

19 URBAN MANAGEMENT AND PUBLIC SERVICE POLICIES

Learning between Barcelona and Brazilian mayors

uclyg mini peer learning

Barcelona

November
2016



The SDGs addressed in the document:



SDG 03

TARGET 6



SDG 08

**TARGET 3
TARGET 6**



SDG 09

TARGET C



SDG 11

**TARGET 2
TARGET 6**



SDG 12

TARGET 5

FOREWORD

Today, cities rely on one another for support more than ever in the face of the challenges posed by meeting the increasing demands of their citizens. Learning and mutual inspiration is therefore essential; cities must share their experiences and local policies with one another.

Our Brazilian delegation was grateful to visit Barcelona to learn about how this city implements its policies. During the visit we learned about the integrated transportation management system and its scheme for converting of waste into energy. We also found out about how the city of Barcelona provides support to local businesses and carries out comprehensive urban planning focused on promoting economic development

Some of our main reflections based on this visit to Barcelona include:

- **Transportation:** it was very impressive to see the integration of the different means of transport in the metropolitan region. It would be useful to apply a similar scheme in our Brazilian cities, but this would need the cooperation of other municipalities, which would have to install integrated systems, update their tariffs and mobilise investment. To raise awareness, we could hold a conference and undertake research in order to support the work plan and raise investment capital.
- **Waste management:** we agreed that we need a plant to convert waste into energy, to reduce the number of landfill sites and to re-use waste for energy production. We observed that building a waste management facility close to the city centre has many advantages. The challenges ahead will mostly lie in financing the required investment, changing the existing legal framework and modifying social behaviours. As a first step, we could begin by encouraging the actors involved and organising a technical team to develop the main terms of reference and to search for investment partners, particularly in the private sector.
- **Employment and entrepreneurship:** we are impressed by the opportunities that Barcelona offers for people to create their own small and micro enterprises with the guidance and support of the city hall. An exchange of experiences would facilitate the establishment of a similar policy and the associated technological transfer, but this would be conditioned by finding appropriate sources of financing.
- **22@ and comprehensive urban planning:** : it was pointed out that changing peoples' mindset is important when attempting to introduce new perspectives in urban planning. A possible first step would be to apply this methodology to empty spaces using public-private partnerships.

On behalf of all of the Brazilian mayors that participated in the visit, I would like to thank the City of Barcelona for receiving us, and UCLG, FNP, and Metropolis for their support. One learning event cannot change everything, but it can stimulate us to apply the lessons we have learned and to seek to make the policies transferrable in order to improve our citizens' quality of life.

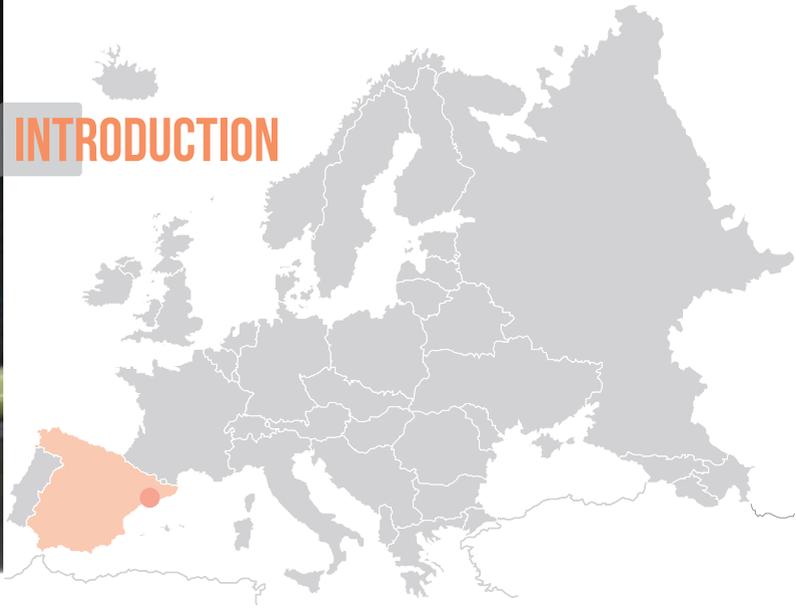
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INTRODUCTION



On 14th November 2016, eight mayors from Brazilian cities visited Barcelona for a peer learning day on urban management organized by UCLG, Metropolis, FNP and the City of Barcelona. Their goal was to identify opportunities and challenges in transferring the exemplary policy practices of Barcelona to their own cities.

The mayors and their teams visited the Barcelona Metropolitan Transportation Company, the waste treatment facility, the Mediterranean Ecopark, the business and entrepreneurial centre, Barcelona Activa, and the 22@ urban renovation project. The programme included a briefing, site visits, and a dynamic debate on how to share experiences and apply the lessons learned in their own cities.

I TRANSPORTS METROPOLITANS DE BARCELONA (TMB)

The day started with a visit by the Brazilian delegation to *Transports Metropolitans de Barcelona* (TMB). Pau Noy, the assistant CEO of TMB, briefly described the current metropolitan transport system of Barcelona.

1. DATA

Transports Metropolitans de Barcelona (TMB) is the main public transport operator in the Metropolitan Area of Barcelona (AMB). TMB aims to provide quality services to citizens and to be an example of sustainable mobility. The Metropolitan Region of Barcelona covers 9,065km² and has 5,692,991 inhabitants (as of 1st January 2015). The number of journeys made by public transport (bus and metro) within the AMB rose by 2.3% between 2014 and 2015.

Category	Area	N° of municipalities	Inhabitants
Metropolitan Region of Barcelona	9,605 km ²	346	5,692,991
Metropolitan Area of Barcelona	636 km ²	36	3,213,775
City of Barcelona	101,4 km ²	1	1,604,555

The SDGs addressed here are the following:



SDG 03

TARGET 6: by 2020 halve global deaths and injuries from **road traffic accidents**



SDG 11

TARGET 2: by 2030 provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding **public transport** with special attention to the needs of those in vulnerable situation, children, women persons with disabilities and older persons.

Management of TMB

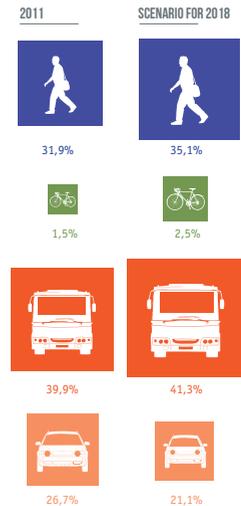
TMB Global Activity	2013	2014	2015
Passengers transported* (in millions)	552.90	560.03	572.80
Staff*	7,802	7,757	7,773
Places-km (in millions)	18,805.90	18,550.39	18,424.37
Journey covered coaches/buses-useful km (thousands)	125,084.36	122,890.34	122,407.17

* Not including Telefèric de Montjuïc.

Inside the City of Barcelona, in terms of the modal share, 39.9% of the inhabitants currently use public transportation, 1.5% use bicycles, 31.9% walk and 26.7% use private vehicles. By 2018, TMB plans to increase the use of public transportation to 41.4%, cycling to 2.5% and walking to 35.1% and to reduce the use of cars to 21.1%.

The TMB bus network has 100 lines covering a total of 873.18km, with 2,548 bus stops. 50% of the buses are run on green energy such as natural gas, electricity and hybrid fuels. Barcelona also has the longest automatic metro system in Europe (30km) with 9 metro lines. Furthermore, there are 600 other buses running under the control of the Metropolitan Area of Barcelona, a local body which is also the owner of TMB.

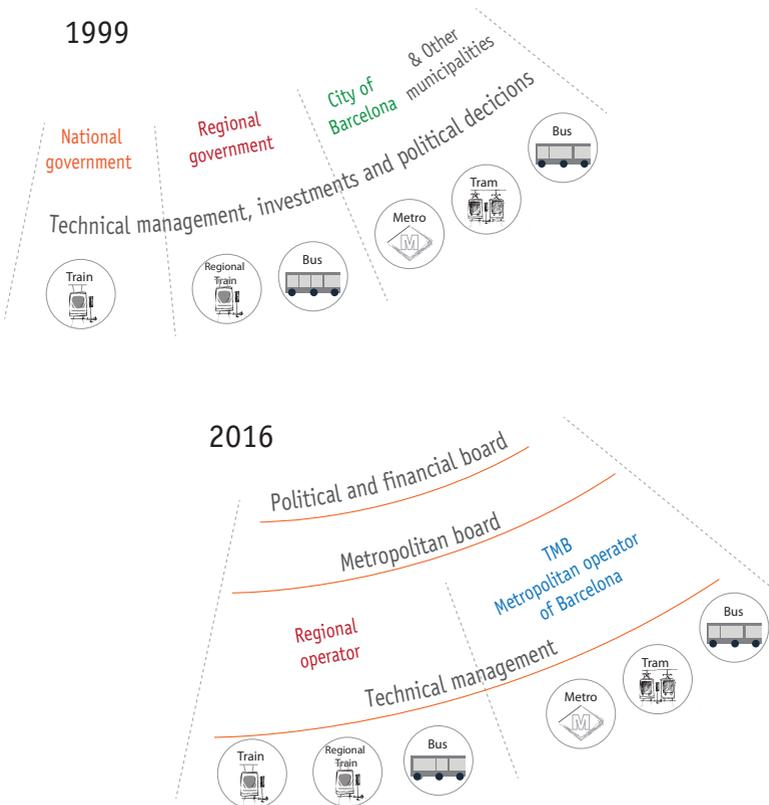
The Metropolitan Area of Barcelona introduced an integrated fare system in 2001. This is based on 6 different zones under the direction of Barcelona and other municipalities to take into account the lateral trips, which allows free transfers between bus and metro services within a period of 75 mins in the first zone and an additional 15 mins for each zone beyond the first one. The number of trips has increased by almost 25% since this system was introduced in 2015. (The number of passengers increased from 748.5 million in 2000 to 939.49 million in 2015 and is expected to reach 960 million in 2016.)



2. INTEGRATED MANAGEMENT OF PUBLIC TRANSPORTATION: CREATION OF ATM (METROPOLITAN TRANSPORTATION AUTHORITY)

In 2000, the major goal was to create a single public transportation authority. The first step was taken in 1997 with the creation of a consortium made up of the Government of Catalonia (51%), Barcelona City Council (25%) and the Barcelona Metropolitan Area (24%). The Spanish Government also participated, but as an observer. The consortium was in charge of the Infrastructure Master Plan, fare integration, and the coordination of financial flows between public administrations and transport companies through the so-called financial contracts. This new structure helped to design a new transportation system involving national, regional, metropolitan and municipal authorities. The main outcome was to favour complementarity rather than competition between transport providers and thereby benefit their users.

The results were noteworthy. The number of trips in 2016 is 28% higher than in 2000; 19% of these including new passengers, while the rest took advantage of the innovation and used multiple and combined means of transportation for their journeys. Transport into the city was greatly improved by the combination of bus, metro, tram and regional train (FGC) services. Recently (2016), a new metro line was opened linking the city to its airport.



3. FUTURE GOALS OF A PUBLIC TRANSPORT OPERATOR

Public transport companies must have a clear vision for the future of public transportation in their cities. It seeks to:

- Manage all the different transport systems and forms of transport (bus, metro, taxi, etc.) including both public and private companies and new mobility scheme like sharing systems, taking joint responsibility for their financial management at the national (Spain), regional (Catalonia) and local levels.
- Plan an integrated transport network at the regional level (extending its scope to cover travel distances of not only up to 10km, but to 100km).
- Plan constant streams of revenue to ensure long term stability and sufficiency. In the coming years public transport demand will rise due the reduction of private transport and to the energy scarcity
- Plan a single regional (Catalonia)/ national (Spain) public railway service.
- Create a T Mobilitat Card-a contactless card similar to the Oyster Card used in London is being considered. This will provide all-in-one access to the city transport network (public bicycles, car-sharing and all these new mobility schemes). In the case of Barcelona, the creation of this contactless card still has some issues pending resolution, especially regarding the privacy of personal data.

During the presentation at the TMB offices in Barcelona, Pau Noy emphasized several elements that will be required of a successful metropolitan transport system:

- Public administrations must consider transport as a public service with policies, like health, social welfare and education, and to support it financially.
- The willingness to devise and plan all transport systems consistently, including non-motorized modes by providing bike lanes and pedestrian paths.
- Agreements between the different local, regional and national (Spain) authorities responsible for transport operations should be achieved.
- A commitment to sustainable mobility. There is an important need to invest more in public transportation systems than in expanding the motorway network.
- The inclusion of the private sector to stimulate investment and develop more public-private partnerships to provide financial and technical resources.

4. SHARING EXPERIENCES OF POLICY MAKING

The public transportation system of Barcelona has been improved in four areas: efficiency, number of commuters, reduction of the use of private vehicles, and increased use of non-motorised forms of transport such as walking and cycling. It is interesting to note that Barcelona is now considering ways in which to promote human powered mobility within the general mobility scheme.

By expanding its transport system plan to the metropolitan level, the Metropolitan Area of Barcelona has also expanded its vision and strategies. For example, the operation of the tram system is now being reconsidered at the regional level. In 2000, the City of Barcelona held a referendum in which citizens voted not to connect the city centre by tram. However, this is now being reconsidered at the metropolitan level by linking both eastern and western trams through the Avenue Diagonal, one of the most important avenues in Barcelona

The Brazilian delegation shared their experiences and opinions on metropolitan transport. Curitiba was held up as a good example of transport policy and urban planning in Latin America, by both the Brazilians and Pau Noy. They all agreed on the importance of a city having an efficient and consistent transport network. They have also thought about installing a metro system as its operating cost is 5 to 10 times cheaper than that of a bus service, once it has been installed, as in the case of Barcelona.

Nevertheless, they expressed concern regarding the lack of flexibility of national laws in Brazil and the lack of resources allocated to the improvement of the country's public transport systems. The case of Barcelona and the TMB seems to be an inspiring example, especially in terms of how to assign clear roles to the different levels of government involved.

Carlos Enrique Franco Amastha, Mayor of Palmas

"Today, transportation is gaining more importance in urban management worldwide. However, we have to think about this matter in the local context because it is a service that is very close to citizens. At the local level, it is not easy to prepare long-term transportation strategies due to the lack of resources. Also, the federal government remains too dominant in the development of policies such as providing infrastructure or setting prices (e.g. a national law fixes subsidy rates so that vulnerable groups such as students and the elderly have reduced prices.) It was inspiring to see that the Metropolitan Area of Barcelona has clearly distributed roles shared among the different levels of government."

Euler Lázaro de Moraes, Government Secretary of Aparecida de Goiânia

"Brazilian cities suffer from budget constraints due to fare reductions in a context of limited incomes."





II. ECOPARK OF THE MEDITERRANEAN

After the visit to the TMB head office, the delegation visited the Ecopark of the Mediterranean waste management plant in Sant Adrià de Besòs, in the southern part of Barcelona. Oriol Vall-Llovera Calmet, the Director of Cooperative Services of TERSA, briefed the group on the facility and its activities

1. THE ECOPARK OF THE MEDITERRANEAN

The Integral Waste Recovery Plant (PIVR) in Sant Adrià de Besòs is an integrated treatment facility for municipal waste from the Barcelona Metropolitan Area (AMB). It is located in the centre of a new development district, right in front of the beach and very close to high income areas. This strategic location is only a short distance from the resource (household waste) and also showcases the fact that the technology used is clean and does not have a negative impact on the immediate environment. The other metropolitan treatment plants are located outside the metropolitan area.

The Ecopark plant has two facilities with different, but complementary, treatment processes: mechanical - biological treatment (separating recoverable materials from the organic matter from which biogas is produced) and energy recovery (even the waste that is not recovered for recycling is incinerated to generate electricity and heat; nothing is excluded from the energy recovery process).

The SDGs addressed here are the following:



SDG 12

TARGET 5: by 2030 substantially reduce waste generation through prevention, reduction, recycling and reuse.



SDG 11

TARGET 6: by 2030 reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality, municipal and other **waste management**.

- The Waste-to-Energy (PVE) Plant came into operation in 1975. It recovers energy from residues obtained from the Mechanical-Biological Treatment Plant and from other metropolitan treatment plants. The steam produced by the plant provides air conditioning and heating for the 22@ district.
- The Mechanical-Biological Treatment Plant (PTMB) came into operation in 2006. Here, materials and energy are recovered from the mixed municipal solid waste deposited in street bins.

2. DATA

The Barcelona Metropolitan area has more than 3,300,000 inhabitants, which represents 42.8% of the population of Catalonia. Each inhabitant of Barcelona produces 1.2 kg of solid waste every day: 1,410,731 tons a year. Before the economic crisis, the amount of waste produced was even greater, demonstrating the relationship between waste production and economic growth.

The annual budget for waste treatment in the AMB was € 155 million in 2015. The fee for waste management is collected by the AMB through a water tax. The PIVR in Sant Adrià de Besòs is operated by TERSA, the public company created by Barcelona Serveis Municipals (BSM, 59%) and the Barcelona Metropolitan Area (AMB, 41%).

The PVE plant has 3 furnaces with a capacity of 15mT/h and treats about 360,000 tons of waste per year: the equivalent of 1000 tons per day. This corresponds to 30% of the total waste production of the metropolitan area, or the waste of 780,000 inhabitants. The plant generates about 180,000 MWh per year, which is twice the amount of electricity needed for street lighting in Barcelona each year and enough electricity for 52,000 inhabitants. It produces 75,822 tons of steam for the heating and cooling of 80 urban buildings for residents and companies in the Forum and 22@ districts. It recovers and recycles 351,103 tons of urban waste, which is equivalent to 906,000 m³.

Technical Specifications of the Waste to Energy Plant:

- Maximum number of hours per furnace: 8,400 hours (95.9% of the year)
- Incineration: 3 lines
- Incineration capacity per line: 14.5 tons/hour
- Average combustion temperature: 900°C
- Combustion LCV: 2,800 Kcal/kg
- Type of condenser: seawater cooled pipes
- Reactor: acid gas phase $-Ca(OH)_2$
- NO_x reduction system: SNCR –ammonia dosage diluted to 45%
- Gas cleaning system: semi dry scrubber

3. PROCESS OF WASTE TREATMENT

After the briefing, the group had a facility visit to look around the waste treatment plant. The process begins with waste selection.



4. SHARING EXPERIENCES ON WASTE MANAGEMENT POLICY

One of the most outstanding points is the concept behind the name: Ecopark. Such a facility is important for the sustainability of a city as big as Barcelona. It forms part of an important value chain, converting waste into energy; it should therefore be considered a useful resource. It is also noteworthy that the facility was designed as an integral part of the urban development plan for the district and for it to allow an effective transfer of energy gains to local buildings, as well as producing heating and cooling (by converting steam into hot or cold water).

The perspective for job creation has been different. While the City of Barcelona sees recycling as a niche for the creation of jobs through start-ups, the Brazilian cities mentioned that collecting and separating waste could create jobs.

Maguito Vilela, the outgoing mayor of Aparecida de Goiânia

“Solid waste management is very important and one of the core duties and competencies of all Brazilian government administrations. What we saw was not only the collection and treatment of the waste, but also the transformation of this waste into energy and resources; this will be the future for Brazilian cities.

The exchange also raised the point of the importance of waste management as an important creator of jobs in Brazil. Most of its waste foragers are from vulnerable communities. As such, the waste industry offers an opportunity to employ the most fragile sectors of the population, which could also be interesting for Barcelona. In fact, the system explained above is based on the use of automated machines and procedures. Consequently, TERSA only needs to employ a few people.”



LINKING WASTE MANAGEMENT TO EMPLOYMENT POLICY – THE PRACTICE OF PORTO ALEGRE

Many of the urban poor in Latin America make money from picking up and collecting waste, such as pieces of cardboard plastic, and metal. Over the last 6 years, the city of Porto Alegre has conducted several projects to secure the incomes of these waste pickers by involving them in waste management. The projects have been carried out by forming partnerships with the private sector and NGOs.

The Vila Teresinha Triage Unit has trained 40 waste pickers. They previously collected and separated waste at their homes, but after training, they have now formed a cooperative and created 100 new jobs. In the corporative, a social worker has continuously trained these people and an NGO has taken care of their children, making sure that they go to school and are cared for in the afternoon, in a neighbourhood that is close to the recycling hall.

Another example is the resettling of Vila Chocolateao. This involved 180 families of waste pickers who were living in the streets before they were transferred outside the town where the recycling plant is located. They were provided with jobs such as sorting the waste. The city and regional administrations for housing and various NGOs were involved in making this project a reality.





III BARCELONA ACTIVA

In the afternoon, the Brazilian Delegation visited Barcelona Activa to learn about entrepreneurial support and the employment policy and also to learn about a recent urban project associated with the offices of Barcelona Activa.

1. BARCELONA ACTIVA: PROMOTING THE ECONOMIC DEVELOPMENT OF BARCELONA

Barcelona Activa works for Barcelona City Council and since 1986 it has been in charge of developing policies to support employment, entrepreneurship and business and also to foster the development of a more diversified economy. The main purpose of Barcelona Active is to promote the economic development of the City of Barcelona through four different streams: providing work for everyone, promoting economic development and the local economy, putting tourism at the service of the city and promoting local commerce.

2. POLICIES AND METHODOLOGY

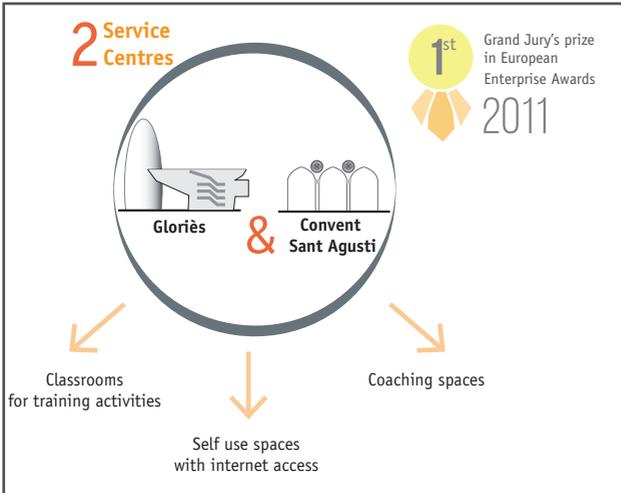
Hosting the Olympic Games in Barcelona in 1992 led to an important redevelopment of the city and the city council also saw the need to support a shift from an industrial to a service-based economy. Most of the industries located

The SDG addressed here is the following:



SDG 08
TARGET 3: promote development-oriented policies that support, **decent job creation, entrepreneurship, creativity and innovation,** and encourage formalisation and growth of micro-, small- and medium-sized enterprises including through access to financial services.

in the Besòs area were moved outside the city, providing an opportunity to develop services and housing in the vacant areas. The local economic policy of Barcelona Activa was supported by the urban development of district 22@.



By promoting entrepreneurship, Barcelona Activa has offered an effective mixed model to transform business ideas into effective enterprises providing technical coaching, feasibility assessment, tailor-made training and incubation programmes.

To provide information, Barcelona Activa offers 226 welcome sessions per year for more than 14,850 entrepreneurs, and also 4,852 training seminars to help lead and manage

successful business projects. On top of this, a team of business experts answers the enquiries of entrepreneurs, assesses the feasibility of their business projects and coaches them to help find suitable funding. It also gives access to effective online tools.

The incubator provides logistical and administrative coaching, information and training services as well as access to business networks for incubated start-ups; 5% of its total budget is dedicated to this work. The Glòries incubator had hosted 62 innovative start-ups by December 2015 and 51% of the incubated start-ups have signed cooperation agreements with each other. Their average annual turnover during their three incubation years was € 511,050 (to December 2015), with an 80% survival rate in the 4th year (one year after leaving the incubator). The Almogàvers Business Factory had hosted 38 IT, e-commerce & creative industry sector start-ups as of December 2015. ESA BIC, a business incubator for new business projects using new technologies and a knowledge of space research, opened in November 2014 and hosted 15 start-ups (up to December 2015).

M-Startup is a platform to host local & international business acceleration initiatives. It focuses on IT technologies and social entrepreneurship with high growth potential. As of December 2015, these accelerators had provided support to 33 start-ups

belonging to the mobile phone, big data, Internet of things and socially sustainable tourism sectors.

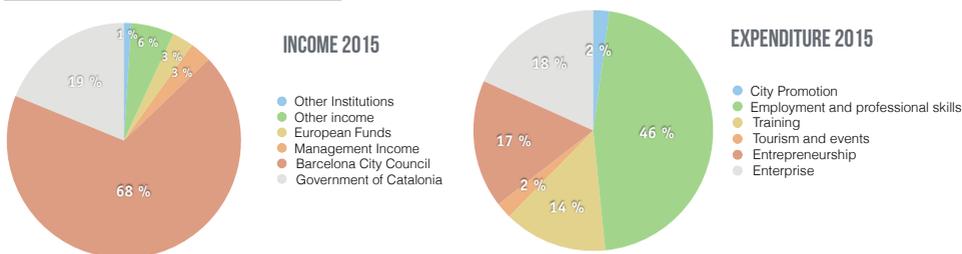
For its Business funding service, Barcelona Activa has signed cooperation agreements with the main banking & financial institutions to facilitate the funding of feasible business projects and microbusinesses with growth projects. € 46.3 million worth of funding was raised in 2015 for 538 start-ups, including € 15.2 million of public funding, € 21.7 million of “soft loans” from banks, and € 1.8 million in microloans.

For more information, see: www.bcn.cat/emprendedoria and www.bcn.cat/empresa

3. KEY FIGURES

Barcelona is the capital of Catalonia with 1,615,908 inhabitants, and generates 20% of Spain’s GDP as well as 25% of its exports. Barcelona counts 167,500 companies including 95% SMEs (Small and Medium Enterprises) and micro businesses. The area has in total 1 million workers. 53% of them are employed in knowledge intensive sectors and 37% of the workforce holds university degrees. There are 214,000 students in nine Universities of Barcelona. The Metropolitan Area is attractive and as a matter of fact, 16.4 million of tourists come for overnight stays.

BUDGET 2015 (€ 37,7 MILLION)



Below you can find Barcelona Activa’s main results for the year 2015.

In the area of business;

- 5,966 businesses received coaching
- More than € 46 million of funding was raised
- 187 companies and business projects were installed in the incubators: Glòries, Almogàvers Business Factory and Barcelona Advanced Industry Park
- € 511,050 was the average turnover of the incubator companies in their 4th year of activity
- 1,900 businesses were created and 3,400 jobs.

In the area of Entrepreneurship;

- 14,850 entrepreneurs, and 2,813 business projects received coaching
- 860 participants in tailor-made programmes for specific groups and economic sectors
- The Grand Jury's Prize in the European Enterprise Awards 2011 (European Commission) for Barcelona Activa's Entrepreneurship Centre

4. SHARING EXPERIENCES IN ENTREPRENEURSHIP POLICY

After the briefing, the Brazilian delegation looked around the Glòries Entrepreneurship Centre.

It was noted that the City of Barcelona has been working in this field and treating it as a priority investment for over 20 years. Its impact has been positive as it supports entrepreneurship and provides services that help young people to enter the labour market, which is positive for the economy of the city. This system provided a network hub through which to share and expand on existing knowledge as well as to help to overcome the national crisis of 2007. However, incubators are rather more product oriented than market oriented so the resulting new business usually face a struggle to survive.

The Mayor of Divinópolis, an intermediary city in Brazil with 230,000 inhabitants, expressed interest in introducing a similar network, which would include universities, to promote entrepreneurship. The mayor highlighted the fact that "the construction of the technology park with both universities and companies is crucial and Barcelona Activa is a good example of the implementation of employment policies".

Gustavo Medanha Melo, elected Mayor of Aparecida de Goiânia: "The entrepreneurship encouragement policy in Barcelona is very relevant. Barcelona constantly pushed to alleviate the youngsters in the period of economic crisis. Also, creativity was emphasized, which is considered as an asset especially in small and micro enterprises. In Goiânia, we have 33,000 and with a similar policy the number will keep growing. For these reasons, I will keep a connection between my city's stakeholders and Barcelona Activa as an inspiration for my city."



THE PRACTICE OF DIVINOPOLIS TO ENCOURAGE ENTREPRENEURSHIP

Divinópolis is a municipality located in the central-western area of Minas Gerais State, Brazil. The economy of the municipality, which has 220,220 inhabitants, has traditionally relied on its steel and retail fashion industries. However, it now needs to shift its economic base to the service sector. Taking this into account, the social department of the municipality and 3 universities created a new initiative, building a Technology Park to promote entrepreneurship and especially micro-scale businesses. The municipality has also encouraged entrepreneurship through procurement, such as by giving priority to local providers when buying food for schools. Inspired by the case of Barcelona, Divinópolis has called for benchmarking as part of relevant policies for its future growth.

IV ● 22 @ BARCELONA: DISTRICT RENEWAL PROJECT

After the presentation and visit of Barcelona Activa, the Brazilian Delegation received a brief description of the 22@ urban renewal project and were on site to visit the district.



1. 22@ BARCELONA PROJECT

Barcelona's 22@ project was planned in 2000 as a way to transform the old industrial areas of Poblenou into a quality, innovative urban environment for working, living and learning. The 22@ Plan included the creation of more than 4,000,000 m² of new land, 35 km of urban renewal projects involving public space and providing approximately 220,000m² of land for new public facilities, green spaces and social housing in what had been old industrial areas of the city. On top of this, the city also developed a strategy to facilitate the development of new business, scientific, educational and cultural activities.

The SDGs addressed here are the following:



SDG 08

TARGET 6 by 2020 substantially reduce the proportion of youth not in employment, education or training.



SDG 11

Make **cities** and human settlements inclusive, safe, resilient and sustainable.



SDG 09
TARGET C:

Significantly increase access to ICT and strive to provide universal and affordable access to internet in LDCs by 2020



For more than 100 years, Poblenou had been the main economic driving force of Catalonia and the definitive industrial neighbourhood of Barcelona. With the Barcelona 22@ plan, the historical, social and economic vitality of Poblenou can be maintained through the transformation of obsolete industrial areas into a creative district with new activities linked to knowledge and innovation.

2. SOCIAL AND ECONOMIC ASPECTS OF THE 22@ PLAN

The project has several different perspectives. As an urban renewal project, it aims to recover the social and economic dynamism of Poblenou and to create a diverse and well-balanced environment in which different facilities can easily coexist. In this project state-subsidised buildings are harmoniously combined with green open spaces, old industrial buildings and new work areas. This project, which has a strong economic component, constitutes a unique opportunity to turn Poblenou into an important scientific, technological and cultural platform capable of giving Barcelona a new image as one of the most dynamic and innovative cities in the world. The social aspect of the 22@ plan was designed to facilitate relations among different professionals working in the same area, improved access and the participation of all the neighbours in the technological offer provided by their district.

3. KEY FIGURES

Below are the main statistics about 22@;

- Total planning area: 198.26 Ha; 115 blocks
- Increase in gross floor space: 4,000,000 m²
- Housing
- Recognition of the existing 4,614 dwellings.
- Creation of 4,000 new state-subsidised housing units (with a minimum of 25% for rental)
- Increase in green space: 114,000 m²
- New facilities: 145,000 m²
- New companies (which arrived from 2000 to 2015): 8,223
- 60% of these were newly created.
- 85% are micro businesses.
- The total annual turnover of the companies in 22@ is € 10.3 billion

- New jobs created (from 2000 to 2015): 93,000
- Total Investment: € 2,272.4 million
- 70% of the reorganisation plan has already been completed, with 139 plans approved.
- 50% of the redevelopment plan has been finished.

4. SHARING EXPERIENCES ON URBAN PLANNING POLICY

It was highlighted that the 22@ project is a comprehensive urban planning project that not only focuses on urban planning, architecture and design, but also includes commercial, industrial, social and cultural aspects. As an infrastructure plan, it combines new models for mobility (including tramways and soft mobility), new energy systems (linked to the Ecopark of the Mediterranean and the TERSA waste treatment plant), a telecom network, waste collection, and centrally distributed heating and air conditioning. There is also a strong emphasis on creating clusters and fostering other activities around the new industry, such as energy, IT-mobile, medical technology, design, and media businesses. The project includes 10 university campuses with 25,000 students, which will encourage collaboration with universities and industries. Compared to traditional urban renewal plans, the 22@ plan focuses more on enhancing the local economy and on promoting innovative industries that will continuously create and provide new jobs.

The development model has been very innovative and supportive for entrepreneurship, especially in the IT sector. The project was also promoted internationally to attract some international start-ups. The large area made available provided a major opportunity and offered an inspiring “playground” for innovative architectural and urban design projects. However, the district has received an unusual amount of public investment as private investment decreased severally after the property crisis which began around 2007.

After 20 years, the district has still not been completely developed. It was part of the initial strategy to create a flexible, long term project that would make it possible to adapt to new trends and incorporate concepts such as mobility and energy management.

Vladimir de Faria Azevedo, Mayor of Divinópolis

"Barcelona's 22@ Plan is very relevant for the new mayors of Brazil. It combines new technologies with the development of public space and also creativity and entrepreneurship in an urban renewal strategy. I would like to stress the capacity of the project to promote resilience in the face of the economic crisis through a long-term policy of creativity and business innovation."





VI. LESSONS LEARNT

The transfer and application of policies from one city to another needs careful consideration of the local context. Any potentially good policy transfer can be a success or a failure in other cities as city backgrounds and governance structures tend to be different. One crucial obstacle to policy transfer would seem to be funding, as Barcelona has a greater budget and more decision-making power for allocating resources than most Brazilian cities. However, looking deeper, it is perhaps more about the efficiency and transparency of political and technical decisions. This is basic to ensuring the clear accountability of local governments to their citizens. It is also relevant to the public-private partnerships that were discussed as a possible solution.

The visit was a good opportunity for Barcelona and the Brazilian cities to learn about other city's policies, to witness concrete examples and tangible results and to obtain inspiration from the resulting insight. In transportation management, integrated and systematic regional management and the division of responsibilities were identified as critical considerations. In waste management, everyone agreed on the necessity to first of all recognise waste as a resource and then to convert this waste into energy. In waste management, and particular in recycling, Brazil's experience of working with waste pickers and creating jobs was discussed as a relevant policy for providing 'decent work for all', which is one of the Sustainable Development Goals (SDGs). At Barcelona Activa, supporting small and micro-scale businesses can be a good investment and aid economic diversification. In 22@, it was emphasized that comprehensive urban planning has made an important contribution to the revitalisation of the area.

Finally, the importance of cities implementing SDG was highlighted with the support of local evidence. The SDGs consist of 17 goals that have been agreed as a common framework for the sustainable development for all cities, regions and countries. Achieving the SDG targets is both directly and indirectly related to the work of local governments; local governments are therefore considered key actors for achieving these goals. As a result, several different goals were discussed during the visits in order to try to find a way of achieving objectives such as Goal #9: the construction of infrastructure, Goal# 11: sustainable cities, Goal #8: growth and decent work, Goal#3: healthy life, and Goal#12: sustainable production and consumption. Overall, the participants agreed that the SDGs could not be achieved without the implication of city and local government institutions. To do this, the cities and local governments must rely on and learn from each other and meet the challenges of implementing policies and providing services within the framework of the SDGs.

CREDITS

COORDINATION OF THE EVENT

FNP Frente Nacional de Preifeitos
Department of international relations,
City of Barcelona
UCLG Learning

PARTNERS OF THE EVENT

TERSA
Barcelona Activa
TMB and AMB
Metropolis

WRITE-UP:

Kate Kim, UCLG Learning

SUPERVISION

Sara Hoeflich, UCLG Learning

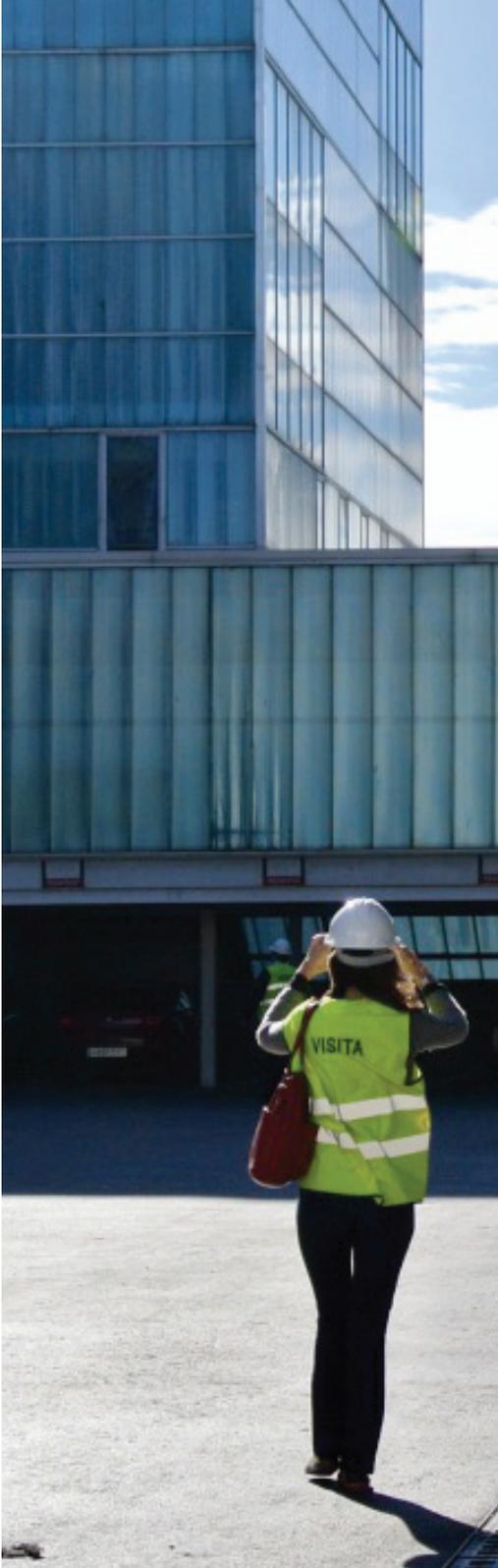
DESIGN AND EDITION

Isabelle Colas, UCLG Learning

For more information please contact:

UCLG Learning:
learning@uclg.org

Department of international relations, City of Barcelona:
internacional@bcn.cat
abarranco@bcn.cat



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