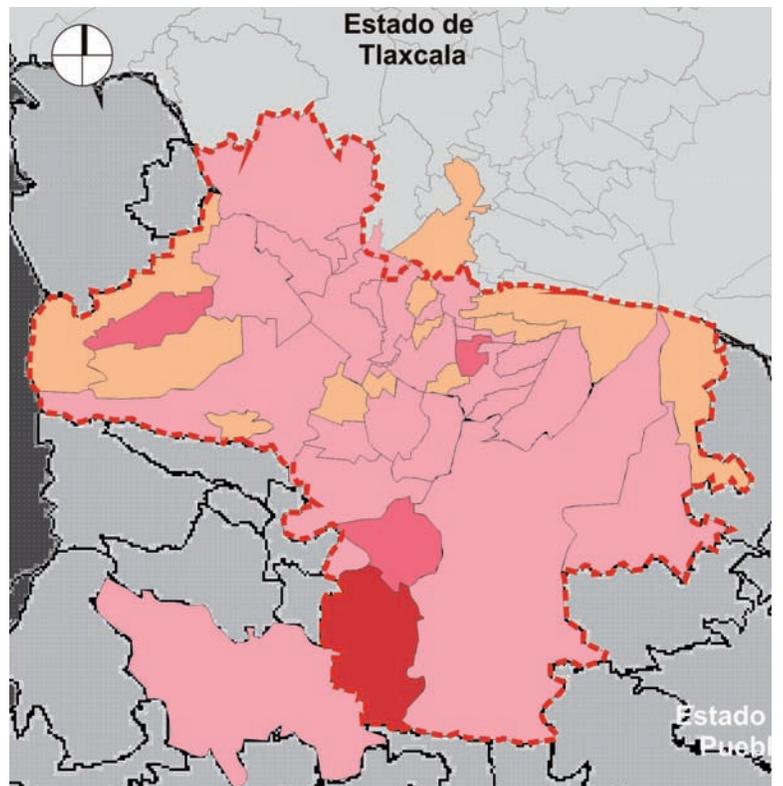


Illustration 3 Employment rate
Source: INEGI and PNUD 2004

PUBLIC TRANSPORTATION

All transport lines operate on concessions: the offer comes from people who obtain a licence from the authorities. The authorities are therefore reduced to a management participation and struggle to meet the needs of 67% of non-motorized poblanos. The State attempts to regulate public transportation through a major Metrobus project.

Licensed transportation service ensure an adequate supply of transport is a legal requirement for the state. This role is undertaken on the basis of private provision: a licensing system. The authorities' role is a management and does not allow it to take the lead and make choices on transportation planning. Altogether there are around 6000 concessions.

In this way, the offer regarding some places is only weakly assured, and there is no overall consistency in transport provision. The current network is radio-concentric and has a saturated center. Therefore, it is particularly inefficient, increasing considerably the distances and travel times. It is also an element that contributes to the congestion the city center.

METROBUS OR THE "RUTA": PROJECT REGULATING

The very high costs for the implementation of underground networks (especially in an earthquake zone) have prompted the government to make the choice of a Metrobus system: a rapid bus system with dedicated tracks and fixed stops, which thus does not suffer from traffic congestion hazards. The program, called RUTA (Urban Transport Network Articulated – Red Urbano de Transportes Articulados) is conducted by the State of Puebla, which eventually provides six lines. The first is under construction and will soon be inaugurated.

The Metrobus system will also be run by concessions: a total of six companies (one per line) shall operate transport and construction of the stations. The State chooses paths, stopping points, and implements the roads. The government has a role in planning and regulation. It is financially onerous, thus after the implementation, it will be given to private companies.

THE "PERIFÉRICO ECOLÓGICO"

Availability of roads causes urban sprawl. The construction of a "green ring road" (open to traffic in 2011) was the trigger for a new intense production of mass housing. According to the comments of some staff in the municipality, the project was then presented as a way to contain the metropolis disordered sprawl.

1. From State Secretariat for transportation.

2. See next chapter



Illustration 2 RUTA. Chachapa - Tlaxcalancingo, First line, now under construction

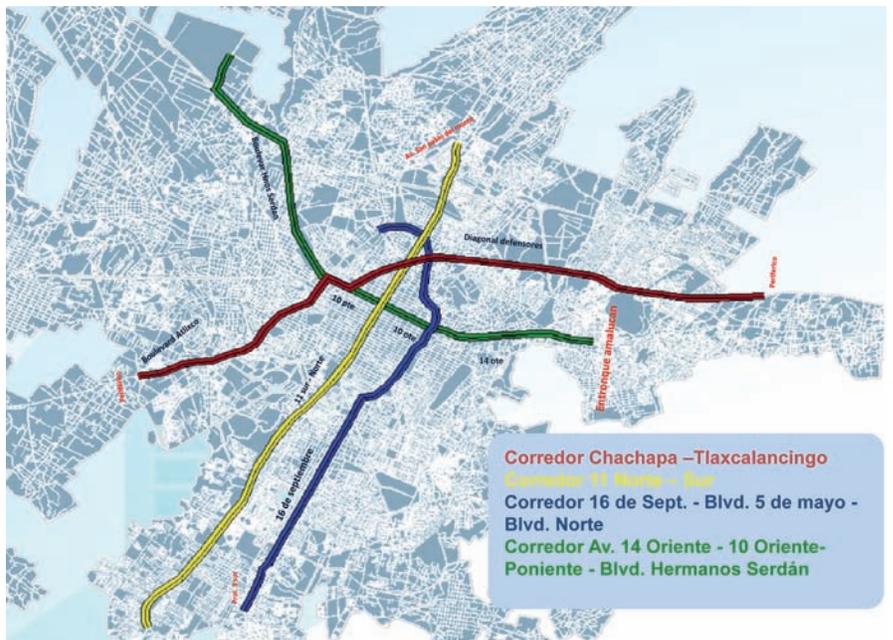
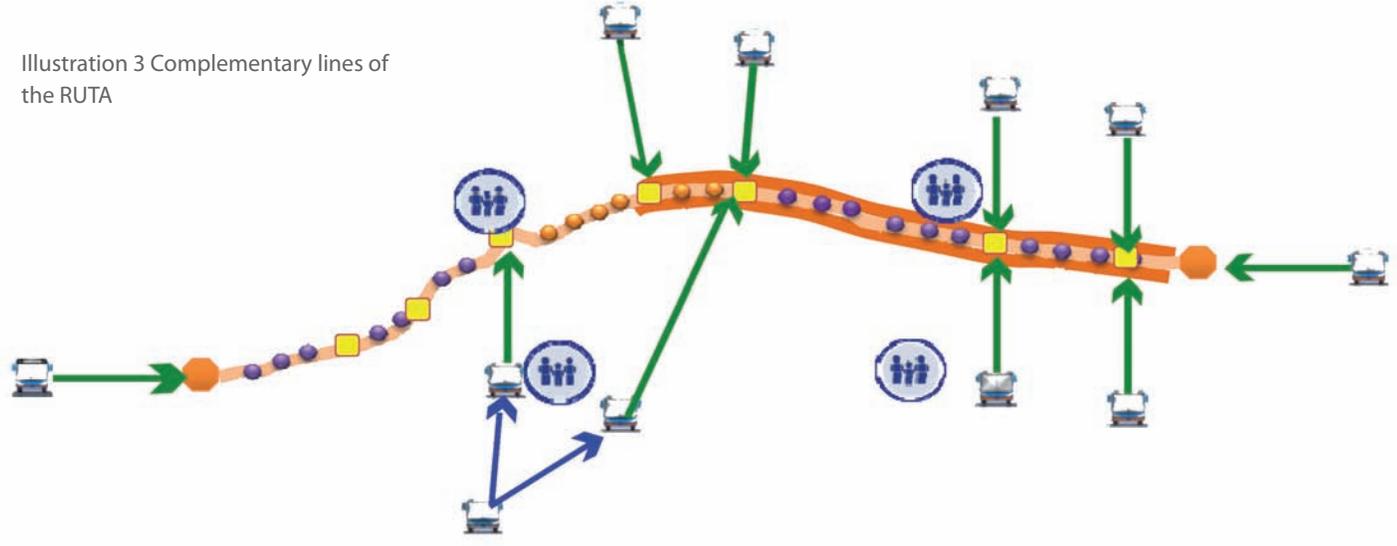


Illustration 3 Complementary lines of the RUTA



MARKET PLACES



Markets have a very important part the city of Puebla and in Mexico. The market transformation program aims at integrating the markets as structural elements of the identity of the city

LA CENTRAL DE ABASTOS

There are a total of 27 markets, including the Central Abastos (supply center) through which pass the goods before supplying all 26 remaining markets. The Central has a total area of 4.5 ha, which is relatively large for a city of 2.5 millions inhabitants. For comparison, Rungis has 232 ha to supply the 12 million inhabitants of the Paris metropolitan area, or 304 ha are dedicated to the gigantic Central de Abasto de Mexico to feed the 20 million inhabitants. The Central was built in 1985, strategically positioned on the edge of the highway Mexico - Puebla - Veracruz. In addition to supplying nearly all of the city of Puebla, it is also the main supply source for the State of Puebla. According to Ricardo Larracilla, about 70% of the foodstuffs are produced within the State, except for fish and seafood, but also for certain goods that are not produced in sufficient quantities in the State: bananas, lemons, or other mangoes and oranges for example. The Central has undergone a rehabilitation project, especially to facilitate the supply (efforts on roads and accessibility). The rehabilitation project (in progress), with a total cost of 21,999,999 pesos (1,293,164 euros), is funded half by the city of Puebla, and about half by Prologya.

MUNICIPAL MARKETS AND "SUPPORTING" MARKETS

There are two types of markets: municipal markets of public ownership, and private "supporting" markets (Mercados de Apoyo). There is a significant imbalance between the level of occupancy: up to 98% are occupied in the center with the municipal mercado 25 de Mayo, and up to 29% for the private market Francisco I Madero. Generally, private markets suffer from a lower occupancy of their buildings. But the actual occupation does not mean a less significant activity. Indeed, the authorities less control private markets, powerless facing the invasion of informal trade ("ambulantes") which are installed in public spaces and car parks. If places are empty, it is because sellers considers them as too distant, at the margin, in the background of the market, and therefore less profitable. This is not about occupying the streets in order not to pay for a place: they also pay their location to the "leaders" of the trade organizations. The map clearly shows the difference in supply markets between center and periphery (Figure 4).



Illustration 1. Logo of the markets

PROJECT REHABILITATION AND UPGRADING OF MARKET POBLANOS

This recent project started just over a single year, on February 14th, 2011. It aims at rehabilitating and technically improving the markets, but also at a legal upgrading (space allocation, officially attributed to the traders). And last but not least, the ambition of the project is to increase the attractiveness and the economic significance of markets, improving overall their image towards the local population. So there has also been an important communication work to integrate and promote markets as a structural element of the identity of the city, explains Ricardo Larracilla, director of the Supply Branch and the Internal Market.

NEW MARKETS: OPPORTUNITIES FOR RENEWAL AND NEW CENTRALITIES?

Recently the city has started to develop a program to build new markets, "minimarkets" (see figure 5). These projects must be located in outskirts and remote areas from the existing markets. The current brake to the construction of these markets is the difficulty to purchase land for setting up in places where there is no public land reserve. The project, still in embryonic form, could be an exceptional opportunity to consider the renewal of strategic areas, supporting or generating new centers in residential remote areas, at the metropolitan scale. There is indeed a major imbalance center / outskirts, with markets mainly concentrated in the city center. One might also ask how these new markets could be an opportunity to invest and transform the wastelands for example. The question then is how to finance these operations and set up projects.



Illustration 2. La Central de Abastos.

Illustration 2 Markets in Puebla.

Source: Secretaría de Desarrollo Económico.



Illustration 3 Minimarkets

INFORMAL TRADE



A very large proportion of the population works in the informal sector: according to INEGI, 13 million people in Mexico. But organizing and regulating this trade is complicated, because it is mostly in the hands of the “leaders” of trade associations, in public spaces as in markets.

INFORMAL: ILLEGAL?

Street trade and informal trade are a very significant phenomenon. According to INEGI, this would concern 100,000 people in the only municipality of Puebla. There is a municipal policy of regularization of informal trade: the “Secretaría de Gobernación” provides licenses to those who so wish, under certain conditions. Only the center and the Monument Zone are excluded, having prohibited any street trading. These permits are quite easily delivered and the rental price of a site in public spaces is not very high, around 100 pesos⁽¹⁾. There are several levels of “legality” from the perspective of the municipality: the “ambulantes”, having no official permission, have no legal status. Instead they let pitches in public spaces to local associations (mention may be made of strong associations such as “28 de Octubre”, “10 de abril”, or “AAA”). The occupation of the “ambulantes” is official (they pay a monthly fee to stay there, and they have a paper proving it). For associations, we can speak of mafia organizations that rent a public space that is not theirs. These informal organizations have almost total control: private markets, but also in the street and in the “tianguis”.⁽²⁾

The municipality does not have data on some markets: the case of Hidalgo Market, for which the association of “28 de Octubre” refuses to provide informations nor to allow the city staff to develop such data. ⁽³⁾ Trade associations have a strong political weight and municipal authorities are forced to interact with them and tolerate informal trade that they do not master, and which is officially illegal. A repressive policy would generate significant resistance movements. In some cases (especially in the center) the “illegals” occupants are expelled even if they have yet paid their location (desalojamiento operations). In other cases, it is impossible for the authorities to intervene: the “ambulantes”, in greater numbers, sometimes resist

and confront the police. So it is a constant struggle between the leaders of trade associations and authorities in place that seek to treat the image of the Monument Zone: “the historic center has acquired a new symbolic value: the ideal staging of political effectiveness”. ⁽⁴⁾

Of the 100,000 merchants identified by INEGI, only 1,500 have a permit issued by the municipality, and trade associations record 14,766 other ⁽⁵⁾. The figures show how informal trade is not regulated by the municipality, and also how the “leaders” have their hands on it: the 80,000 missing, mostly, are independents or otherwise associated with trade associations that do not communicate with the authorities.

HOW TO CONSIDER STREET TRADE?

There is significant and unmet demand for legal places in public spaces, that would be reserved for the informal trade, which is especially visible in the center, where informal trade (theoretically illegal) is widely tolerated. The lack of supply increases the power of the “leaders”.

There is an issue here. What places could be used to organize informal trade? In the pedestrian streets? In gardens or public squares? Requisitioning and expropriating strategically located wastelands? Briefly how to support and consider street trade?



1 According to the Secretaría de Gobernación

2 Tianguis are outdoors markets in public spaces. They come from a Pre-colombian long tradition

3 Detailed report on markets, Secretaría de Desarrollo Economico, Turismo y Competividad

4 Antonine Ribardiére and Bernard Tallet, Atlas Mégalopolis, Mexico, Autrement ed., 2011.

5 Datas given by the Secretaría de Gobernación



HISTORY OF THE TEXTILE INDUSTRY

The industrial history of Puebla goes back to its foundation: in the following years, a flour industry was established. An industry based on hydraulic energy already existed before the electric energy era of modern industry during the 19th century. Therefore, the first textile industries located close to waterways.

It is the presence of mills that were used to grind grains that allowed the development of the textile industry in the 19th century. In 1543, Juan Lopez de la Rosa had the first textile industry of Puebla's history built (which produced silk): it was called the Molino de Santo Domingo in 1576. In 1835, Estevan de Antunano had "La Constancia" built, which settled in the big mill ("Molino grande") of "Santo Domingo", close to the Atoyac River. Antunano had also the "Economica" built in 1843. Between 1835 and 1845, 7 factories emerged along the rio Atoyac («la Constancia», «benevolencia» or «amatlan», «el patriotismo», «el mayorazgo», «molino de en medio», «santa Cruz Guadalupe», and «la economia»), 3 along the san Francisco River («la teja», «Guadalupe», and «el Carmen»), 3 at atlixco («la esperanza», «la providencia», and «la luz Del siglo»), and one along the Alseseca River («la amistad»).

It is interesting to note that the settlement of the first industries is closely linked to the geography, the topography and hydrography of the territory around the city at that time (figure 1). Indeed, most of these factories used the technology of hydraulic mills (others used the steam machine). In the database of the historic maps of the city of Puebla, the map of 1862 is the first one to include rural territories, as it shows the factories, "ranchos" and "haciendas" of that time. But more than taking into account the representation of the new of industrialization of the city, this wider frame was designed in 1862, to resist against the French invader.

In the second half of the 19th century, there is a progressive shift towards hydroelectric energy. In 1893, 13 factories have their own

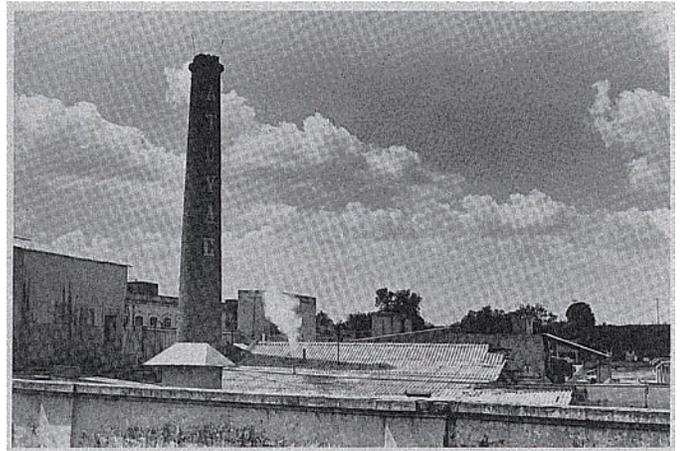


Figure 1: Textile factory El Mayorazgo on the "11 sur". Photo. Rosa Ma Palafox.

production of hydroelectric energy. In 1902, there are 37 textile factories in Puebla, and 51 in 1913. One year later, it is the first decline of the industry in the context of the Revolution: burned factories, destroyed machines, and paralysed rail traffic. But the vitality of the textile industry of Puebla will not be much affected and after the Revolution, the factories started back up again: in 1920, 47 of the factories existing in 1913 were in operation. The collapse of the textile industry that will follow during the 20th century (which still exists but to a far less extend than before) will be one of the factors of the physical degradation and the depopulation of the city centre.

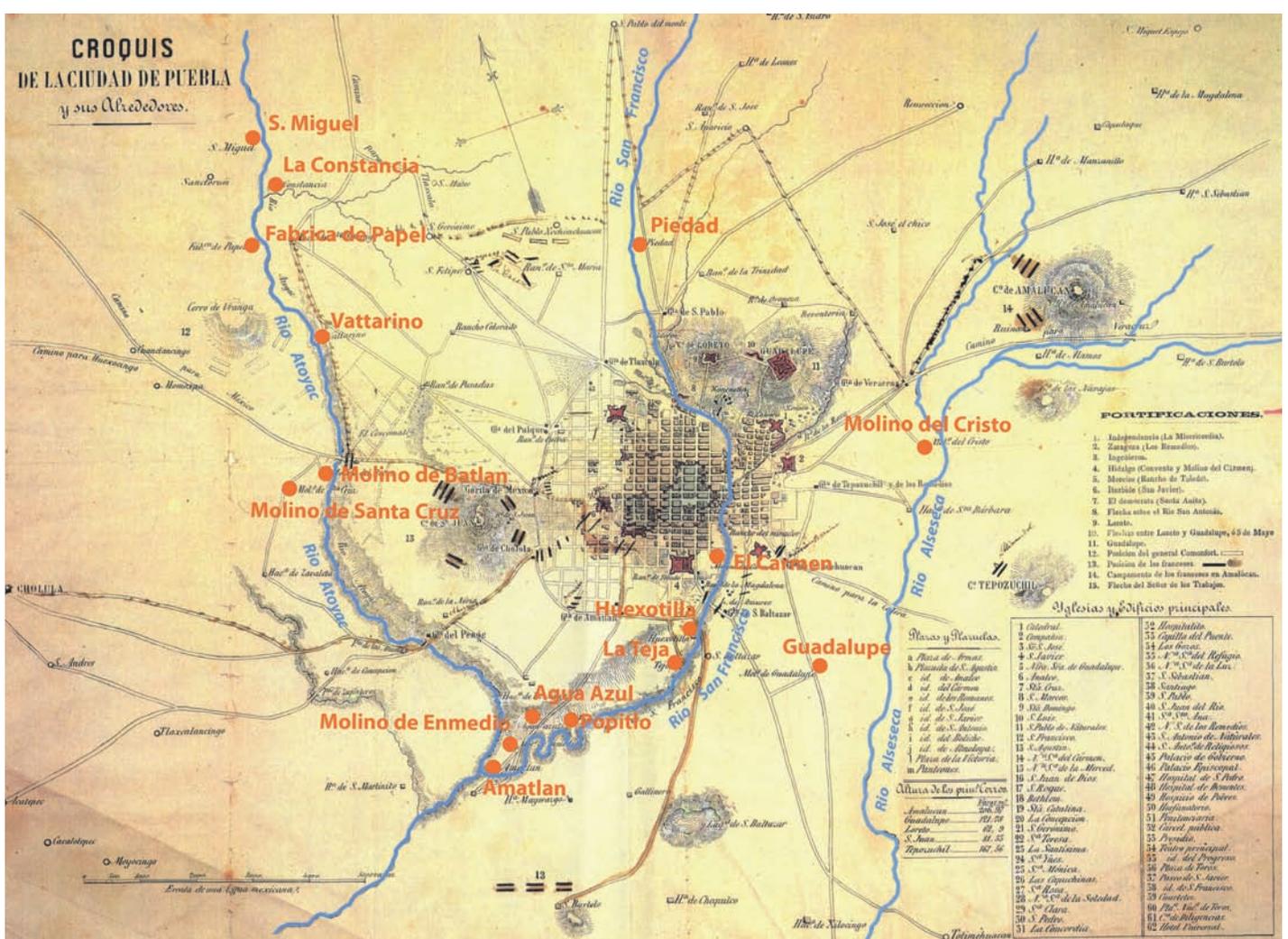
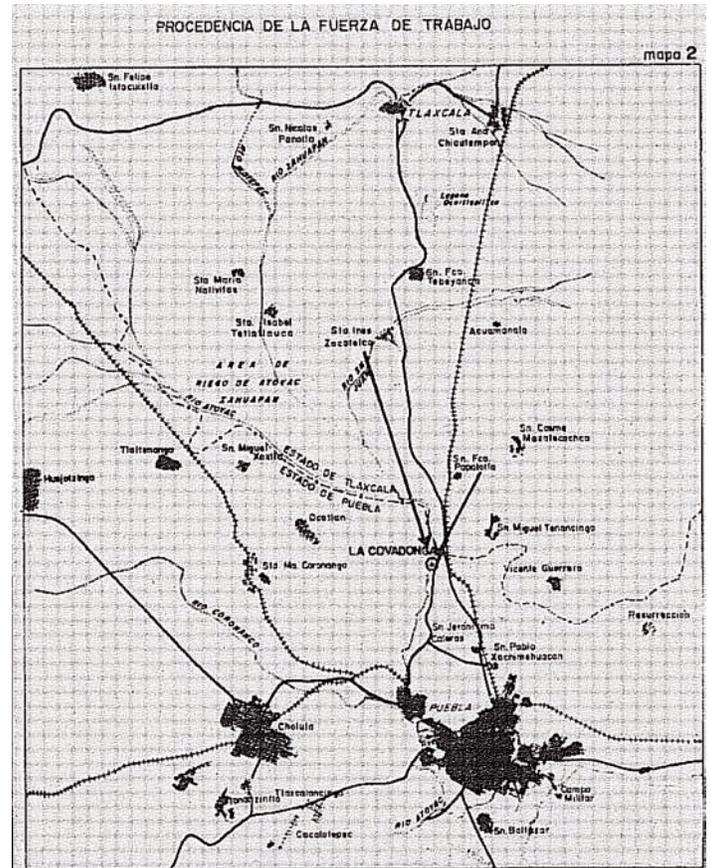
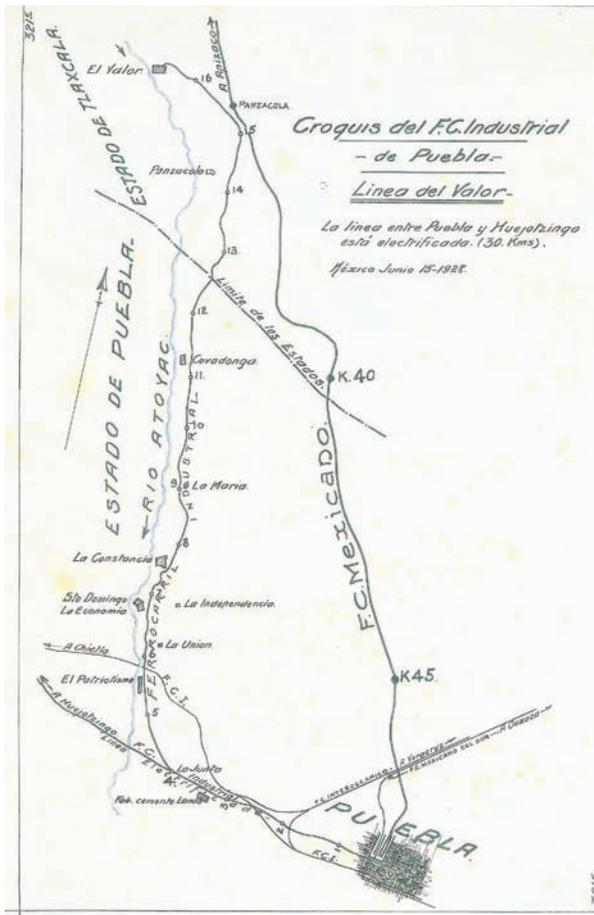


Figure 1: Localization map of the industries (mainly textile ones) along the main rivers around the city, and especially the Atoyac River. From the original map from 1862: "Croquis de Puebla y sus Alrededores."

Figure 2: From Puebla on, the "Ferrocarril Mexicano" and the "Ferrocarril Industrial", along the rio Atoyac. Map from 1928. Source: Centro de Investigacion de los Ferrocarriles Mexicanos. Figure 3 (right): New polarities emerge at the regional scale thanks to the implementation of industries, including Puebla, Tlaxcala, Cholula and also Atlixco in the South - which can not be seen on the map. Source: Secretaria de Recursos Hidraulicos.



THE RAILWAY

The train was an essential component of the economic and urban development of Mexico and Puebla. Today, despite the fact that the transport of goods on the Inter-Oceanic line is less significant, the vestiges of the railway system are only signs of its past glory. However, those vestiges also have an important potential.

GLORY AND DECREPITUDE OF THE MEXICAN RAILWAY

The massive industrial development of the city is due to its strategic position between the port of Veracruz and the Mexican capital. Puebla's central train station (1) was the first station in the country, on the first line Veracruz-Puebla-Mexico and its construction was completed in 1873: the line "Ferrocarril Mexicano". Later on, three lines passed through Puebla: the «Ferrocarril inter-oceanico» (2), the line Puebla-Oaxaca, and the «Ferrocarril mexicano». In 1930, 90% of the transport of passengers was done through the train, and 10% through routes. The automobile industry gained more and more over the rail. The rail was progressively privatized in the 20th century and today, in most of the cases; it is almost not used anymore for passengers transport.

THE POTENTIALS OF THE RAILWAY

If the railway system was progressively privatized, the lines and the associated spaces are still public spaces (federal properties). Therefore, there is a secret reserve of land that is associated to the railways. Unfortunately, we could not have more details about these properties on the scale of Puebla's metropolitan territory (3). What use of these lines can be imagined today? Should the transport of passengers be reintroduced at a national scale? Or at the metropolitan scale of Puebla, through the organization of a new public and inter-urban transport network (4)? Can active transport systems, public spaces and parks be imagined?

Using the railway system brownfields would have potential to imagine a public transport policy, which would be viable and organized, and opposed to inefficient a "micro-transport" system based on concessions. It would also have potential, in order to think a network

of public spaces. Some of these spaces are already used in an informal way, like public spaces used by pedestrians or bicycles (figure 3). A work would have to be accomplished to list all the spaces and rail lines that could be used to imagine new projects. Despite some parts of the network, which were replaced by roads, those lines still exist today.

THE PROJECT OF COMMUTERS TRAIN PUEBLA-TLAXCALA-MEXICO

How can we grasp the opportunity of the emerging railway project linking Puebla-Tlaxcala-Mexico? This line exists today, but in the current situation, 4 hours would be needed (with an available line) to link Puebla and Mexico, when 2 hours are needed if the commuters use the road.

1. The railway museum today (Museo Nacional de los Ferrocarriles Mexicanos)

2. The ferrocarril Inter-oceanico never reached the ocean

3. According to Alfredo Nieves Medina, from the Mexican Railway Research centre (Centro de Documentación y de Investigación Ferroviarias - CEDIF). It is true that despite a map of the federal properties in the historical centre, we could not access any information regarding public properties in Puebla.

4. Efficient suburb trains going to Mexico (suburbans) exist for example



Figure 1: General topographic map of Puebla and its surroundings in 1884, on which some elements can be clearly seen: the line towards the East and towards Amozoc (Inter-oceanico) and then Oaxaca; the line going to the South-West through Atlixco (Inter-Oceanico); the line going to the North-West and going to Texmelucan (Inter-oceanico), and the line through the North and going to Mexico through Tlaxcala (Ferrocarril Mexicano), and finally through the South the “Ferrocarril Carbonifero del Sur”.

Source: Mexican Railway Research centre (Centro de Documentación y de Investigación Ferroviarias – CEDIF).

Figure 2: Map of railway Apizaco-Puebla,



from the Ferrocarril Mexicano of Mexico-Veracruz, going through Tlaxcala, 1907.

Source: Mexican Railway Research centre (Centro de Documentación y de Investigación Ferroviarias – CEDIF).



Figure 3: The new uses of the railways lines. Here a part of the old railway going from Puebla to Cholula, and then to Atlixco, and DF. The line is still in use but only a few trains transporting goods use the line every day.

THE INDUSTRY IN PUEBLA

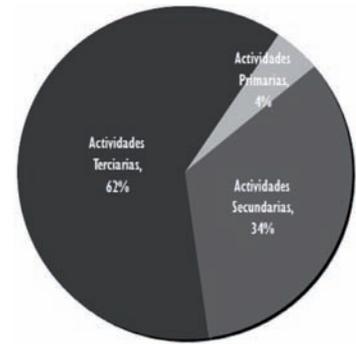


Figure 1: parts of the GNP of the Puebla state in sectors. Source: INEGI

An important part of the economy of the state of Puebla is based on the industrial sector, comprising 34% of the GNP of the state. An important part of this industry is located in Puebla's metropolitan zone.

AN IMPORTANT INDUSTRY SECTOR, WHICH IS MADE IN MAJORITY OF THE AUTOMOBILE INDUSTRY

3,4% of the national GNP was made of the GNP of the Puebla state in 2010. If the third sector produces more than the half of the GNP (64%), the secondary sector represents an important part with 34%. The basis of the secondary sector is the manufactured industry (26% of the GNP) and especially the automobile industry, as it represents almost the half (47,7%) of the manufactured industry products, which is 12,5% of the State's GNP. This production essentially relies on the Volkswagen factory, which is also the fabrication factory that produces the most in all North America (figure 2). The major part of this production (83%) is being exported, mostly into the United States. In 2010, 80,5% of the exportation of primary and manufactured goods were exported into the United States' market (2).

With 1,6 milliards barrels per day the state of Puebla produces also 0,6% of the national oil production (1). Therefore, Puebla is the sixth (among seven) Mexican state producing oil. It is interesting to note that in Mexico, the major part (83%) of the oil is extracted offshore (3). The state of Puebla is also one of the smallest gas producer in Mexico (it is ranked 8th among 9 states), with 0,3% of the national gas production and 86 millions cubic feet per day (4). Finally, the electricity production represents 1,2% of the national production, creating 1849,9 gigawatts/hour, and among them 60% are hydroelectric energy, and about 40% are thermoelectric energy.

Among the manufactured industries, there is a wide majority of micro-firms (95% of the firms employ 1 to 19 persons) that generates a small part of the total incomes (3%). However, a very small part of bigger firms (0,5% of the firms employ 251 workers or more) contributes to the production of 76,6% of the incomes (5).

WHAT FUTURE FOR THE AUTOMOBILE INDUSTRY IN PUEBLA?

Most of the industrial production relies on the big firms, and especially on Volkswagen. We might ask what will be the future of the automobile industry in Puebla, as it might become weaker in the following decades, bearing the exhaustion of carbon energies in mind. On the other side, the exhaustion of carbon energies will not necessary lead to the end of the automobile industry, but might lead to a potential transformation (towards electric automobiles and renewable energies)?

1 Source: Pemex, 2006 / Atlas Megalopolis Mexico, Antonine Bibardièrre and Bernard Tallet

2 Source: Bank of Mexico / Atlas Mégalopolis Mexico

3 Source: Pemex, 2006 / Atlas Mégalopolis Mexico

4 Idem

5 For detailed information, please refer to the tables in the annex part, especially the one about "Information statistics on the economy and industry in the Puebla state"

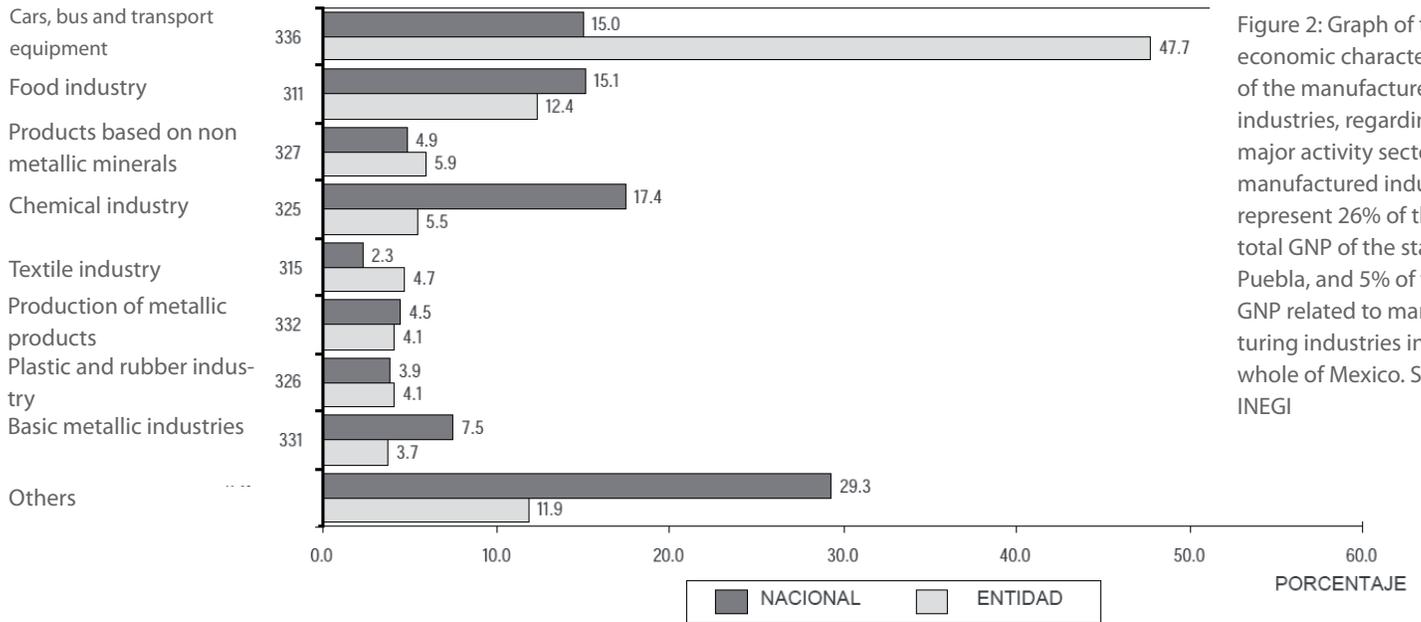


Figure 2: Graph of the economic characteristics of the manufactured industries, regarding the major activity sectors. The manufactured industries represent 26% of the total GNP of the state of Puebla, and 5% of the GNP related to manufacturing industries in the whole of Mexico. Source: INEGI

Figure 3: Volkswagen in Puebla



Figure 4: Volkswagen's exportations parts

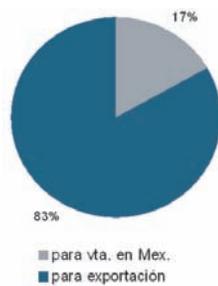


Figure 5: Volkswagen in North America

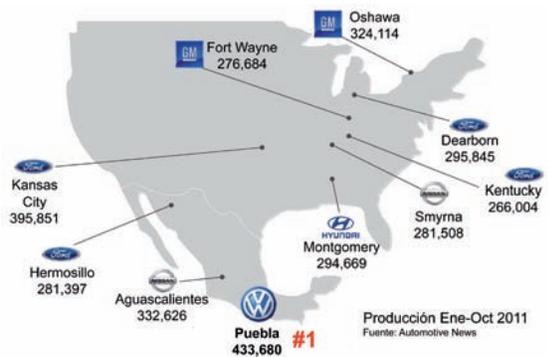
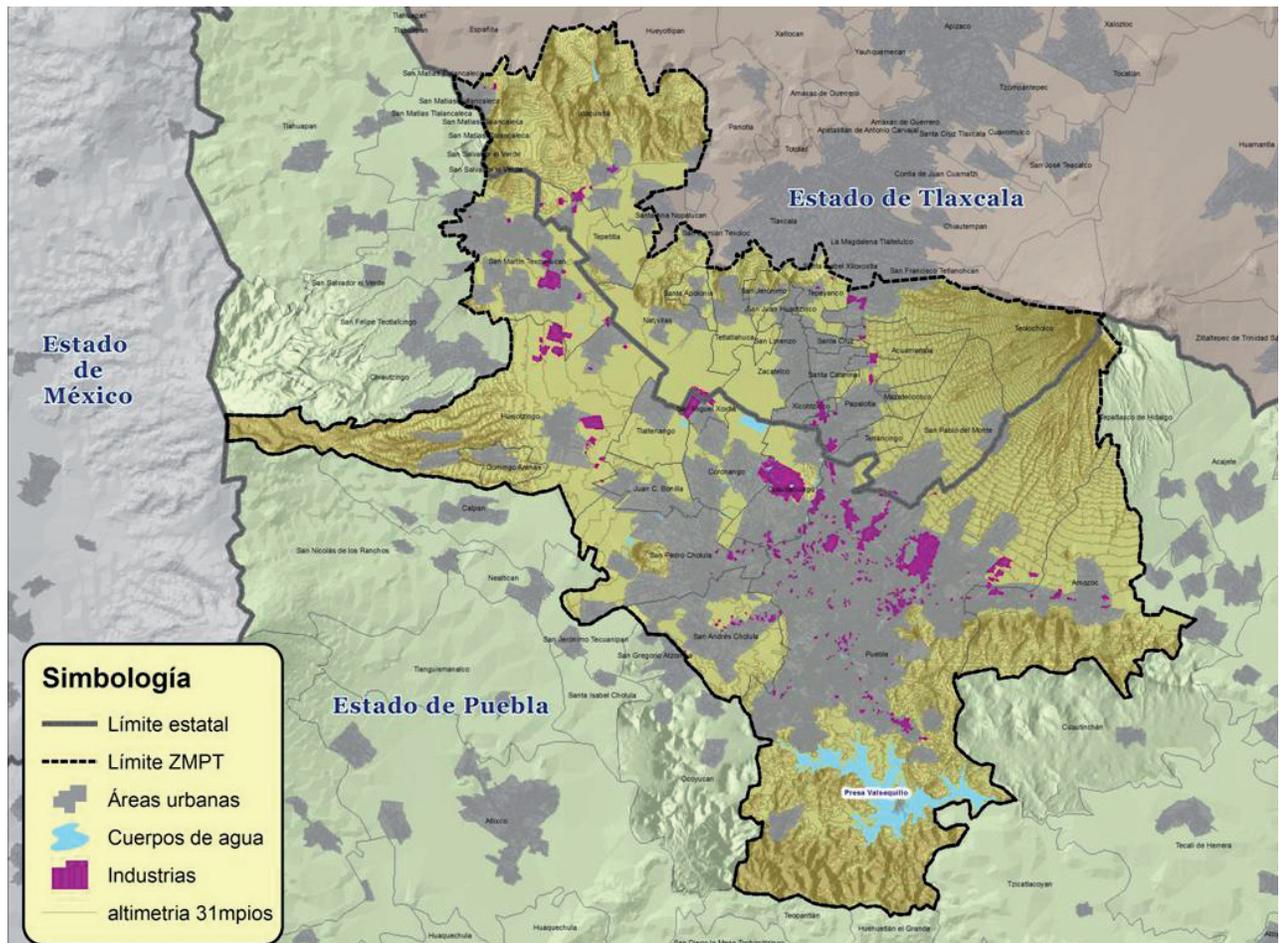


Figure 6: Map localizing the industries in the metropolitan zone. The industries are concentrated in majority in the Northern part, following the high-speed way Mexico-Veracruz, but they are also disseminated in the whole metropolitan zone. Source: Iracheta, Alfonso.



TOURISM

Tourism is one of the reasons why Puebla's metropolis is attractive. Puebla and Cholula are the most popular and known destinations in the region.

Puebla's historical centre, listed as a UNESCO World Heritage Site, is probably one of the most attractive places in the whole metropolitan zone. Most of the touristic attractions can be found there: restaurants, museums, craft trades (ceramic). The Los Fuertes site (with the Loreto and de Guadalupe forts) became a new important place in the centre and a new touristic attraction; especially with the events related to the celebration of the 150th anniversary of the 5th May battle.

Among the attractive site in Puebla, there is also the Xanenetla site, located at the bottom of de Los Fuertes, that became a new touristic reference thanks to the interventions delivered by the "Puebla Ciudad Mural" project. This project transformed the façades of the neighbourhood with its "murals" (painted murals). Prior to this, the Xanentla neighbourhood was known and judged as being unsafe, and became in between a reference for the city. Among the big touristic activities, there is also the zoo ("African Safari"), which occupies a 30 hectares surface, located south of the Puebla municipality.

Tourism in Puebla represents 9% of the BIP of the metropolitan zone (according to the Secretary of Economy and Tourism). Cultural tourism is also related to two convention centres, touristic walks, churches, architectural heritages and the hotels.

In most of the cases, Puebla is accessed through the Mexico-Veracruz highway, despite the international airport Hermanos Serdan, located 26 km away from the city-center. Flights connecting with the center of Mexico are mostly going to the international airport of Mexico-city.

Even if Puebla as an important touristic attractiveness, it stays a secondary city due to its position towards Mexico, on the road between Mexico and Veracruz. On average, the city is visited only for one day. In 2011, the 1.499.292 tourists stayed on average 1,38 days in Puebla (Secretary of Economy and Tourism). The municipality would like to increase the time spend by tourists



Figure 1 Puebla's historical center

in Puebla to 1,6 days, thanks to a marketing campaign promoting its "alternative" assets.

In Puebla's municipality, the Valsequillo lac does not have any touristic use (despite its potential). This is mostly due to its high percentage of contamination (and the contamination of tributary rivers).

TOURISM IN OTHER MUNICIPALITIES OF THE PUEBLA AND TLAXCALA STATES

In the territory of Puebla's metropolis, several archaeological sites exist, like in Cholula or in Tlaxcala, with the Cacaxtla and Xochitecatl sites. Some of the city centres are also attractive like those of Tlaxcala, San Andres and San Pedro Cholula or Atlixco. Today, no touristic project is planned at the intercity scale.

The archaeological site of San Pedro Cholula is the second touristic pole of the region with its massive pyramid. Cholula is only located 15km away from Puebla's centre. People also come to Cholula to visit the Zocalo or the numerous churches (one for every day of the year, according to the tradition).

In the Tlaxcala state, there are also the sites of Cacaxtla y Xochitecatl, which are vast archaeological zones located in the Nativitas town. This Cacaxtla site is well-known for its well-preserved pre-Hispanic mural paintings, and the Xochitecatl site is known for being an important ceremonial site (abandoned in the End century after JC). Tlaxcala is also known for its historical centre and its Moresque architectures.



- LEGEND
-  Historic centre UNESCO
 -  Archeological sites
 -  Historical centers
 -  National parks
 -  Zoo
 -  Metropolitan area boundary
 -  Natural park Izta - Popo
 -  1 Cacaxtla - Xochitécalt archeological site
 -  2 Tlaxcala city
 -  3 Natural Park La Malinche
 -  4 San Luis Huamantla City
 -  5 Historic centre of Puebla
 -  6 African Safari
 -  7 Cholula archeological site
 -  8 Atlixco City
 -  9 Hermanos Serdán Airport

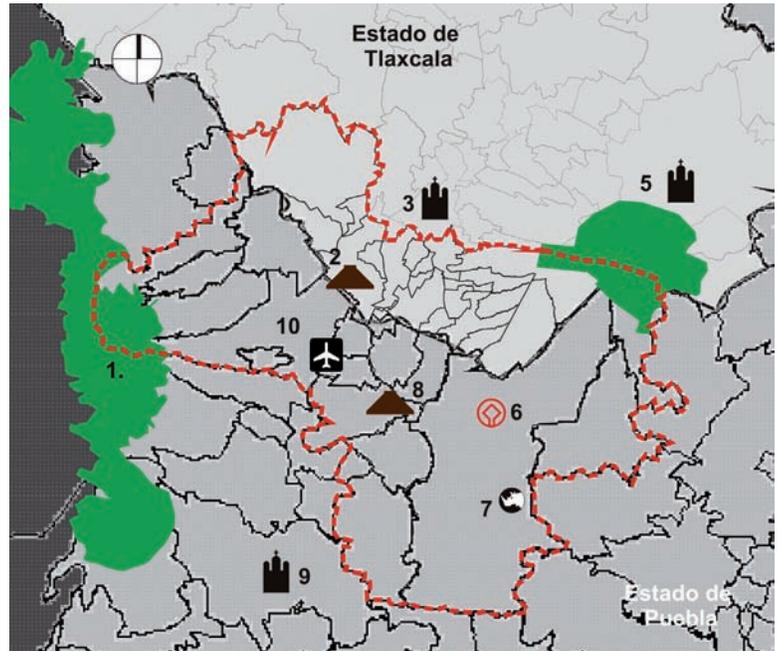


Figure 2: the most important and attractive poles of Puebla's metropolitan region. Source: realised with INEGI data (Zona de Patrimonio Cultural) and the Altas Megalopoles Mexico.

Finally, the Atlixco region is attractive for its calm, its climate, its luxuriant vegetation, its swimming pools and hotels.

RURAL TOURISM AND ADVENTURE

Around Puebla's town, there are hiking and alpinism paths in the Izta-Popo National Park (the Pecho peak is the highest one). The access to the Popocatepetl is restrained from since the volcano erupted in 1994. The Malinche National Park is also an attraction for hikers. The Tlaxcala state is in charge of the management of the parks, through the General Ecological Coordination. The two parks have restricted road access (until specific places), makes paths and refuge to host the hikers.



Figure 3: Cholula's pyramid



Figure 4 (at the top): Tlaxcala).

Figure 5: archaeological Xochitcalt site Source: <http://www.mexicocity-explorer.com.mx/tlaxcala.htm>



Figure 6: Itza-Popo Natural PARK

source: <http://www.mexicoenfotos.com/fotos/puebla/parque-nacional-iztac-huatl-popocatepetl/mX12182408266366.html>

PUEBLA, UNIVERSITY TOWN

Puebla is a university town. It is the city with the most universities per inhabitant in Mexico, and the second city with the most universities (just after Mexico city). The education sector represents one fifth of the income of the city's economy.

The concentration of universities in Puebla is due to a demand coming from the country's southern states and neighbouring countries in the South. It is also a historical vocation of the city.

The development of an important university offer in Puebla is due to the concentration of prestigious national institutions in the city and its proximity with Mexico-city, its central position in the country, and the fact that Puebla is considered today as being a safe city – in opposition to other Mexican cities.

HIGHER EDUCATION IN MEXICO

About 190.000 students are currently living in Puebla, studying on almost 200 university related institutions, public and private. This high number is due to the existence of smaller private institutions, which quality is not always proved and who are called "patitos" institutions (literally "small ducks"). The big majority of these institutions is located in the town of Puebla and San Andre Cholula.

The majority of the students study to graduate in a 5 years degree giving the "licenciatura" title. The favourite formations are law, firm administration, education and pedagogy, computability, psychology, informative, mechanic, tourism and communication (according to E-Consulta, 2009).

Despite its efforts to develop the research, only 1% of the students are doing a PhD.

The wide majority of the universities are private, but it is a public university (the BUAP) who attracts most of the students, has the biggest budget and the highest number of buildings located in different parts of the city.

TERRITORIAL REPARTITION

Despite the fact that the universities are located across different parts of the city, they are mainly concentrated around two poles: Puebla's center and Angelopolis. In the historical centre, whole buildings and sometimes whole plots are occupied by universities. In Angelopolis, the universities are big campuses.

Regarding the universities in the historical centre, the Ville du Savoie project needs to be mentioned. It is managed by the BUAP and was suggested by former administration – which will be detailed in the 5th chapter.

In the Angelopolis district, the installations of universities is due to a state-related urban planning project, that sold land at lower prices to "noble institutions", like hospitals and universities, in order to revalorize the zone. These plots were the "ejidos" that the State could expropriate thanks to the law that enabled their privatisation in the 1990s.

PUEBLA UNIVERSITY CAPITAL – PCUM

In order to consolidate the university town status of Puebla at the national and international scale, the PCUM (Puebla Capital Universitaria of Mexico) was created in 2011.

The PCUM is a collaboration agreement between the 16 biggest universities in Puebla. The goals are to initiate or to consolidate the academic relations between the universities and to create links between the university education and the education of firms, and also with the civil society.

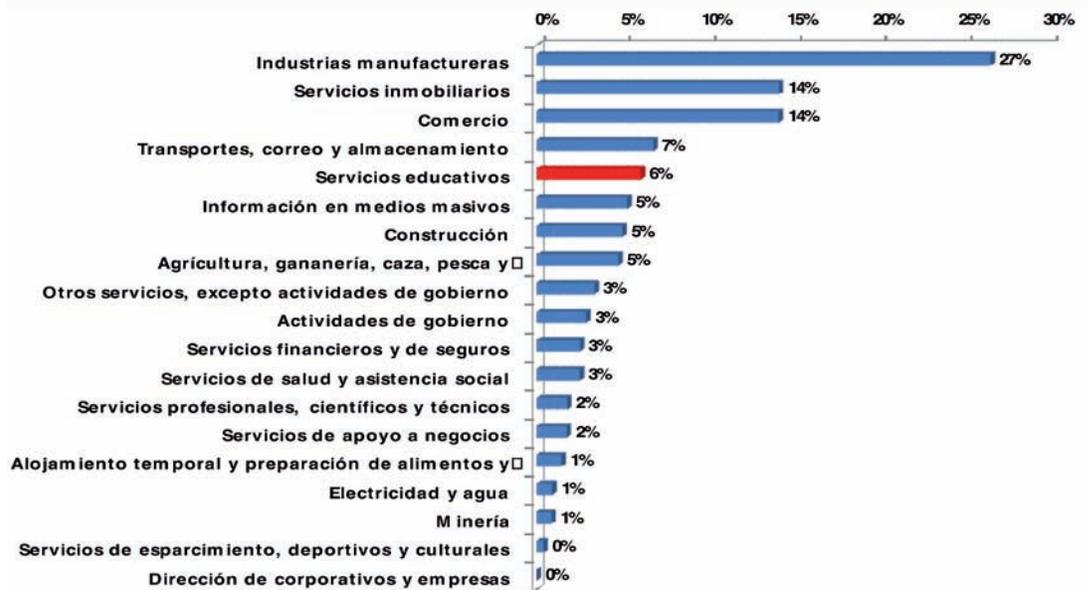


Figure 1: Contribution to the BIP
Source: "Puebla, vocación económica"

In a similar way, the goal is to give a power to act to universities, in order to have an impact on the decision process (especially regarding the planning system and urban projects).

Despite its recent implementation, the PCUM is already recognised at an international level. In March 2012, it was mentioned among the best practice projects for the development and management of knowledge, which was presented to the Congress of the centre Iberoamerican of strategic urban development (Congreso del Centro Iberoamericano de Desarrollo Estratégico Urbano – CIEDU), in Barce-

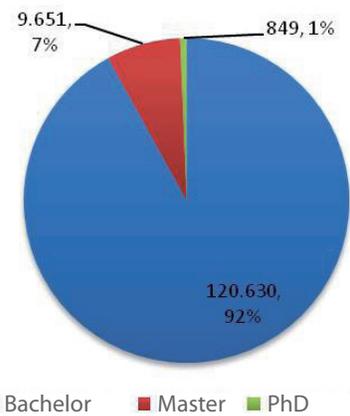


Figure 2: Proportion of Students by education level.
Source: "oportunidades para la inversión en el Estado de Puebla"

Top	UNIVERSITY	TYPE
1	UNAM - D.F.	Public
2	UAM - D.F	Public
3	UANL - Nuevo León	Public
4	BUAP - Puebla	Public
5	UDLA - Puebla	Private

Figure 3: Ranking table of national universities
Source: <http://mejoresuniversidadesdemexico.mx/?q=ranking>

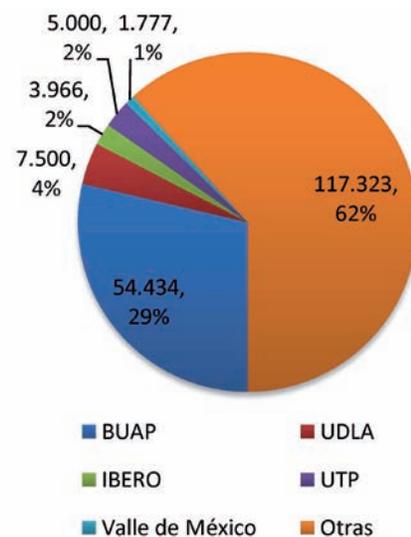


Figure 4: Quantity of students in the major universities
Source: PCUM / information delivered by IMPLAN



Figure 1: Tech de Monterrey Campus, in Angelópolis
 Source: http://www.cholulacity.info/2011_05_01_archive.html



Figure 2: Buildings of the BUAP in the historical district

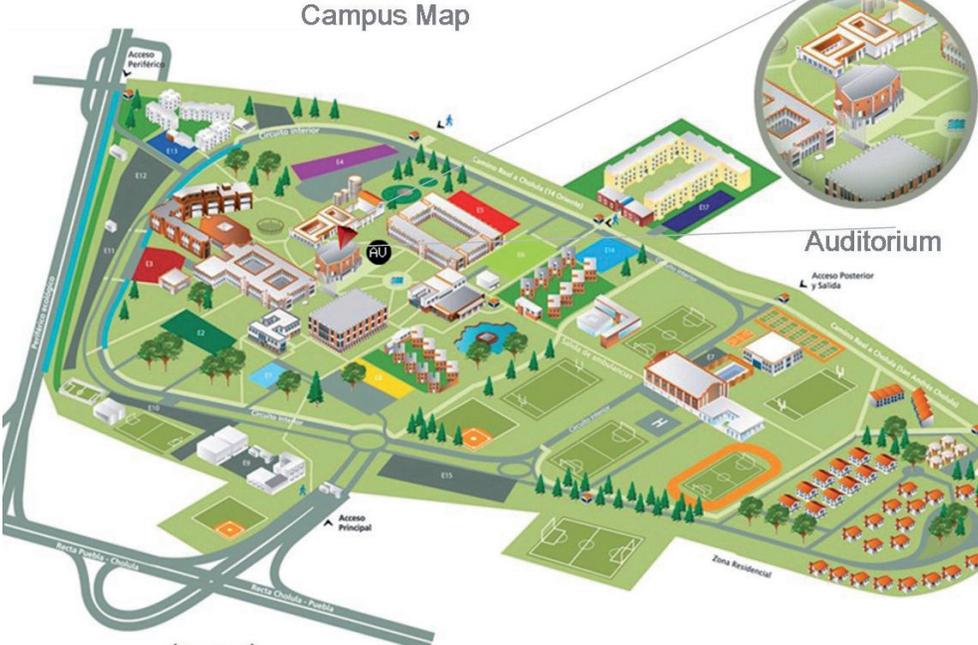
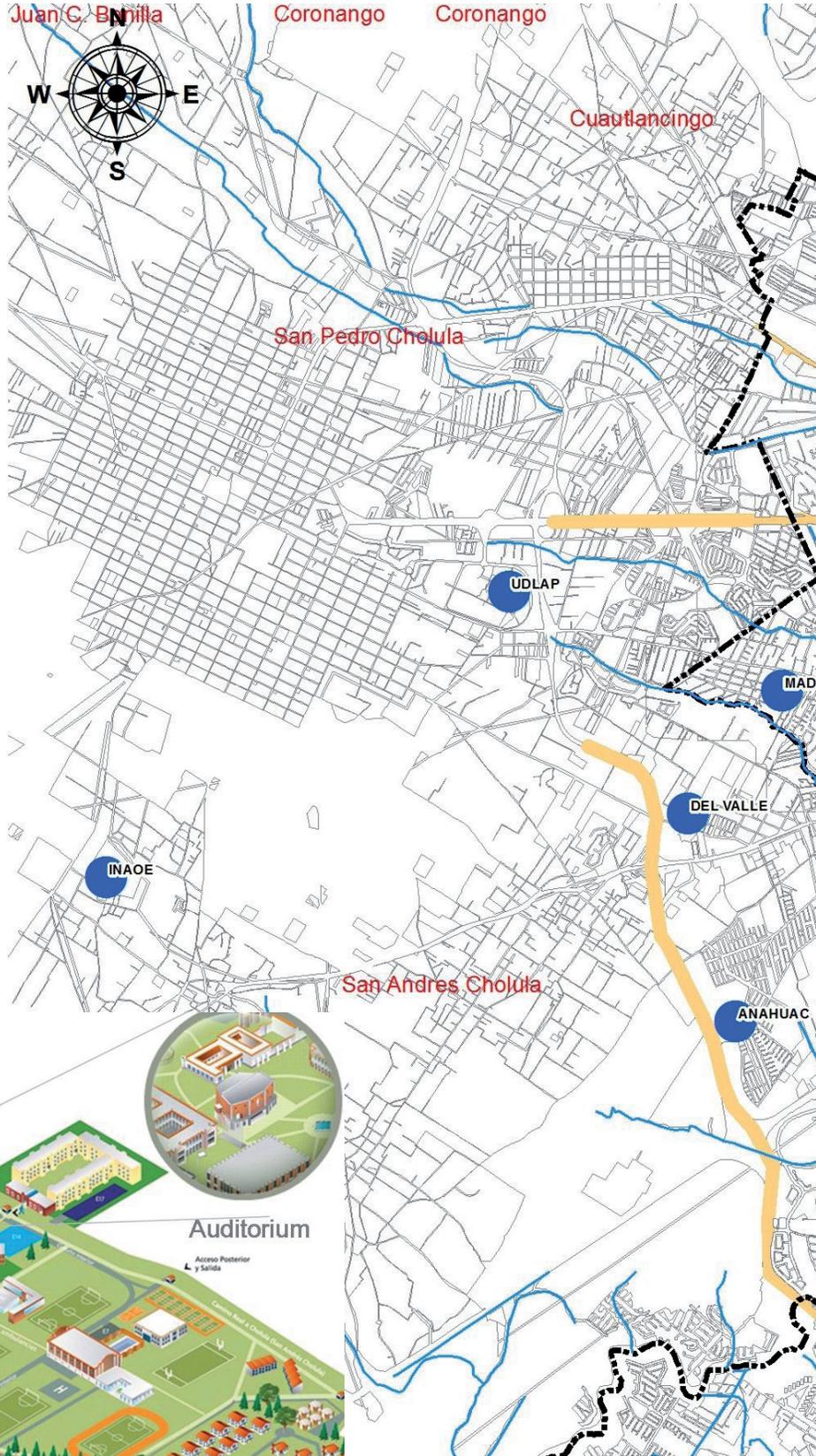


Figure 3: UDLA Campus
 source: <http://www.udlap.mx/inter-nas/mapaudlap.aspx?>

PUEBLA, CITY OF DESIGN

Among the big projects for Puebla, there is the project Puebla National Capital of Design, as well as the project of integration of the UNESCO Network of creative cities.

PUEBLA NATIONAL CAPITAL OF DESIGN

Today, design is a key value-added element in the competitiveness mechanisms between advanced economies. The Economy minister (at the federal level) led the project of the Design city in 2011, through "ProMexico". The aim was to nominate the city that encompasses all the characteristics and presents the best project to become the Mexican "design city". The selected city earns then grants to launch its projects and has a new visibility as Design city, with the potential to attract firms from the sector.

35 cities were candidates, 4 were selected: Monterrey, Tijuana, Guadalajara and Puebla, which was finally chosen, mainly thanks to its industrial history and its university-related status.

In order to answer to the offer, Puebla presented two strategic projects: the construction of an International design centre by 2013 and the UNESCO declaration of a Creative city on the middle term (by 2017 according to some sources).

Puebla's International design centre is an emerging project of the creation of a city centre dedicated to design: with a convention centre, specialised shops, workshops, industries.

The choice of the location for the implementation of the International design centre is a major one, and there are several propositions: the borders of the Atoyac river, different places in Angelopolis



Figure 1: Automobile, textile and furniture design

Source : Source: http://www.estudiologos.com/blog/curso-de-diseno-automotriz/2010_04_01_archive.html

or the Humbolt district in the centre, in order to integrated the City design project into the repopulation plan of the centre. Until today, no decision has been made regarding the location.

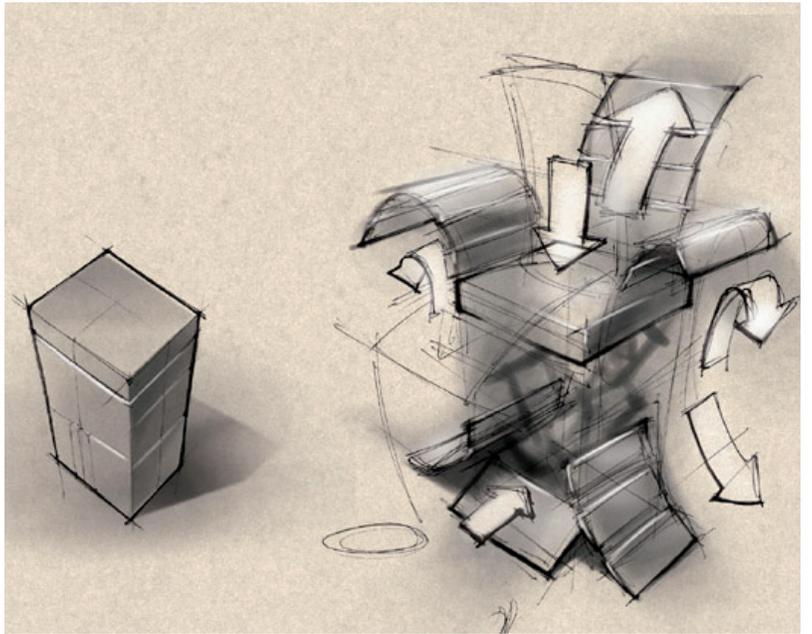
The secretariat for Economy and Transport, which is in charge of the project, has the idea to organise congresses and national prizes in order to develop a project, and especially with the organisation of a Design week, that should be organized in November 2012.

THE UNESCO NETWORK OF CREATIVE CITIES

The second project related to the Design city project is the integration of Puebla into the UNESCO network of Creative cities by 2017.

This network is a programme that highlights various cultural specialities in a city (music, literature, cinema, handcraft, drawing, food). According to the UNESCO, the goal of the programme is to "create links between creative cities worldwide, in order to integrate them into an international market, and to promote new technologies, distribution networks, which will place the creativity at the centre of the economic and social development".

In 2004, the first creative city was awarded and since then, 30 cities are members of the Creative cities network. 10 cities are related to the Design network: Nagoya, Seoul, Shenzhen, Shanghai, Kobe, Montreal, Berlin, Graz, Saint-Etienne and Buenos Aires.. No Mexican city is member of the



tomotriz-en-upaep-México/ - <http://elempresario.mx/actualidad/puebla-recibe-cinco-nuevos-inversionistas>, <http://larealnuevaescuela.blogspot>.

network actually. In order to become on of the cities member of the Design network, Puebla will have to prove what it is able to do and develop the education and research sectors, realise events, emphasis its creative industry, like in the sectors of architecture, textile, automobile, graphism, etc.

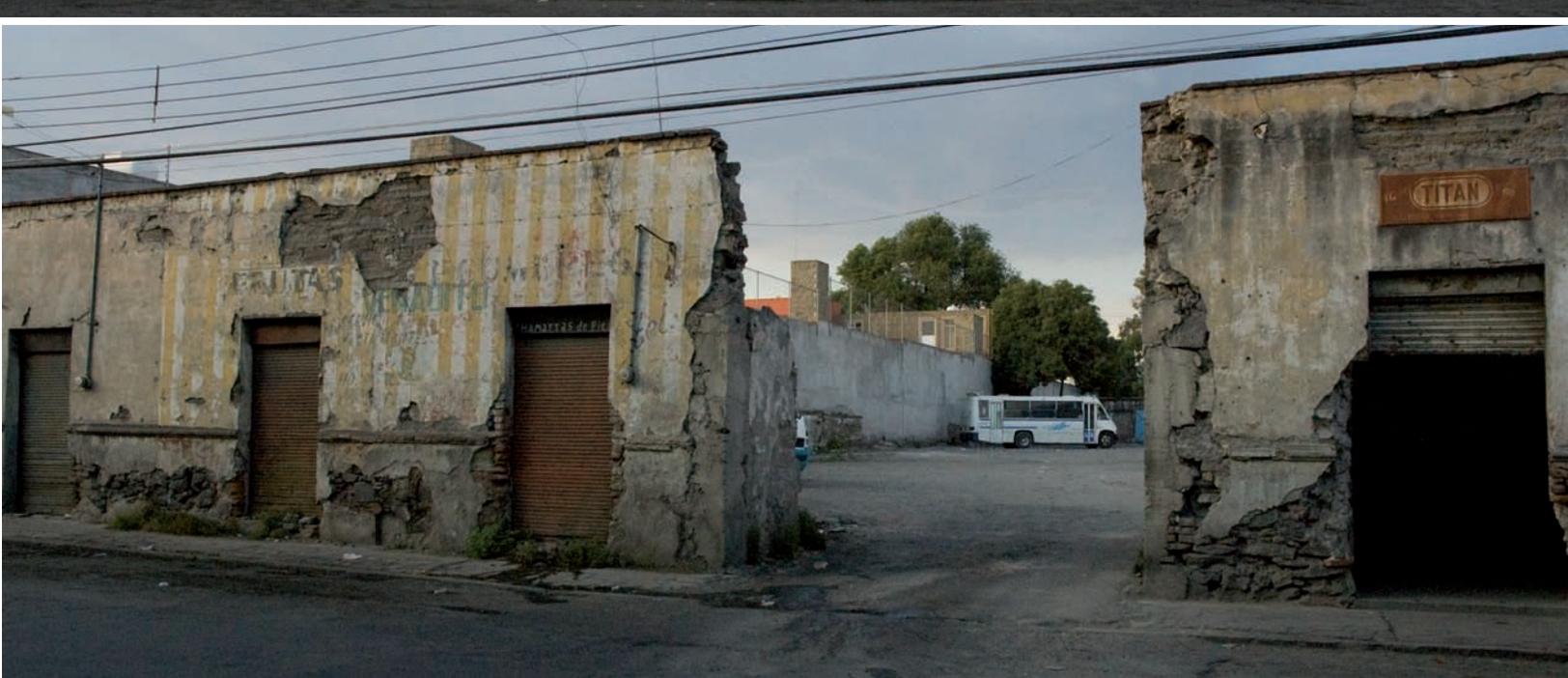
How to define the city of design, regarding what is specific to Puebla city? Is it the city of automobile? Of handcraft? The “ciudad de los murals”, with the example of the Colectivo Tomate? Is it the industrial city?

At what scale can we imagine a project of a design city, by considering the subject of the atelier: metropolisation and historical centre?



Figure 2 : the project “Ciudad Mural” of the Colectivo Tomate. See the part related to the Colectivo tomate in the same chapter.

Source : <http://pueblaciudadmural.blogspot.mx/>



CHAPTER V

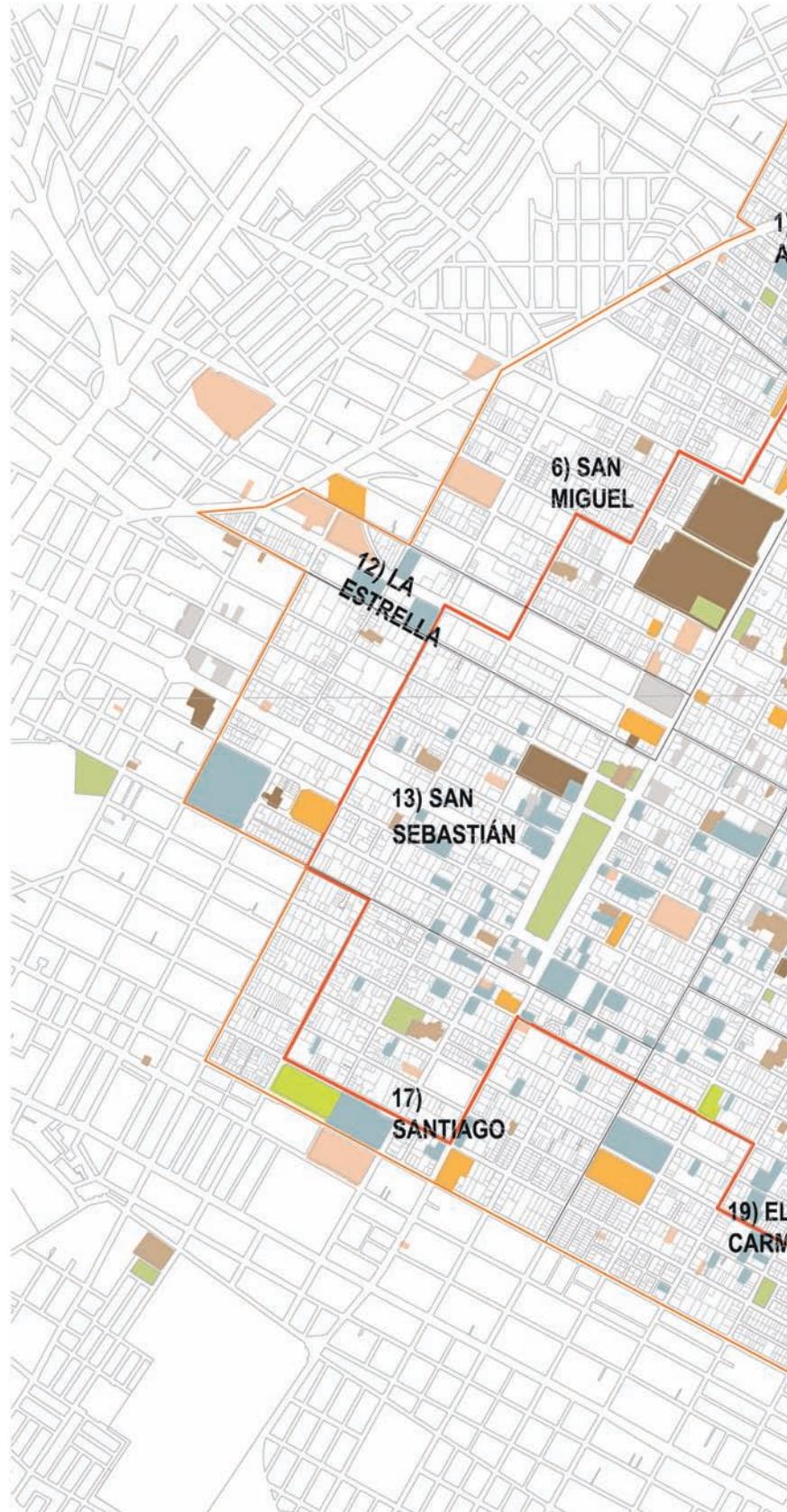
CITY - CENTER

CITY CENTER

Activities in the historic centre
Source: SDUOP.

Scale 1/10.000

- DUIS Boundary
- UNESCO boundary
- Trade
- Culture
- Churches
- Schools and universities
- Parking
- Sport
- Health
- Parks and gardens





AN ATTRACTIVE BUT DEPOPULATED CITY-CENTER

Concurrently with the classification at World Heritage of Humanity and a strengthening of activities' concentration, the city-center becomes depopulated: the population passed from 340,000 inhabitants in 1978 to 108,000 today (1)

HISTORY OF CLASSIFICATION

A first protective decree of the federal government defines the "Historic Monuments' Zone of Puebla de Zaragoza", on November 18th 1977, following a study of the Colegio de Arquitectos de Puebla. From the creation of the "Monuments' Zone" (zona de monumentos) on, the project runs for a classification by the UNESCO.

On November 8th 1987 UNESCO finally registered the historic center of Puebla as World Heritage of Humanity. The area concerns 2619 monuments into 5.97 km² ; 10.2 km² including the buffer zone. It is one of the largest historic sites classified by the UNESCO World Heritage. By way of comparison, the banks of the Seine in Paris extends over 3.65 km² , the historic area of Istanbul is on 6.78 km² , and the historical center of Rome lays on 14.85 km² .

The classification was a real lever for a rehabilitation and enhancement project in the historic center. The classification itself is not a funding source but a prestigious status that has been the origin of various rehabilitation programs (rehabilitation and redensification plan of the center, DUIS project).

DECENTRALIZATION, DEPOPULATION, AND THE CHANGING CENTRE

HISTORY OF DECENTRALIZATION

In the 19th century, industrialization starts with the settlement of a working population in the center, and in due course a "physical and social degradation of central districts". As noted in chapter 2, Puebla's industrial success is due to its location on the Mexico - Veracruz axis. The old Spanish houses were gradually divided into rental housing purpose. Warehouses, business, light industry, and new housing were set in central neighborhoods or barrios. These material and social transformations of the center lead to the exodus of the wealthiest and a progressive deterioration of the frame.

Beginning the 1950s, services move and spread towards neighborhoods with high social status. This movement began with the construction of the Humboldt neighborhood in the 1920s. But,

located near the city center, it is considered to have had only little influence on decentralization (the district is now part of DUIS central area). However, there are two important events concerning this upper classes' migration to the outskirts: the construction of La Paz district in the 1940s, and the commercial center Plaza Dorada arising in the 1960s. They generate two axes developments: east-west to La Paz by Avenida Juarez, and north-south to Plaza Dorada (see figure 3). They were extended west to Cholula, and south to the BUAP. From the 1970s on, a long-time transformation process can explain the massive depopulation of the city center.

DEPOPULATION

The depopulation may seem paradoxical but can be explained by several factors.

- The buildings degradation of and a lack housing supply. Today in the great center (including the UNESCO zone, the DUIS zone, and central neighborhoods or barrios), various buildings are vacant or useless. The buildings' degradation results from a long-time process: first, in 1944, a decree states a rent freeze that will only be revoked in 1993; and second, the Ley de la vivienda made very difficult the expulsion of tenants (Bélanger).

- Comfort standards appealing people to move elsewhere: problems due to traffic congestion, waste collection, pollution, noise, lack of security (real or perceived).

- The summed up constraints on house owners for their building renovation and the absence of public policy to support them: expensive property, unaffordable credits, heritage protection (and conse-

1. Source: SDUOP, Secretaría de Desarrollo Urbano y de Obras Públicas.

2 Source: <http://whc.unesco.org>

3 Idem

4 Idem

5 Idem

6 Source: PhD Thesis by Hélène Bélanger, "La régénérescence socio-résidentielle des quartiers centraux latino-américains : le cas de la ville de Puebla au Mexique".

7 Source: www.paseo-sanfrancisco.com.mx/historia.phd.

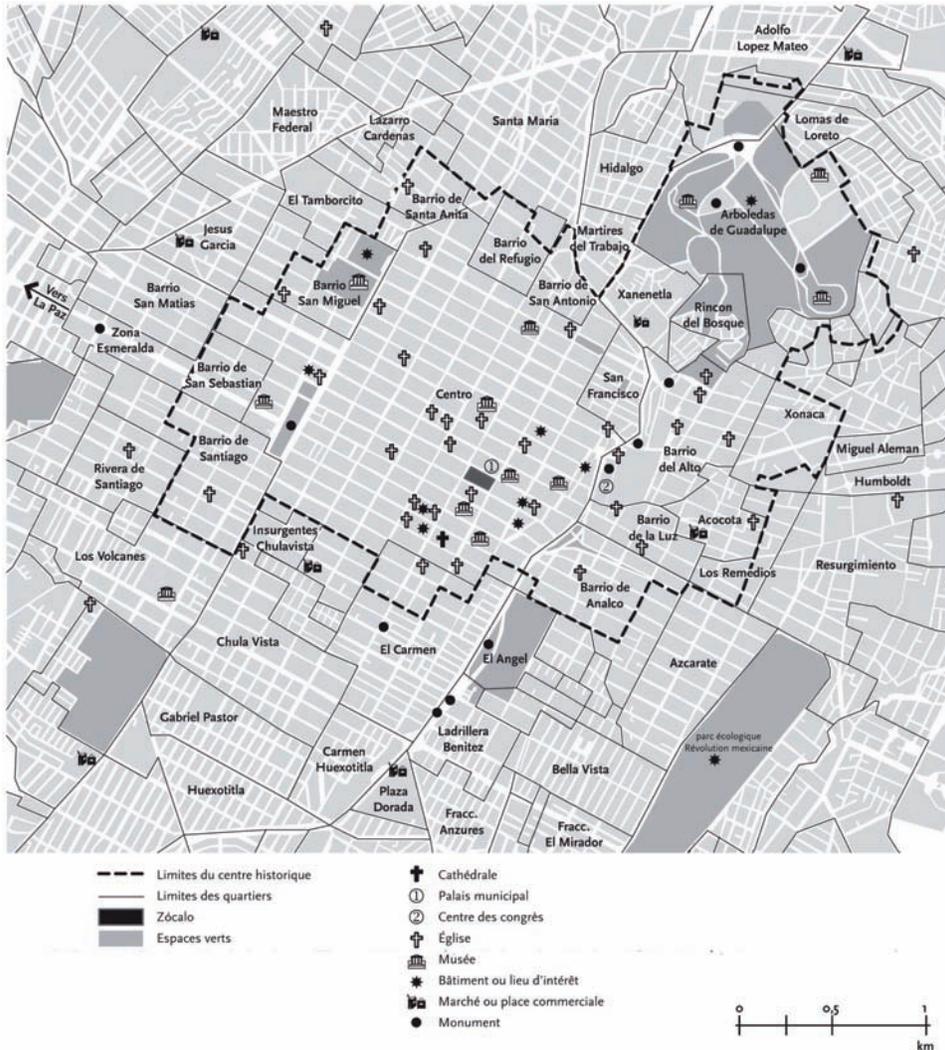
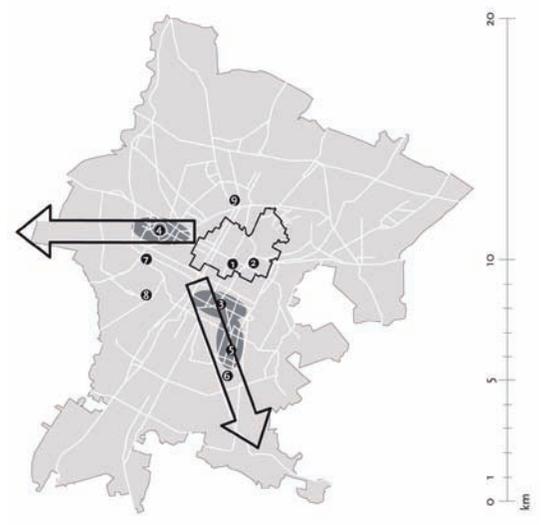


Illustration 1 Historic centre and its surroundings (7)



- 1. Zócalo
- 2. Conventions center
- 3. Plaza Dorada
- 4. La Paz neighborhoods
- 5. San Manuel neighborhoods
- 6. BUAP
- 7. Plaza las Animas
- 8. Plaza Angelópolis
- 9. Bus station CAPU

Illustration 2 Social and residential localization between 1970 y 1990" (7)

quent costs), difficult administrative procedures (with many building permits refused).

- The development of the services sector. There is not much interest for the owners to renovate. They prefer to convert their property for an other use than residential (Ley de la vivienda). Beside this, there is a growing but unsatisfied demand for luxury housing in the city center.

- Urban sprawl is caused by the development of a massive housing offer, outside the center, which is more accessible and valued.

TRANSFORMATION POLICIES OF THE STATE

In 1990s, the State has made considerable efforts to foster transformation and re-appropriation of the center city areas. This movement was materialized in a master project: the Paseo de San Francisco (former industrial zone right in the central area) was converted into a major service center, filled with shops and leisure activities, that also welcomes the congress center (figures 3 and 4). In 1993 a decree provides for the expropriation of 27 blocks, 6 being used for the State project, and the remaining 21 sold to private buyers. Despite negotiations and 4500 people resisting (then inhabitants of the neighborhood, mostly lower class), they were expelled by force without being offered any possibility of re-housing (Tellez-Morales/Belanger). On a more general note, the center experienced painting facades

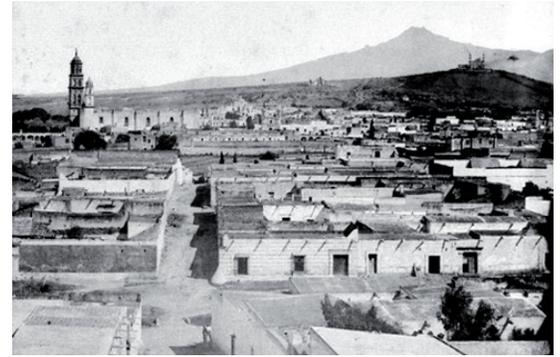


Illustration 3 El Paseo de San Francisco before his transformation (7)



Image 4 El Paseo de San Francisco now

operations, pedestrian roads settlements (including Calle 5 de Mayo, and part of Reforma which is closed to traffic on Sundays), and street lighting improvement.

Apart from the flagship planning project Paseo de San Francisco which has radically transformed part of the center and probably affects consistently on its inhabitants (literally replaced), we can say that there has been very few major impulses for the transformation of the built environment and the urban regeneration of the center. Overall, it is more about encouraging a transformation by improving the image of the center by a symbolic development.

ECONOMIC ACTIVITIES AND IMPACTS IN THE CENTRE: A TRANSFORMATION TOWARDS A TERTIARY MODEL

The city-center concentrates commercial activities, business and urban (administrative, cultural, recreational) equipments. Since the 1980s-1990s, there has been a tertiarisation movement: banks, schools, governmental services, and scientific activities settled. These activities and non-commercial services have increased by 452% between 1980 and 1999 (source: INEGI).

There has been and still is a cultural and commercial gentrification, without affecting the residential sector (Janes and Varley / Bélanger). So from certain point of view, the re-appropriation of the historical center Puebla has already taken place, mainly through the services, shops and cultural facilities.

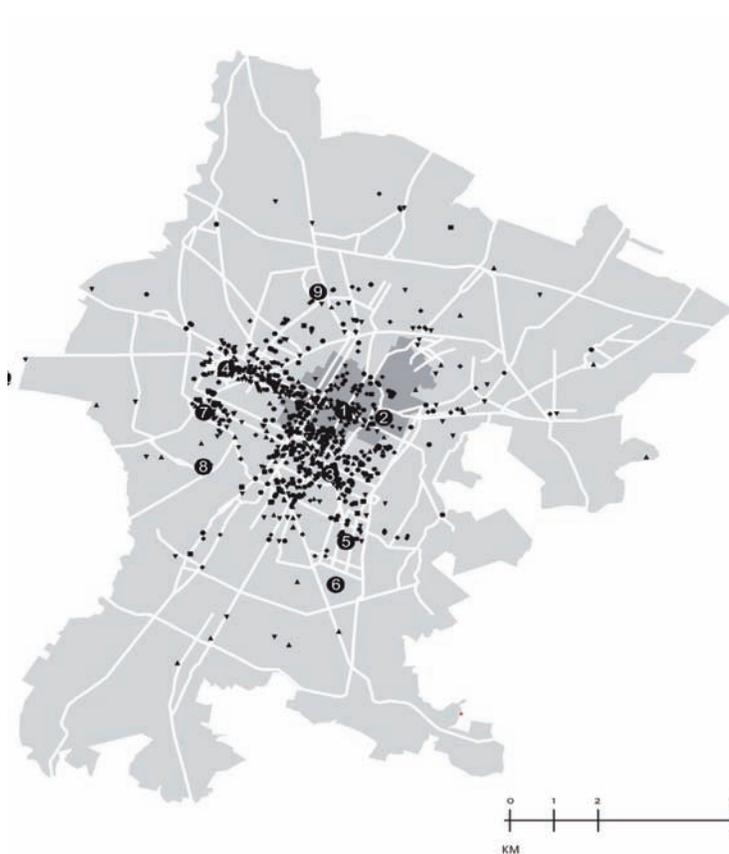


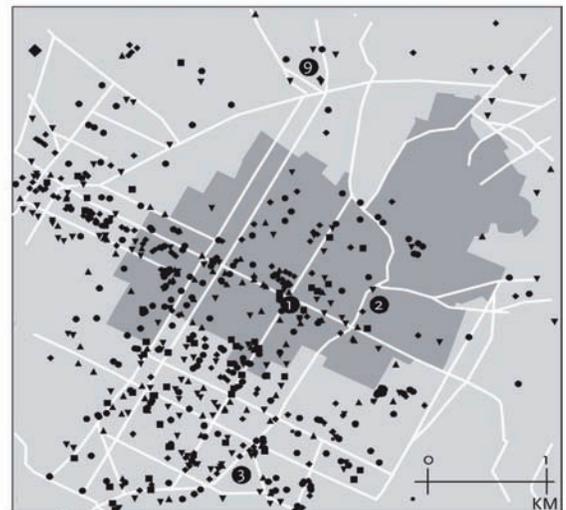
Image 1 Activities concentration in the city center (3)

RECOVERING THE CENTER? RESIDENTIAL AMBITIONS AND TRENDS IN PROGRESS

RESIDENTIAL AMBITIONS: STRENGTHS AND LIMITATIONS

The main reasons and constraints explaining the lack of appeal to the center are the features of housing (14%), the transportation issues (17%), and the urban infrastructure problems (14%). Transportation issues are considered to be the most problematic, and should be solved the sooner (1). The city center seems to be neglected because of its access, to enter in it as much as to leave it. Despite the interest of a rich urban environment and the appeal of services concentration, road traffic congestion is foregrounded by the survey respondents (including the lack of parking), although other factors are involved: the housing supply, and a lack of "quietness" combined to the bad perception of the social environment committed to insecurity.

It is also interesting to note the shifting perceptions among inhabitants and non-inhabitants: everyone recognizes the advantages of living downtown, but the non-inhabitants, see with mistrust the issues of safety, cleanliness (street-cleaning and garbage-collecting services), water supply, and transportation.



- | | |
|----------------------------------|----------------------------------|
| ■ Historic centre | ■ Health care |
| ① Zócalo | ◆ Law |
| ② Paseo de San Francisco | ● Finance |
| ③ Plaza Dorada | ▲ Higher education |
| ④ La Paz neighbourhood | ▼ Others (professional services) |
| ⑤ San Manuel neighbourhood | |
| ⑥ Universidad Autónoma de Puebla | |
| ⑦ Plaza Las Animas | |
| ⑧ Plaza Angelópolis | |
| ⑨ Bus terminal CAPU | |
| ⑩ Towards Cholula | |

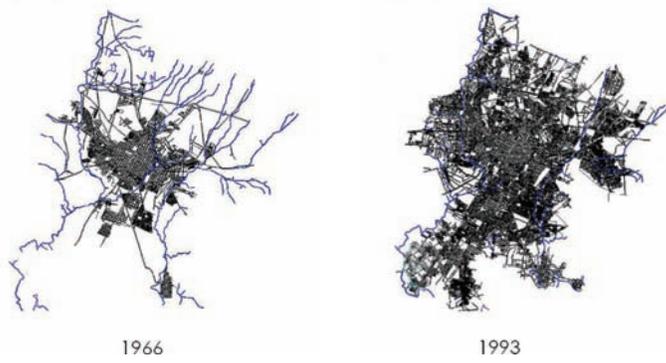
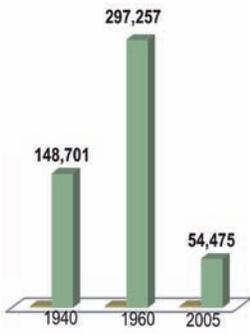


Illustration 2. Historic centre depopulation.

Source: SDUOP, Secretaría de Desarrollo Urbano y de Obras Públicas

Illustration 3. Urban sprawl and depopulation.

Source: Valverde, Francisco.

1 From an investigation in Hélène Bélanger's PhD Work.

MALO 1995 ■
 RUINA 1995 ■

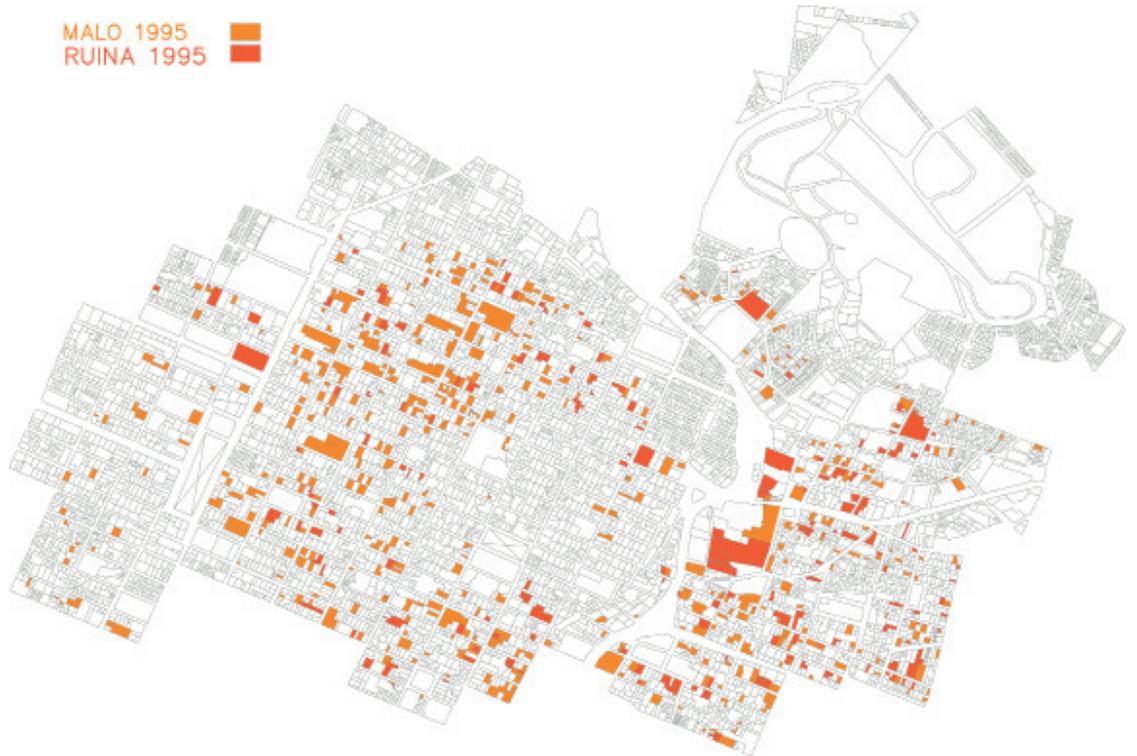
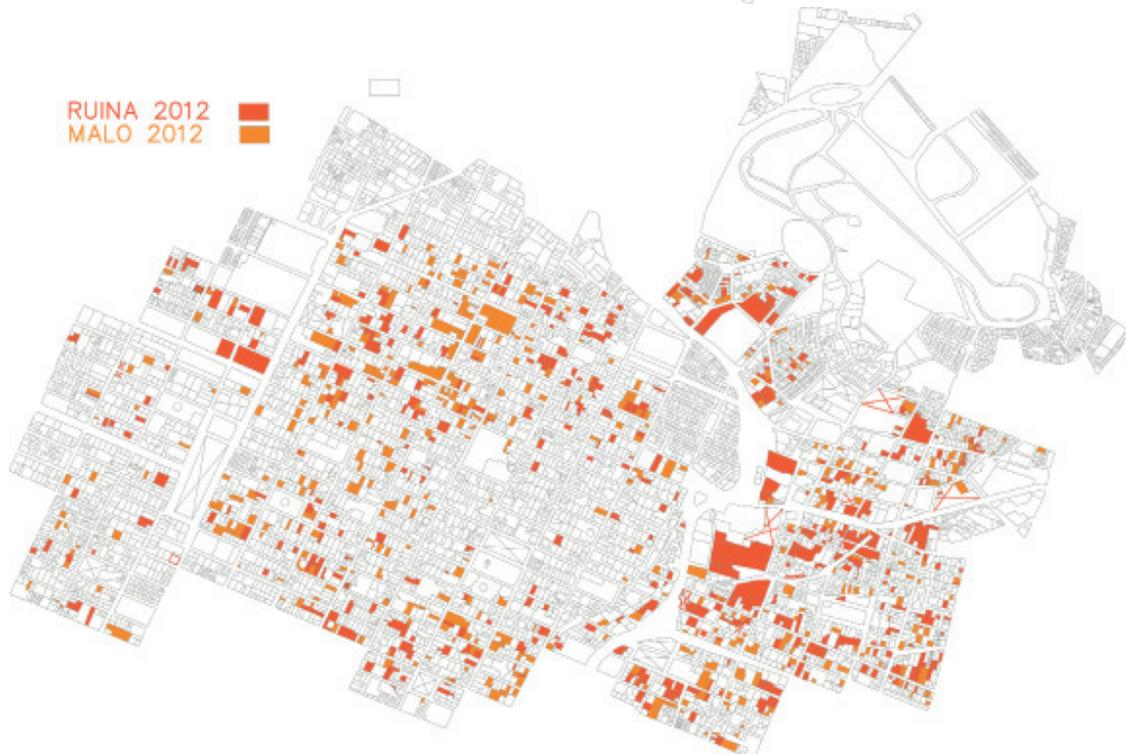


Image 4 Buildings state conservation.

Source: Montero, Carlos (plan 1995) and Benítez, María Pia (plan 2012)

RUINA 2012 ■
 MALO 2012 ■

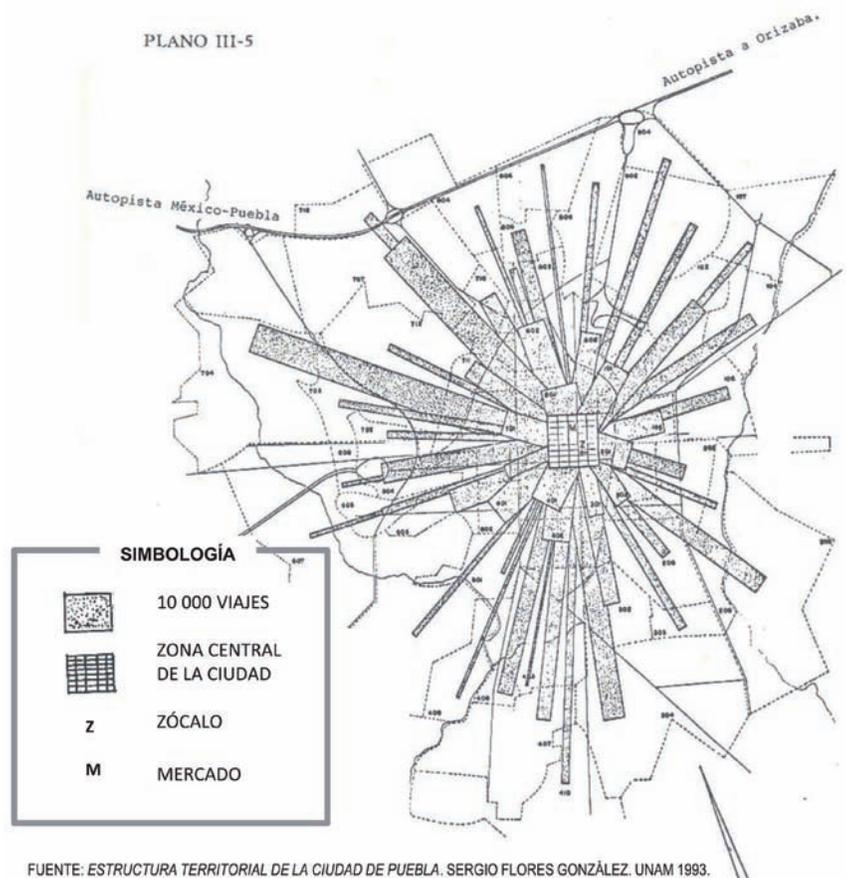


Today, in spite of various and tough constraints, there is a strong attraction to the central area and an emerging trend to the re-appropriation of the city center by a wealthy class.

IS RESIDENTIAL GENTRIFICATION OF THE CENTER AT WORK?

Helene Belanger's work addresses gentrification of the core area of Puebla through its re-appropriation by upper-middle class households, she calls the "professional class". An interesting idea is advanced: "We assume that the historic center of Puebla, after a decentralized and declining period, is "at the crossroads", starting a regenerating cycle". This would be an emerging phenomenon announced by "marginal gentrifiers". Demographic and economic transitions have driven some people to reinvest the city-center: increase of employed women in the city-center population (37% according to the INEGI in 2000, 10% more than in 1987), which correlate fertility rate decrease, and the reduced households average size. This professional class development testifies new social ambitions and new ways of life: the outskirts, well connected (in terms of roads infrastructures), single-family home model is not anymore favored. The city-center settlements are preferred because it "eases work-life or work-leisure balance for the households that emphasis those activities."

1 "The professional class is a subset of the middle classes as Ley calls new middle class or new cultural class. It differs from the middle class itself by its lifestyle, linked to demographic and economical changes: households size reduction, increasing number of women in the labor market, increasing schooling, development services sector of work."



FUENTE: ESTRUCTURA TERRITORIAL DE LA CIUDAD DE PUEBLA. SERGIO FLORES GONZÁLEZ. UNAM 1993.

Illustration 1. Radiocentric mobility. Source: SDUOP / UNAM

DUIS RESETTLEMENT PROJECT

The reclassification process for the historic center ran through various steps: the UNESCO classification, a regeneration and redensification project led by the city hall, which became a DUIS project, that is to say a federal plan that exceeds the area specified in the local planning rules.

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DUIS PROJECT: RESETTLEMENT PROJECT OR REGENERATION AND REDENSIFICATION PLAN FOR THE MONUMENTS AREA

Since 2011, the project for rehabilitation and redensification of the center was realized in a program called DUIS. DUIS is the instrument of major urban development policies in Mexico, at a federal scale. It involves and completely restructures high scope areas. In Puebla, the program is the first for the rehabilitation of an historical urban center. Usually, DUIS are for suburban rehabilitation and development (San Juan DUIS Project for example). Today in Mexico, eight DUIS projects are approved and recognized.

The project is led by the SDUOP (Secretaria de Desarrollo Urbano y de Obras Publicas), together with INAH, IMPLAN (Instituto Municipal de Planeacion), and the state government of Puebla. Obtaining federal funding with

the DUIS status is a considerable opportunity for the city of Puebla to implement its project for the center. The project involves installing 108.075 new inhabitants in the center by 2020 (for an amount of 238.073 inhabitants in the DUIS area). The DUIS area is not exactly the classified zone: it widens towards districts partly included in the protected area. The DUIS area includes 20 districts.

PARKS AND CENTERS MI BARRIO VIVE

At the urban scale, the project is structured by parks development and centers "Mi Barrio Vive" ("my neighborhood lives"): 13 existing parks will be equipped, 2 new parks and 4 centers "Mi Barrio Vive" will be created (Figure 1). The parks made of are playground, public toilets, tourist information stations, parking lots for bicycles and bicycle rentals, bus stops. Centers include at least a sports field, commercial and tourist kiosks, and local commercial equipments. These new places of social cohesion will also be animated by ephemeral events, cultural activities, sports, arts, etc... The neighborhood revitalization will provide opportunity for "a potential resettlement and inter-district commercial installation".

1 DUIS "Integral Sustainable Urban Development" (Desarrollo Urbano Integral Sostenible). The program includes among other major federal agencies for housing production: the CONAVI (Comision Nacional de Vivienda), SHF (Sociedad Hipotecaria Federal), INFONAVIT (Instituto del Fondo Nacional de la Vivienda para los Trabajadores), FOVISSSTE (the Fondo de Vivienda del Instituto de Seguridad y Servicios Social de los Trabajadores del Estado).

Illustration 1 "Mi Barrio" Parks and centers (2).

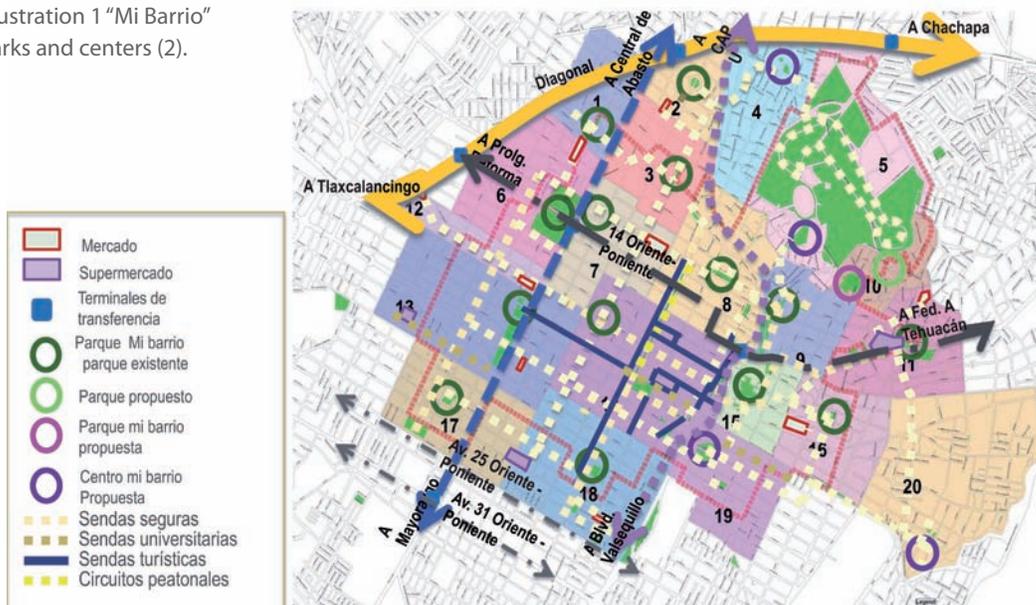


Illustration 2 Parking (3).

URBAN PROJECT

These programs “Mi Barrio” will be connected to a network of pedestrian paths, the “safe path” (“Sendas Seguras”), and will also be close to new car parking extension. The “Sendas Seguras” (Figure 1) are various pedestrian and bicycle paths, in relation to local transportation (as well as future Metrobus). This work is therefore based on public space management (see figure 4) and street furniture: street lighting, sidewalks, pavements, pedestrian crossings, traffic lights for pedestrians, ramps and textures for disabled people, and wide and safe bicycle lanes.

Another major point is to improve the provision of car parking, creating 10 new parks, and expanding 68 in the 162 existing lots in the area (Figure 3 previous page). It is also about improving the public transport supply: connecting and integrating the local transport networks with new public spaces, or connecting to the Metrobus BRT (Bus Rapid Transit) for efficient transportation within and outside the historic center. There will be thus “multimodal terminals” (“terminales de transferencia”) where will converge the main public transport routes and larger parking areas.

The project is also about urban sustainable development: sorting and recycling bins, public light with a magnetic-production that will reduce to a minimum of 25% of energy consumption (there would be enough energy resources to three times the population expected to occur in the study area - 238,073 new residents), burial of electric networks, and major works to supply drinking water, to collect storm-water, and to drain sewage.

DUIS PROJECT ALLOWS A MAJOR DENSIFICATION DOWNTOWN AND IS MANIFOLD (CULTURE, TOURISM, RECREATION, SHOPPING, IMAGE ARE CONCERNED). IT GOES TOWARDS ALONG A STRONG ECONOMIC RECOVERY OF THE CENTRAL AREA THAT SHOULD ATTRACT PRIVATE INVESTMENTS. WHAT IMPACTS SHALL BE EXPECTED FOR RESETTLEMENT?

ARCHITECTURAL PROJECT

Projects must respect the rules of COREMUN (regulatory municipal code) and INAH (National Institute of Archaeology and History). However, it will be possible to build densely (up to 400 dwellings / ha), and with a coefficient of land use by 75%. Before DUIS, COREMUN established density up to 15 to 50 dwellings / ha.

For the existing buildings, it is proposed to “encourage recovery, preservation, and restoration of residential buildings”, to “promote residency in classi-

fied or historical and cultural buildings (restore their original purpose)” and to encourage “mixed-use (trade, services, housing), giving priority to housing.” However we do not know more about the measures taken in this direction.

For housing, new buildings are offered to implement densification at blocks scale. It is proposed to verticalize the new buildings within the blocks so these are not visible from the street.

VOCATIONS

The project aims at enhancing services, cultural vocations, tourism, and administrative services: it is proposed to create programs for municipal buildings extensions (in particular three turrets of 1500 m² each on the site walk Venustiano Carranza, extensions of municipal services and facilities for the State government in the Mercado Sabores Poblanos).

LIMITATIONS TO THE RESETTLEMENT PROJECT. HOW TO ACCOMPANY RENOVATION?

Despite all efforts, rehabilitation and renovation has their limits. On the issue of resettlement and housing, the project aims at providing tools to enable a re-appropriation by residents, owners and developers.

Since the 1990s, and with the current project, planning policies move towards developing the center: pedestrian paths, bicycle lanes, street lighting and other equipment of any kind in public space, houses maintenance and façade painting, promoting balconies and green roofs, or luxury shops, restaurants and outdoor bars (Figure 4).

By focusing on the actions for the improvement of the center, the project did not attack the root of the problem. DUIS clears the means and tools to attract private investors with real estate operations. In parallel, major state projects, such as the Paseo de San Francisco and Los Fuertes project, also goes in the same way: an incentive policy that

1 Source: DUIS - SDUOP.

2 Classified documents where found via universities

Illustration 1. Project activities (1).



Illustration 4 luxury trade (1).



Image 3 Convention Center at Los Fuertes , already built (1).

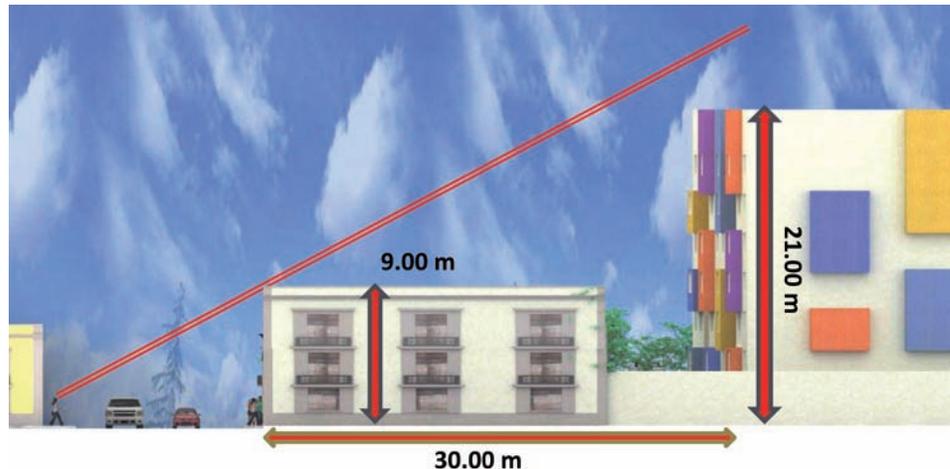


Illustration 5 Propositions for public space (1).

has not addressed the renovation strictly speaking, nor the degraded and vacant buildings or abandoned plots. It is therefore about encouraging a transformation by improving the image of the center by a symbolic development, consistent with what can already be observed: a tertiary center that becomes a business place, also dedicated to tourism and consumption. The DUIS reinforces the attractiveness of the center. Currently, there is no policy to assist owners or any political support to the renovation of the center. How to implement a policy that would help the transformation the unoccupied urban fringes? How to help (technically, financially, administratively) the owners of the classified buildings to manage a renovation (preferably towards of housing)? How to support the renovation? Will implemented incentive policies be sufficient to regenerate a socio-residential center? Or to what kind of regeneration will it be favorable? All those issues raise even a simpler question: to whom shall be made a resettlement project in the center?

Despite tremendous efforts, the difficulty also lies in the lack of information available: DUIS team has not got any buildings or blocks maps that are damaged or abandoned, or even those classified . It would take a considerable work to globally think the conversion of abandoned and degraded buildings. This reflection would not necessarily be limited the UNESCO or the DUIS area.

Illustration 1 and 2 New buildings inside of the blocks (1).



PUEBLA CITY OF KNOWLEDGE

The project of Puebla “City of Knowledge” is a project that has been developed by a university, the BUAP (1), which offers a quite different interpretation for the transformation of downtown, based on its cultural and academic vocation.

UNIVERSITY PROJECT, AN IDEA FOR CITY

From a study on vocations of the city, the project “Knowledge City” offers to put historic and cultural educational functions in the foreground for the rehabilitation and resettlement. In Puebla the first “Colegios” were built in the 16th century. In the 17th century the city had already 10: far more than enough for the local population, and people from other cities already came to study in Puebla. Puebla has been for long a city of knowledge and training. This tradition continues to this day, as Puebla is the second university in the country, and has the one with the highest proportions of students in its population. The city has approximately 190,000 students of which 30% come from other cities in Mexico or elsewhere.

The project of “Knowledge City” stands on this tradition of historical and cultural student city, and propose the resettlement by the students and professors population, including the creation of student residences. It is also about developing services and academic equipments. The BUAP alone has 37 properties in the city center.

The project’s strategy is focused on the use of public spaces, including pedestrian streets in the major historical areas that also concentrate monuments (Figure 1). The car parking is also a way to decongest the center, concentrating large parking lots in the outskirts, more or less at the four cardinal points. This is a radically different strategy from that of DUIS that enlarges and multiply the existing parking lots in the central area. As Carlos Montero Pantoja says, it is about “giving back the city to pedestrians, artists, city dwellers and tourists.”

A PENDING PROJECT

The supply for students housing is insufficient. It is on housing supply, and thus on helping the rehabilitation that policies should insist.

How to give back the city to students? By what means organizing the rehabilitation of the historic center? Should private investors be attracted? Or on the contrary, should public services take over or accompany the rehabilitation?

It is also about to know to whom is made historic center in terms of renovation and resettlement? One of the ideas of the “Knowledge City” is point the university as an intermediary towards owners (as investors) to create students housing. There must be means and investments: from a strong intervention of the state? From the university (including private universities that have strong financial power)? From the input of a patron, such as the example of Carlos Slim which has supported the renovation of the historic center of Mexico City?

WHAT VOCATIONS FOR A CITY OF KNOWLEDGE?

Starting from an existing (and historic) vocation of the city is a mean to imagine an idea of for the projected town. Could The city of knowledge rely on other vocations specific to Puebla? Can’t we imagine craft knowledge (ceramics and azulejos), industry knowledge, artistic knowledge (murales)?

1. BUAP : Benemérita Universidad Autónoma de Puebla.

2 The “Colegios” were the institution of higher education. These large complexes included study rooms, libraries, as well as the dwellings of students.

3 See Chapter 2.

4 Mexican businessman, also one of the wealthier worldwide.

5 Datas from an interview with Carlos Montero Pantoja

REGULATIONS IN THE CITY CENTER

The regulations on various levels controlled by various institutions are imposing strong constraints, which are disadvantaging an urban renewal and restocking policy in the city center.

THE REGULATIONS IN THE CITY CENTER: CONSTRAINTS FOR THE RESTOCKING POLICY?

A regulation applies on various levels to build in the central zone: the ruling related to the UNESCO heritage classification, the INAH (National Institute of Archeology and History) classification at the federal level, the PMDUSP (Municipal Program of Urban and Sustainable Development of the People – Programa Municipal de Desarrollo Urbano Sustentable de Puebla) and the COREMUN (Municipal Regulatory Code - Código Reglamentario Municipal), which are setting the urban rules at the municipal level, with a specific part for the central zone. All these rules apply to the “zona de monumentos”, that is to say the UNESCO heritage classification zone, as well as the expended perimeter (the current DUIS perimeter), with some substantive changes : considering the zone as a transition zone between the historical city and the “modern” city.

The municipality sets the general rules through the COREMUN and the developing goals with the PMDUSP. Among other things, the density depends on the classified building, and the recovery COS must be equal to the original COS for rehabilitation. It is also stipulated that the policies should meet the DUIS. That is why the housing density set by the COREMUN to 15 to 50 accommodations/ha has passed in the framework of the DUIS to 400 accommodations/ha .

The UNAH makes sure that the historical buildings are being preserved: the rehabilitation must render as precisely as possible the building as it was originally, on the basis of the existing documents (maps, photographs, sketches...): moldings, building methods and materials, colors. On the other hand, for the new constructions, in all the zona de monumentos or in case of the lacking of precise historical data, the INAH tries to respect the image of the monument zone: setting of proportion rules, sketches of the facades related to the various times and “styles”. The new constructions are not under the strict regulation on classified buildings: a “game” between the old and the modern is permitted concerning the use of other materials, for example. That is why the INAH has an agreement with the DUIS and the municipality, encouraging a densification of the center, with respect to the “general harmony”.

Despite a quick, basic and incomplete presentation of the major complexity of the various rulings concerning the central zone, we might say that these data make the rehabilitation of the frame as faded as the new buildings in the very complicated zone. The owners must surround themselves with experts to rehabilitate or to build, and this costs a lot. At the same time, there is no actual helping policy for the owners.

The INAH is only here to advise and control, the municipality is there to control as well. The architect Rafael Barquero admits that there should be helping policies for the owners at the municipal level with a program such as the DUIS, but also at the State of Puebla level and at the Federal State level too, or even with the help of the universities. Finally, it is important to remind that the DUIS, even though it evolved “in agreement with” the INAH and the municipality, is a “complete” project which sets its own rules, without ending up being under the constraint of all the existing ruling (with the radical increasing of the number of accommodations per hectare, for example).

1 The PMDUSP and the COREMUN documents are available in the computer database.

2 The INAH data has been written based on an interview with the architect Rafael Barquero, deputy director of the INAH department on the Puebla state.

3 See Chapter III « Central Zone », « the DUIS or a restocking policy in the center »

INDUSTRIAL WASTELANDS



The exceptional industrial heritage in Puebla is unfortunately not well exploited nowadays: in spite of a few transformation projects, which could be an asset, as a true part of the identity of the city, today appears more like a constraint: a landscape of wasteland and vacant lots.

ACHIEVED, ONGOING OR YET TO COME TRANSFORMATION PROJECTS FOR THE INDUSTRIAL HERITAGE

The transformation projects for the industrial heritage are rare: there is the San Francisco Paseo, often evoked as an exemplary operation. The Project had been led by the State of Puebla in the 1990s and was set in a revitalization of the city center dynamic through the rehabilitation of a great housing and industrial zone. So it was not just about the rehabilitation of the industrial heritage, but also about creating a project of the center.

More recently, the “La Constancia”, the first textile factory, renovation has started (Figure 1). The project, which is being achieved, is also a State initiative and shows a clearer rehabilitation and transformation of the industrial heritage goal. The project sets new uses in the former factory, with the premises of TV Orquesta Esperanza Azteca, a music academy, and premises dedicated to the setting of crafting activities.

There is only one other transformation project that we know of (that is being studied), that of an former factory into a cultural center in Xanenetla, which is led by the INAH .

Despite these examples, we might say that today, except some isolated State-led projects, there is no such thing as a transformation and promotion of the industrial heritage policy.

INDUSTRIAL WASTELANDS AND VACANT LOTS: CONSTRAINTS AND ASSETS

The industrial heritage is huge, there are many wastelands and vacant lots, and rehabilitate them is very expensive. Even beyond the heritage wastelands, there is an immoderate offer of industrial premises and vacant lots (Figure 2) in the city center and outside the city center. It seems impossible to set a global transformation of the industrial heritage policy today : great “savant” architectural, complete and “by the book” rehabilitation projects. How to set a transformation of the wastelands policy? With which practices? Can we imagine alternative transformation practices ? Could it be like the Colectivo Tomate projects in Xanenetla ? Practice transformations? Organizing artistic and cultural events? How to seize the opportunity of the city project on design to engage in a reflection on the transformation of the industrial wastelands? And finally, how does the consideration of industrial vocation of the transformation of the industrial heritage constitute a project, and be at the basis of a city idea for Puebla.

1 See Chapter V « Central Zone », « Central Zone, the Great State Projects »

2 Instituto Nacional de Antropología e Historia



Illustration 1. La Constanca

Illustration 2. Factory for sale, a current situation in Puebla



Illustration 3 and 4 Industrial wastelands in the city



INDUSTRIAL WASTELANDS

Image 1. "El Carmen" old textile factory inside of a block

TWO INDUSTRIAL WASTELANDS INT HE CENTER : « EL CARMEN » AND THE FORMER WHEAT FACTORY

There are many industrial wastelands in the center. In here, we can find two large wastelands in the same patch, close to the "El Carmen" railroad track which is a former textile factory and the former wheat factory. Transforming these factories into wastelands is a challenge. These spots have a strong potential with great areas, remarkable human and landscaped scale elements, historical and patrimonial value. How does the transformation of an important industrial wasteland in the center can be the pilot project, a first step to consider a transforming strategy for the wasteland at a wider scale?

Image 2. Antigua fabrica harinera cuyos grandes instalaciones abandonados son visibles desde la calle



Image 3 Big industrial factories in the same block
1 "El Carmen",
2 Former wheat factory

THE FORMER CEMENT WORKS

Not only are these industrial wastelands numerous, but some of them are open wastelands with gigantic areas in the middle of the town: in here, the site of the former cement works where the stone was directly extracted from to transform it on-spot. Today it is a strong breaking in the urban fabric. How can we turn a site that is breaking into a site that would connect the different disconnected ensembles? How can we transform these sites? How can we take advantage of such an exceptional landscape potential? And how can a large transformation of a wasteland project can be an opportunity to launch a wider scale dynamic?



Image 4. Factories and landscape.



Image 5 Wasteland



Image 6 Satelital view of old cementery near to "15 de Mayo" Avenue

WHICH CENTER ?

Skimming the perimeter of the monument zone such as the DUIS zone, we do not observe any breaking of clear limit in the urban tissue, except in the North-West with the Los Fuertes hill, and in the North where the “Diagonal Defensores de la Republica” momentarily breaks the orthogonal line. What would the significative limits of the central zone be, apart from the various administrative limits?

WHICH CENTER ?

The outlying zones of the DUIS perimeter often present characteristics which are similar to those of the zone included in the DUIS: urban and framing typologies, wastelands. The only part which is significantly different is the strengthened center around the Zócalo which is only a small part of the perimeter of the classified zone. There has to be various distinctions: the plural historical center with a strengthened heart and more or less degraded zones (included in the DUIS and UNESCO perimeter), and the “outlying” center which spreads beyond the official central zones. Depending on the cases, we observe characteristics which are specific to various parts of the center and to the outlying of the center. What is the influence perimeter of the central zone? To which scale and with which criterias should we intervene? What are the limits of the center? How can be rethink these limits to consider the connection of the center to other existing close-by centers? Perhaps we should consider the center from the interface with peri-urban zones, where the or-

thogonal tissue extended from the “barrios” meets other forms of the urban world: the fraccionamientos, the great equipment, the social housing, the industries? We have not found data on the various districts of the center and their characteristics yet. There is a research and analysis work to be done. Nevertheless, we can make a few comments, from the observations made on the ground: “RIGID” TERRITORIES? Generally, in the official central zone and outside, there are many wastelands and vacant lots. The northern districts included in the DUIS zone, for example, are residential areas that are particularly degraded: El Refugio, Santa Anita, Santa María (see map of the central zone at the beginning of the chapter). In the districts west of the DUIS (San Sebastián, San Miguel, La Estrella), there are many wastelands and vacant lots with many former industries, and more important area (Figure 3). But it is a mixed tissue where we can also find shops, housing and activities.



- Parks and gardens
- Cemetery
- Market
- Social housing
- Military zone
- Non built areas

Image 1 Historic center and outlying zones

Image 2. Derelict buildings



Image 3. Wasteland surrounded by a wall in San Miguel Neighborhood.



Image 4 Semi-interventions in San Miguel.



THE CENTER AND THE EXTENDED CENTER PROVE THE DYNAMICS WHICH ARE WORKING TO TRANSFORM AND DENSITY THE FRAMEWORK. THE TYPOLOGIES OF THE CENTER, WHICH ARE RICH AND VARIOUS, DEFINE A COMPLEX RELATIONSHIP BETWEEN THE PUBLIC AND THE PRIVATE SECTORS WITH BOTH PERMEABLE AND HIDDEN LOCATIONS. HOW CAN WE RELY ON THESE EXAMPLES? HOW CAN THE CENTER BE A MODEL TO IMAGINE AN URBAN PROJECT OF THE CENTER SCALE AND AT A LARGER SCALE?

OBSERVING THE TRENDS : EVOLVING TERRITORIES ?

In the center and the extended center, we observe transformation, renovation and urban tissue densification dynamics (Figures 3 and 4). That is also true leaving the monument zone, and particularly concerning the whole zone south of the latter: we observe an evolving territory, with many partly rehabilitated buildings, horizontal and vertical extensions of the frame, and new constructions. The territories which are close to the center are obviously prized by private founders who are taking them over. It is also true at another scale, private founders : mainly from the "small" private real estate. But it is also where more important recent investments have been made, as a housing tower built in the middle of a horizontal residential tissue extending south of the center proves (Figure 2).

These radically different examples (from the tower to the self-construction) show how the urban transformation process work today. How can we consider and lean on these dynamics to picture a project for the center, for the extended center, for the metropolis?

CAN THE CENTER BE A MODEL ?

The mixed and residential tissue of the city center and the extended city center is made of urban typologies and rich frames: a mixed use (the presence of activities, shops) and mixed frames, and even a social mix, at least on the use and attendance of the inhabitants, and in comparison with the social

segregation of the new types of production of space of the fraccionamientos. They are also quality public spaces with examples where the private sector engages in conversations with the public sector, with dead-ends, alleys, common yard of the "vecindades" infiltrating the "manzanas" (islets) (Figures 5,6,7). The inside of the islets of the center are porous, rich, diverse, full of surprises, with various space devices. At the same time, these places are hidden, isolated. The common space is a transition between the private and the public, that is to say that the common space is hierarchized from public to semi-public, collective, semi-private, to private. But in Mexico, this matter of porosity of the public space meets the matter of security, like the fraccionamientos which are closed and the enclosure of new city production types. Can the rich and varied typologies of the center be taken as examples? How can they be used to imagine center densification and transformation projects? Can these urban devices be examples for a center transformation project, or at a wider scale?

AS A CONCLUSION ON THE CENTER

- On the existing process and typologies of the center :how can we lean on the existing qualities of the central zone and the existing work of transformation to imagine an urban project ?
- On the intervention scale: to what scale should we intervene to imagine an articulation between the center and the outlying? In the center (and if yes, which one? The UNESCO center, the DUIS center, the extended center?) or outside the center, in relation with other parts of the city (other centers)?
- On the current projects: can reinforcing the attractiveness of the center allow the inhabitants to come back live in the center? For whom?
- On the rehabilitation policies : how can we set a restocking policy along with the renovation of the degraded buildings and wastelands? How can we help the owners rehabilitating the wastelands?



Image 1
House next to an
abandoned tower

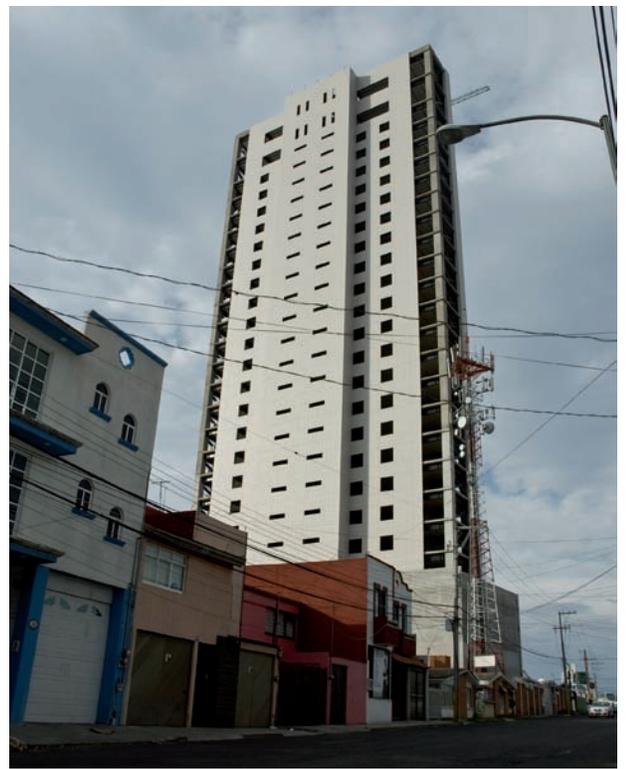


Image 2 Towers
inside a horizontal
urban tissue.

Image 3 partial rehabilitations



Image 4 Different activities in the center



Images 5, 6 y 7 Common spaces at "vecindades"



BIBLIOGRAPHY

BIBLIOGRAPHY

DOCUMENTS

METROPOLIS

- AYUNTAMIENTO DE PUEBLA. Programa Municipal de Desarrollo Urbano Sustentable de Puebla. 2005-2008
- BENÍTEZ, Óscar. Reestructuración urbana y metropolitana de la ciudad de Puebla, México, último ciclo: Síntesis de las Transiciones Económica y Geográfica Globales. Un Recorrido Transversal por las Escalas Nacional, Regional y Metropolitana. Presidente Poniente 2010. En línea: http://www4.fct.unesp.br/pos/geo/dis_teses/10/oscar_dr.pdf. Fecha de consulta 23 abril de 2012
- CONAGUA, Avances en el Sector Hídrico Mexicano. En línea: <http://www.conagua.gob.mx/CONAGUA07/Noticias/C1.pdf> Fecha de consulta 28 abril de 2012
- CONAPO, Índice de marginación urbana 2005. En línea: http://www.conapo.gob.mx/Publicaciones/IMU2005/IMU2005_principal.pdf. Fecha de consulta 1 de mayo de 2012
- ESTADO DE PUEBLA Y DE TLAXCALA. Acuerdo del 2 de octubre de 2009 sobre la "Creación para el Consejo para el Desarrollo Metropolitano de la Zona Metropolitana de Puebla-Tlaxcala"
- FLOREZ, Sergio. La Megalópolis de la Región Centro de México: Una Aproximación a su Análisis. En línea: http://www.buap.mx/investigación/invesjuri/tlame/19y20/p_228.pdf Fecha de consulta: Fecha de consulta 23 abril de 2012
- GOMEZ, Ma. Antonieta. Caracterización de Sources puntuales de contaminación en el río Atoyac, México. Source: http://www.bvsde.paho.org/bvsaidis/uruguay30/MX08163_Saldana_Fabela.pdf. Fecha de consulta 28 de abril de 2012
- IRACHETA, Alfonso. Metròpoli en crisis: una propuesta para la zona metropolitana Puebla-Tlaxcala. Programa de Estudios Urbanos y Ambientales –PROURBA-EL COLEGIO MEXIQUENSE. 2011
- MARTINEZ, Ma. Eugenia. Indicadores de competitividad: Una propuesta para su integración en el municipio de Puebla. En línea: <http://148.228.97.3/cedes/recursos/INPC.pdf> Fecha de consulta: 28 de abril de 2012
- MENDOZA, Rosas. Ordenamiento territorial para la propuesta de la creación de un parque temático de turismo alternativo en la zona de la presa de Valsequillo, Puebla. UDLA 2006. En línea: http://caterina.udlap.mx/u_dl_a/tales/documentos/lhr/mendoza_r_m/Chapter_4.html Fecha de consulta: 28 de abril de 2012
- NOBLE, ARMSTRONG, BARTLETT, BENCHWICH, CAVELIERI, CLARK, HECHT, KHON, MATCHAR, MOON, THALHEIMER, México. Lonely Planet. 9 Edición 2011. Paris
- RIBARDIÈRE, Antonine. TALLET, Bernard. Atlas México Megapoles, Editions Autrement, Paris 2011.
- Secretaría DE DESARROLLO ECONOMICO Y TURISMO MUNICIPAL DE PUEBLA – DIRECCIÓN DE DESARROLLO PARA UNA CIUDAD COMPETITIVA. Fichas técnicas de la Ciudad de Diseño y MRT Diseño Puebla, 2012.
- SEMARNAT, Programa de Gestión de la Calidad del Aire de la Zona Metropolitana del Valle de Puebla. 2006-2011. En línea: http://www.semarnat.gob.mx/temas/gestionambiental/calidaddelaire/Documents/Calidad%20del%20aire/Proaires/Proaires_Vigentes/1_ProAire%20ZMVP%202006-2011.pdf Fecha de consulta: 26 de abril de 2012
- SOTO, Oscar. Algunas ideas sobre la ciudad de Puebla. Presentación presentada al equipo de Les Ateliers en noviembre de 2011
- UNESCO. Ciudades Creativas: fomentar el desarrollo social y económico a través de las industrias culturales. 2004
- ONU Hábitat, Estado de las ciudades de México, rapport de 2011
- IMPLAN PCUM
- _____ Plan Puebla 500
- _____ Aspectos Generales del IMPLAN como institución
- Leticia GAMBOA Ojeda, Rosalina ESTRADA Urroz, Blanca Esthela SANTIBÁÑEZ, Bernardo García Díaz, Aurora GÓMEZ Galvarriato, Everardo Rivera Flores, Historia e Imágenes de la Industria Textil Mexicana, Puebla Tlaxcala y Veracruz, Cámara de la Industria Textil de Puebla y Tlaxcala, 2000.
- VELÁZQUEZ, Yadira. México y Puebla; del centro comercial a la ciudad la construcción de nuevos territorios urbanos. En línea: www.cemca.org.mx/trace/TRACE_51_PDF/Vázquez_51_2007.pdf. Fecha de consulta: 25 de abril de 2012

CENTER

- BELANGER Hélène, La régénérescence socio-résidentielle des quartiers centraux latino-américains : le cas de la ville de Puebla au Mexique
- ACEVEDO José Ignacio, SDUOP « Plan DUIS

de Regeneration et/ou Redensification Urbaine de la Zone de Monuments et son entourage »

- HERNÁNDEZ, Celia. CASTILLO, María Isabel. ORNELAS, Jaime. La zona metropolitana Puebla – Tlaxcala: Situación actual y posibilidades de desarrollo. Universidad Autónoma de Tlaxcala, Tlaxcala, 2010.
- MONTERO PANTOJA Carlos. Colonias de Puebla. Universidad Autónoma de Puebla.
- MONTERO PANTOJA Carlos, TENORIO TELLEZ Lina Marcela, GALINDO CORTÉS María Elena, MAYER MEDEL María Silvina. Patrimonio arquitectónico del siglo XX en Puebla.
- MONTERO PANTOJA Carlos SALAMANCA MONTES Juan Francisco, TEUTLE LÓPEZ Alberto, MARTÍNEZ MANZANERO Betsabé, LICONA VALENCIA Ernesto Licona, R.GARCÍA Daniel. Espacios públicos en el centro histórico de la ciudad de Puebla. Universidad Autónoma de Puebla.
- VÉLEZ PLIEGO Francisco Manuel. Planeación, crecimiento urbano y cambio social en el centro histórico de la ciudad de Puebla.

INDUSTRIAL HISTORY

- Leticia GAMBOA, Rosalina ESTRADA. Empresas y empresarios textiles de Puebla, Análisis de dos casos. Cuadernos de historia contemporánea, serie horizontes, Universidad Autónoma de Puebla, 1986.
- GAMBOA OJEDA Leticia, ESTRADA URROZ Rosalina, SANTIBANEZ TIJERINA Blanca Esthela, GARCIA DIAZ Bernardo, GOMEZ GALVARRIATO Aurora, RIVERA FLORES Everardo. Historia e Imágenes de la Industria Textil Mexicana, Puebla, Tlaxcala, Veracruz. Cámara de la Industria Textil de Puebla y Tlaxcala, 2000.
- AGUIRRE ANAYA Carmen. Personificaciones del capital, siete propiedades en la sociedad e industria textil de Puebla durante el siglo XIX. Cuadernos de la casa Presno, Universidad Autónoma de Puebla, 1987.

DWELLING

- DUHAU Emiliou, Politiques du logement et intégration au Mexique : de la promotion publique à la promotion immobilière privée, cahiers des Amériques latines número 44.
- “Estado actual de la vivienda en México”, Cidoc y SHF con el apoyo de Conavi, Sedesol
- “Estado de ciudades de México”, rapport ONU Hábitat, 2011.

ENVIRONMENT

- WWF. Living Planet Report 2006. En línea http://www.footprint-network.org/newsletters/gfn_blast_0610.html. Fecha de consulta 1 de mayo de 2012
- _____. Living Planet Report 2010. En línea: <http://awsassets.panda.org/downloads/lpr2010.pdf> Fecha de consulta 1 de mayo de 2012
-

BIBLIOGRAPHY

WEBSITES

- Alcantarillado. Sistema Municipal de Información Ambiental. Entorno: Agua <http://www.pueblacapital.gob.mx/work/sites/pue/resources/LocalContent/3619/3/infraestructura.pdf>. Fecha de consulta 28 de abril de 2012
- Acuíferos. <http://www.pueblacapital.gob.mx/work/sites/pue/resources/LocalContent/3619/3/acuifero.pdf> Fecha de consulta 28 de abril de 2012
- INEGI www.inegi.org.mx
- Carreras con mayor demanda en Puebla. En línea: http://www.peu.buap.mx/revista_7/articulos/Carreras_con_mayor_demanda_en_Puebla.pdf. Fecha de consulta: 5 de abril de 2012
- CENTRO IBEROAMERICANO DE DESARROLLO ESTRATÉGICO URBANO (CIDEU). Espacios Urbanos Neoterciarios. Memorias del XX Congreso. 2012. En línea: <http://xx-congreso-cideu.com/mo-nografia/>. Fecha de consulta: 29 de marzo de 2012.
- COMISION DE DEFENSA DEL PATIRMONIO CULTURAL, Cacaxtla – Xochitecatl mucho más que un museo. 2007 En línea: <http://www.investigadoresinah.org.mx/NAVEGADOR%20DER/Patrimonio%20Tangible/cacaxtlaTexto.pdf>. fecha de consulta: 7 de abril de 2012
- Conflictos por el agua: http://www.e-consulta.com/index.php?option=com_k2&view=item&id=31767:buscan-en-carcelar-a-5-activistas-de-acuexcomac-por-conflicto-del-agua&Itemid=332. Fecha de consulta: 28 de abril de 2012
- Consejo para el Desarrollo de la Zona Metropolitana de Puebla y Tlaxcala. En línea: http://periodicodigital.com.mx/portal/index.php?option=com_k2&view=item&id=127778:crean-puebla-y-tlaxcala-fideicomiso-por-320-mdp-para-obras-del-fondo-metropolitano&Itemid=534. Fecha de consulta 5 de abril de 2012
- _____ en línea: <http://zonametropolitanapueblatlaxcala.espacioblog.com/post/2012/01/04/instalan-consejo-la-cuarta-zona-metropolitana-puebla> Fecha de consulta 2 de mayo de 2012
- Contaminación del aire: <http://www.lajornadadeoriente.com.mx/2011/06/06/puebla/ecl207.php>. Fecha de consulta: 29 de abril de 2012
- Cuautlancingo. http://cuautlancingo.gob.mx/?page_id=1377. Fecha de consulta 23 de abril de 2012
- _____ <http://es.wikipedia.org/wiki/Cuautlancingo#Econom.C3.ADa> Fecha de consulta 23 de abril de 2012
- Desarrollo humano: http://www.undp.org.mx/spip.php?page=area&id_rubrique=5/ Fecha de consulta: 24 de abril de 2012
- Empleo en México: <http://marcela-massa-m.suite101.net/estados-de-la-rePublic-mexicana-con-un-alto-indice-de-empleo-a19231>. Fecha de consulta: 25 de abril de 2012
- Enciclopedia de los municipios de México, Estado de Puebla: <http://www.e-local.gob.mx/work/templates/enciclo/puebla/> Fecha de consulta: 24 de abril de 2012
- _____ Estado de Tlaxcala. <http://www.e-local.gob.mx/work/templates/enciclo/tlaxcala/>. Fecha de consulta 24 de abril de 2012
- Índice de desarrollo urbano. http://es.wikipedia.org/wiki/%C3%8Dndice_de_desarrollo_humano. Fecha de consulta 24 de abril de 2012
- INFONAVIT: <http://portal.infonavit.org.mx> Fecha de consulta: 25 de abril de 2012.
- Marginación urbana: <http://www.conapo.gob.mx/Publicaciones/indices/pdfs/001.pdf> Fecha de consulta 24 de abril de 2012
- Parque Nacional Izta-Popo. En línea: <http://iztapopo.conanp.gob.mx/descripcion.php> Fecha de consulta: 7 de abril de 2012
- Parque Nacional La Malinche. En línea: <http://www.planeta.com/ecotravel/méxico/parques/tlaxcala.html>. Fecha de consulta: 7 de abril de 2012
- PIUS : <http://piuspuebla.files.wordpress.com> Fecha de consulta: 25 de abril de 2012
- San Andrés Cholula.
- PLAN DE EVACUACIÓN POPOCATEPELT. http://e-tlaxcala.mx/index.php?option=com_k2&view=item&id=10945:efect%C3%BAa-simulacro-en-las-siete-rutas-de-evacuacion-del-plan-popocat%C3%A9petl&Itemid=312. Fecha de consulta 29 de abril de 2012
- PTAR Puebla: http://www.pueblacapital.gob.mx/wb/pue/plantas_de_tratamiento_en_uso_capacidad_instalada. Fecha de consulta 28 de abril de 2012.

- <http://www.e-local.gob.mx/work/templates/enciclo/puebla/Mpios/21119a.htm>. Fecha de consulta: 23 de abril de 2012
- <http://es.wikipedia.org/wiki/Cholula>. Fecha de consulta: 23 de abril de 2012
- http://caterina.udlap.mx/u_dl_a/tales/documentos/laaq/saenz_s_ma/Chapter1.pdf. Fecha de consulta: 23 de abril de 2012
- San Martín Texmelucan: En línea: <http://es.scribd.com/doc/44261049/SAN-MARTIN-TEXMELUCAN>. Fecha de consulta 22 de abril de 2012
- Red de Ciudades Creativas de UNESCO. En línea: <http://www.unesco.org/new/es/culture/themes/creativity/creative-industries/creative-cities-network/>. Fecha de consulta: 2 de abril de 2012
- Residuos sólidos: http://www.abctlaxcala.com/index.php?option=com_content&view=article&id=23393:mas-de-40-toneladas-de-basura-no-llegan-a-rellenos-sanitarios&catid=34:locales&Itemid=55. Fecha de consulta 29 de abril de 2012
- http://ssaot.puebla.gob.mx/index.php?option=com_content&view=category&layout=blog&id=87&Itemid=173 Fecha de consulta: 29 de abril de 2012
- <http://noticias.universia.net.mx/ciencia-nn-tt/noticia/2009/06/11/15165/genera-puebla-diariamente-5-5-millones-kilos-basura.html>. Fecha de consulta: 29 de abril de 2012
- <http://elpopular.mx/local/todos-los-rellenos-sanitarios-incumplen-la-norma-federal/> Fecha de consulta 29 de abril de 2012
- http://www.elperiodicodetlaxcala.com.mx/index.php?option=com_content&view=article&id=4613:-se-generan-en-tlaxcala-mas-de-950-toneladas-de-basura-diarias&catid=35:local-tlx&Itemid=27. Fecha de consulta: 29 de abril de 2012
- FOVISSSTE <http://www.fovissste.gob.mx>
- CONAVI <http://www.conavi.gob.mx>
- INFONAVIT www.infonavit.gob.mx
- Río Atoyac: http://e-consulta.com/index.php?option=com_k2&view=item&id=30197:descargan-en-el-ri%C3%B3-atoyac-27-empresas-sus-contaminantes&Itemid=332 Fecha de consulta: 28 de abril de 2012
- <http://www.dalelacara.org/default.aspx>. Fecha de consulta 28 de abril de 2012.
- <http://www.revistacardus.com/?p=66>. Fecha de consulta 28 de abril de 2012
- <http://ecopue.mx/proyectos/miratoyac/> Fecha de consulta 28 de abril de 2012
- ZONA ARQUEOLOGICA CACAXTLA. En línea: <http://es.wikipedia.org/wiki/Cacaxtla> fecha de consulta: 7 de abril de 2012
- ZONA ARQUEOLOGICA XOCHITÉCATL. En línea: <http://es.wikipedia.org/wiki/Xochit%C3%A9catl> fecha de consulta: 7 de abril de 2012
- Zonas naturales del Estado de Puebla: En línea: http://www.poramoralplaneta.com.mx/convocatoria/Bases_Conv_ANP2012_V1.0.pdf. Fecha de consulta 1 de mayo de 2012

SOURCES DE LAS IMAGENES DE LA CRONOLOGÍA

- 1- Llegada de los inmigrantes a América por el estrecho de Bering. Source : <http://yucatanvoyages.com/mexique-histoire.html>
- 2- Primeros habitantes del continente americano Source : <http://amerique-latine.com/ala/fr/Prehistoirepeuplement.jpg>
- 3- Cabeza Olmeca. Source : http://v8.cache8.c.bigcache.googleapis.com/static.panoramio.com/photos/original/1268653.jpg?redirect_counter=3
- 4- Valle de Tehuacán. Source : http://upload.wikimedia.org/wikipedia/commons/8/8c/Paisaje_en_el_valle_de_Tehuac%C3%A1n.JPG
- 5- Pirámide de Xochitécatl. Source : maps.google.co.in
- 6- Maqueta de Teotihuacán, Museo Nacional de Antropología de Mexico, foto de Thomas Casanova
- 7- Fotografía pirámide del Sol
- 8- Pinturas de Cacaxtla. Source : http://1.bp.blogspot.com/_mMqzZITA5oc/TGMP9BcbK-I/AAAAAAAAADro/OBCW8Dxh6BM/s1600/cacaxtla.jpg
- 9- Maqueta de Tenochtitlán, Museo Nacional de Antropología de Mexico, foto de Thomas Casanova
- 10- Representación de la región Azteca, Museo de Antropología de Mexico, foto de Thomas Casanova
- 11- Batalla de Cholula. Source : <http://www.redmexicana.com/comun/actividadeseducativas/AmericaLatina/AmericadelNorte/Mexico/Ilustrations/batalladecholula-531764.jpg>
- 12- Toma de la Ciudad de Mexico por Hernán Cortés
- 13- Fundación de Puebla de Los Ángeles. Source : http://upload.wikimedia.org/wikipedia/commons/6/6f/Fundaci%C3%B3n_de_la_Puebla_003.JPG
- 14- Representación de la fundación de Puebla de Los Ángeles. Source : <http://www.poblanerias.com/images/noticias/cultura/fundacionPuebla.jpg>
- 15- Retrato de Miguel Hidalgo. Source : http://4.bp.blogspot.com/_JgLoYHeTxq0/TJojdd6qY9I/AAAAAAAAAU/Ny7Gaqqh6rk/s1600/Miguel_Hidalgo%5B1%5D.jpg
- 17- La Constancia en rehabilitación. Foto: Thomas Casanova
- 18- Perdidas territoriales de Mexico en la guerra contra Estados Unidos Source : http://ddc.artetv/uploads/program_slideshow/image/2110308.jpg
- 19- Retrato de Benito Juárez. Source : U.S. Library of Congress - Prints & Photographs Online Catalog, http://upload.wikimedia.org/wikipedia/commons/8/8b/Benito_Juarez.jpg
- 20- Pintura representativa de la batalla del 5 de mayo de 1862, óleo sobre lienzo 1903. Source : MNH CONACULTA – INAH, <http://imageshack.us/photo/my-images/140/278w.jpg/>
- 21- Retrato de Maximiliano de Mexico. Source : <http://www.msxlabs.org/forum/siyaset-ww/261751-i-maximilian-i-maximilian-kimdir-i-maximilian-hakkinda.html>
- 22- Tren de vapor mexicano. Source : <http://www.industriaferroviariaonline.com/wp-content/uploads/2010/11/Historia-del-ferrocarril-en-México.jpg>
- 23- Plano de Puebla de 1902. Proporcionada por el arquitecto Ignacio Acevedo Ponte de Leon
- 24- Francisco Villa y sus tropas Source : http://2.bp.blogspot.com/_uheNIUAGBA8/TQFacJyGj_I/AAAAAAAAADPA/pE1HtwZO4j0/s1600/revolucion%2Bmexicana%2B1910.jpg
- 25- Afiche "Mi tierra y Libertad" del movimiento zapatista de la Revolución Mexicana: <http://majfud.files.wordpress.com/2011/10/zapata-poster.jpg>
- 26- Imagen de la Colonia La Paz trans su construcción: Source : <http://www.revistadelauniversidad.unam.mx/4808/rivero/imgs/48rivero.jpg>
- 27- Autopista Mexico - Veracruz poco después de su construcción. Source : <http://media.photobucket.com/image/1962%20autopista%20Puebla%20México/booxmiis2/Zaragoza.jpg>
- 28- El escarabajo de Volkswagen. Source : http://3.bp.blogspot.com/_hwB-u4xhPmM/S_ugMIRhiTI/AAAAAAAAAHn4/xz-b6z8lpMM/s1600/volkswagen-beetle-ings-his-4.jpg
- 29- La manifestación de Tlatelolco. Source : http://sp270.fotolog.com/photo/30/23/17/fer_ceniza2/1223007333435_f.jpg
- 31- Plano de la zona de monumentos. Source : http://www.ub.edu/geocrit/sn/sn-194-42_archivos/image011.gif
- 33- Firma del TLCAN en 1992. Source "George Bush Presidential Library and Museum": <http://upload.wikimedia.org/wikipedia/commons/b/b0/Nafta.jpg>
- 34- Daños en Puebla tras el temblor de 1999. Source : http://www.solosequenosenada.com/misc/terremotos/pics/1999-La_Mula_Murcia.jpg

ABBREVIATIONS

- AA, Área de Amortiguamiento (usos del suelo en Puebla)
- ASP, Área del Sector Primario (usos del suelo en Puebla)
- AG, Área Agrícola (usos del suelo de Puebla)
- BUAP, Benemérita Universidad Autónoma de Puebla
- BRT, Bus Rapid Transit
- CIDEU, Centro Iberoamericano de Desarrollo Estratégico Urbano
- CONAGUA, Comisión Nacional del Agua
- CONANP, Comisión Nacional de Áreas Naturales Protegidas
- CONAPO, Consejo Nacional de Población
- CONEVAL, Consejo Nacional de Evaluación
- CONAVI, Comisión Nacional de Vivienda
- COREMUN, Código Reglamentario para el Municipio de Puebla
- CORETT, Comisión para la Regularización de la Tenencia de la Tierra
- DREIF,
- DS, Densidad Selectiva, (usos del suelo en Puebla)
- DUIS, Desarrollo Urbano Integral Sustentable (centro histórico, proyecto federal)
- FODA, matriz de Fortalezas, Oportunidades, Debilidades y Amenazas
- FOVISSSTE, Fondo de la Vivienda del Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado
- HDV, habitacional densidad vertical
- IBERO PUEBLA, Universidad Iberoamericana de Puebla
- IDH, Índice de Desarrollo Humano
- IMPLAN, Instituto Municipal de Planeación
- INE, Instituto Nacional de Ecología
- IMSS, Instituto Mexicano de Seguridad Social
- INAH, Instituto Nacional de Antropología e Historia
- INAOE, Instituto Nacional de Astrofísica, Óptica y Electrónica
- INEGI, Instituto Nacional de Estadística, Geografía e Informática
- INFONAVIT, Instituto del Fondo Nacional de la Vivienda para los Trabajadores
- INIFAP Instituto Nacional de Investigaciones Forestales, Agrícolas y Pecuarias
- ISSSTE, Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado
- ITP, Instituto Tecnológico de Puebla
- PCUM, Puebla Capital Universitaria de México
- PEA, Población Económicamente Activa
- PEMEX, Petróleos Mexicanos
- PIB, Producto Interno Bruto
- PIUS, Plan Integral Urbano Sustentable (SEDESOL, municipalidad de Puebla)
- PMDUSP, Programa Municipal de Desarrollo Urbano Sustentable de Puebla
- PNUD, Programa de las Naciones Unidas para el Desarrollo.
- PTAR, Planta de Tratamiento de Aguas Residuales
- SAGARPA, Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación
- SSAOT, Secretaría de Sustentabilidad Ambiental y Ordenamiento Territorial
- SDUOP, Secretaría de Desarrollo Urbano y de Obras Públicas
- SEDESOL, Secretaría de Desarrollo Social, presente en los tres niveles del poder federal, estatal, municipal
- SEMARNAT, Secretaría de Medio Ambiente y Recursos Naturales
- SHF, Sociedad Hipotecaria Federal
- SOAPAP, Sistema Operador de los Servicios de Agua Potable y Alcantarillado del Puebla
- TEC de Monterrey, Instituto Tecnológico de Monterrey,
- TLCAN, Tratado de Libre Comercio de América del Norte
- UAM, Universidad Autónoma Metropolitana
- UANL, Universidad Autónoma de Nuevo León
- UDLA, Universidad de las Américas
- UMAD, Universidad Madero
- UNESCO, Organización de las Naciones Unidas para la Educación, la Ciencia y la Cultura
- UPAEP, Universidad Popular Autónoma del Estado de Puebla
- USA, United States of America
- UTP, Universidad Tecnológica de Puebla
- UVM, Universidad del Valle de México
- WWF, World Wide Fund for Nature
- ZM, zona metropolitana

PRACTICAL LINKS

- AGRICULTURA, SAGARPA <http://www.sagarpa.gob.mx>
- ATLAS NACIONAL INTERACTIVO DE MÉXICO: <http://www.atlasdeMéxico.gob.mx/>
- CONSEJO NACIONAL PARA LA CULTURA Y LAS ARTES - SISTEMA DE INFORMACIÓN CULTURAL http://www.sic.gob.mx/index.php?table=centrodoc&disciplina=&estado_id=21&municipio_id=0
- CORETT, <http://www.corett.gob.mx/index/index.php>
- DESARROLLO SUSTENTABLE: <http://www.driea.ile-de-france.developpement-durable.gouv.fr/le-tableau-de-bord-6-enjeux-14-r1633.html>, http://www.driea.ile-de-france.developpement-durable.gouv.fr/IMG/pdf/_d_doc_communication_mars_2010_cle7116ce.pdf
- DUIS, <http://www.duis.gob.mx/Espa%C3%B1ol/Paginas/Inicio.aspx>
- <http://www.shf.gob.mx/programas/intermediarios/DUIS/Paginas/default.aspx>
- INEGI - INSTITUTO NACIONAL DE ESTADÍSTICA Y GEOGRAFÍA
 - PLANOS POR ESTADO <http://cuentame.inegi.org.mx/mapas/default.aspx?tema=M>
 - ECONOMÍA EN MÉXICO: <http://cuentame.inegi.org.mx/economía/default.aspx?tema=E>
 - Población: <http://cuentame.inegi.org.mx/Poblacion/default.aspx?tema=P>
 - Generalidades del Territorio <http://cuentame.inegi.org.mx/Poblacion/default.aspx?tema=P>
- INIFAP <http://www.inifap.gob.mx/>
- INFONAVIT, www.infonavit.org.mx
- MAPA DIGITAL DE MÉXICO: <http://gaia.inegi.org.mx/mdm5/viewer.html>
- PLANO DIGITAL DEL ESTADO DE PUEBLA <http://www.geopuebla.com.mx/mapas/map.phtml>
- PIUS, <http://piuspuebla.wordpress.com/>
- RIESGOS NATURALES NACIONALES : <http://www.atlasmacionalderiesgos.gob.mx>

