

# Medellín, Colombia

## The Integral Urban Development Project: fighting crime with urban interventions

Medellín, once one of the most violent and socially fragmented places in the world, developed a strategy to strengthen social and economic cohesion within the City's boundaries. The multi-stakeholder Integral Urban Project (PUI) initiative has reintegrated once fragmented neighborhoods into the city through scaled up infrastructure and services. Today, Medellín's integrated urban renewal serves as a model of integrated planning and innovation in Latin America and throughout the globe.

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Urban NEXUS Case Study

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### Abstract

In the 1990s Medellín was one of Latin America's most dangerous cities (Vulliamy, 2013). The situation spurred the City of Medellín, together with a range of stakeholders including politicians, NGOs, academics, local community groups and international organizations, to plan and implement selective urban interventions to improve the lives of inhabitants in the northeast area of the city. The Integral Urban Project (Proyectos Urbanos Integrales, PUI) initiative emerged in response to tackle deep rooted social and economic challenges, including marginalization, poverty, violence and drug trafficking.

The Integral Urban Project identified strategic areas of the non-consolidated communes of the city and transformed them through an "urban acupuncture" approach, improving both social and physical infrastructure. These interventions reduced social segregation and violence while reintegrating the communes with the rest of the city. The areas of action included strengthening community participation, as well as the improvement of public spaces and housing conditions, community services and facilities, along with provisions for enhanced environmental sustainability. Ultimately, the institutional Nexus created through the scalar integration of community working groups, municipal and national agencies, with academic institutions and international development agencies, was a key factor behind the PUI's success.

### Addressing social, economic and environmental sustainability with urban planning interventions

The eradication of extreme poverty, promotion of environmental sustainability and the prevention of the formation of slums through safe and equitable housing schemes, represent the global problems which are key foci of the Millennium Development Goals. With these goals in mind, the objective of the City of Medellín was to implement a set of urban interventions within a master plan which embraced an integrated approach to development, and would be replicable in other urban areas with similar conditions.



<b>Date</b>	2004-2011
<b>Urban NEXUS Sectors</b>	Social+ Building+ Environmen+ Transport
<b>Urban NEXUS Innovations</b>	Institutions; Communications + User Behavior
<b>Scale</b>	City-wide (five districts, 650.000 people)
<b>Budget</b>	\$US500 million



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## Urban NEXUS Definition

The Urban NEXUS is an approach to the design of sustainable urban development solutions. The approach guides stakeholders to identify and pursue possible synergies between sectors, jurisdictions, and technical domains, so as to increase institutional performance, optimize resource management, and service quality.

It counters traditional sectoral thinking, trade-offs, and divided responsibilities that often result in poorly coordinated investments, increased costs, and underutilized infrastructures and facilities. The ultimate goal of the Urban NEXUS approach is to accelerate access to services, and to increase service quality and the quality of life within our planetary boundaries.

ICLEI / GIZ 2014

# Urban NEXUS Case Study

## Medellín in context: marginalization, violence and weak state intervention

Medellín is Colombia's second largest city, with more than 3,5 million inhabitants in the metropolitan region. The metropolis is located in a northern Valley of the Andes Mountains, and is an important center for the region due to its commercial and industrial activities, as well as its academic and public institutions. Less than a decade ago, many parts of the city of Medellín experienced a lack of political support, resulting in deep social and economic segregation; a phenomenon that also manifested itself in the physical structure of the city. The insufficient presence of members of State led to poor living conditions characterized by social marginality and violence, particularly in the northeast communes.

## The history of Medellín's informal settlements

The formation of the first informal settlements along the urban periphery, which now comprise the self-constructed communes in northeast Medellín, began in the 1940s and continued with the proliferation of new settlements in the 1960s and 1970s. From 1970 onwards, the economy stagnated and the formal sector was unable to absorb the incoming labor force. The social impact of this situation was significant, and by the end of the 1980s, unemployment had risen to 13% of the labor force. Of this figure, more than 50% of the unemployed were concentrated in the low-income areas, particularly in the northeast of the city. From 1982 to 1990, the number of violent deaths occurring rose from four to fifteen per day. Among children under five years of age, 48% were underfed, 18.8% suffered severe malnutrition and school desertion stood at 48%. The local average income was \$83 US dollars, compared to a national urban average of \$115 US dollars.

Additionally, population densities in low income areas reached 500 inhabitants per hectare (UN Habitat, 2012). At the same time, social segregation, poverty and



Escalators and lifts improve the accessibility of hillside developments to the city center

marginalization rose, while continuous unplanned urbanization took place on the hillsides of the urban territory.

The 1990s marked a turning point for Medellín's settlements. In 1996, the Istanbul Declaration on Human Settlements was signed at the HABITAT II Second United Nations Conference on Human Settlements. The agreement established secure and hygienic shelters and settlements as a universal goal. As a product of this international push for equitable, safe housing, the first of the State's integrated attempts at intervention in Medellín resulted in the widespread consolidation of basic services and facilities such as paved roads, collective equipment and street lighting in the area.

An example of these early interventions is the Integrated Slum Upgrading Program of Medellín, or Programa Integral de Mejoramiento de Barrios Subnormales en Medellín (PRIMED), a pilot project started in 1993 in cooperation with the Colombian and German Government, through the Ministry for Economic and Development Cooperation (BMZ), the German Development Bank (KfW), and the United Nations Development Program (UNDP). The program lasted seven years before being closed in 2000 due to the lack of local political continuity. Nevertheless, the PRIMED pilot project managed to sketch the guidelines for a new approach to urban marginality through establishing a methodological structure, new management capacity and innovative institutional coordination; all of which would be reapplied later.

Starting in 2000, the City was repeatedly struck by a constant wave of protests, wherein civil society called for a dramatic transformation of Medellín's insecure and socially fragmented conditions. The government's awareness of the low quality of life and marginality that prevailed, along with the history of violence of the city and civic pressures, led to a renewed inter-institutional effort to confront the issue.

## **Medellín's Integral Urban Project: planning for holistic integration**

The planning and implementation of the first Integral Urban Development project was the result of a collaborative effort across multiple sectors (public, private, community, NGOs and international organizations) to address key issues in the poor neighborhoods. These included the reduction of violence and marginalization, the strengthening of communities, the improvement of public spaces, pedestrian mobility, formal housing, as well as the mitigation of environmental problems with an integrated approach. The integrated model of intervention of the PUI consisted of the development of high quality infrastructure, along with broad community participation to guarantee its sustainability. Specific objectives included the upgrading of local planning and urban development in the densely populated neighborhoods, the improvement of conditions of human development through education and health services, the identification of referential sites for citizen interaction, and improvement of urban equipment for the communities by supplying urban areas with centers for community activities. Transportation was also made a priority: the Metrocable cable-car system was installed to provide residents in previously under-served areas with an affordable transport option.

The formulation of the plan for Medellín's Integral urban project was included in the local administration's Development Plans from 2004 -2007 and from 2008 -2011.



The master plan of the project detailed physical, social and institutional interventions necessary to improve the quality of life of inhabitants living in the most vulnerable areas of Medellín, which were identified as five different communes of the city. The methodology of implementation aimed to generate an institutional Urban Nexus between communities and governmental departments, as well as private and international agencies, to deliver concrete outcomes and ensure the sustainability of the project. At the methodological level, the master plan for the Integral Urban Project was developed in four phases (Laboratorio de Medellín, 2011):

1. Planning: via an analysis of the city to define the scope of intervention, this component incorporated municipal action, a model for the management of the project, and the signing of inter-administrative contracts.
2. Diagnosis and formulation: consisted of the definition of the master plan for the area. The diagnosis included identifying the problems around community life and their sources, as well as potential areas of opportunity for change. Subsequently, the contracts, actions, programs and projects were identified and articulated according to the required interventions. Following this, the information was systematized in order to include the priorities of the community. Project formulation involved the identification of actions for each component, the location of interventions, the budget, parameters for community participation, and a comprehensive implementation schedule.
3. Project development: consolidated the urban and architectural design, and determined the path for its management, socialization and implementation.
4. Project delivery: involved the final delivery of the PUI to the responsible actors, such as the relevant authorities needed to implement and execute certain strategies to ensure continuity of the initiatives at the municipal level.

The PUI North-East was the first pilot project, and was implemented in Communes 1 and 2. The second PUI began in 2006 in Commune 13. Two years later, the project was implemented in the center-east (Communes 8 and 9). The fourth phase of implementation targeted the northwest Communes 5 and 6. The last PUI was executed in Commune 7, Iguana.



The creation of accessible, inclusive public spaces: an essential component of the PUIs

## Integrating actors: linking the local to international scales

In order to achieve these goals, the mayoral office of Medellín designated the autonomous municipal Company of Urban Development (Empresa de Desarrollo Urbano, short EDU) to serve as an umbrella authority to organize, advise and consult an array of actors. EDU coordinated the design, planning and organization, management of information and resources, and oversaw the execution of PUIs projects. Specifically, EDU's activities range from soil management, urban renewal and real estate operation, to design, innovation and the execution of projects for integrated habitat transformation.

The PUI programs were put into action through the EDU's coordinated efforts, with the support of several Colombian public and private agencies. Together, all these stakeholders cooperated to achieve an integrated urban management Nexus that addressed the improvement of urban spaces, health services, education, local economy, resource management and environmental protection. Medellín's Secretary of Public Works, the Secretary of Government, and the Secretary of Health were responsible for the improvement of physical infrastructure as well as public health and security. The EPM, EEVVM and the Secretary of Environment for Medellín helped to improve the environment and the quality of life of the citizens through scaled up sanitation, communications and waste management facilities.

The Secretaries of Education, Civic Culture, Social Development, as well as the ITM and the INDER worked together to provide programs to reduce school desertion, extend higher education, emphasize the value of life in order to reduce violence, promote human development, and foster economic and artistic innovation. Simultaneously, the Secretary of Social Welfare for Medellín and the ISVIMED developed social housing projects, such as the Shared Housing Model (Modelo de Vivienda Compartida, short MVC) to offer housing alternatives for families to overcome their vulnerability and extreme poverty conditions.

The international financial support for the PUIs originated from agencies such as the United Nations Habitat and United Nations Development Program (UNDP), the Spanish Development Cooperation Agency (AECI) and the French Agency for Development (AFD). The Agency of International Cooperation of Medellín (ACI) played a fundamental role in linking a range of international public and private entities with the PUIs for their financial support.

Beyond the social dimension of this project, and the increased welfare of the population, the reintegration of the communes to the City's economic center has benefited both the public and private financial outlook through the creation of new sources of income for the state through taxes, as well as new commercial opportunities for investors, including technology giant Hewlett-Packard.

## Results

**Social interventions** included the strengthening of communitarian organizations through workshops and the training of community leaders, as well as regular open information sessions. It also involved the appointment of a managerial municipal committee and the formation of discussion tables, allowing the public, private, international and academic sectors to convene, monitor, and assess cooperation and progress towards the program goals.

**Physical interventions** included the revitalization of public spaces and the construction of parks and squares. To promote pedestrian mobility, the transport

### Smart Urban Infrastructure

(Physical) integration of the Communes by connecting them with the city center via an escalator system.



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**The PUI programs were put into action with support from the following Colombian public and private agencies:**

- Secretary of Public Works
- Secretary of Education of Medellín
- Secretary of Social Welfare of Medellín
- Secretary of Health of Medellín
- Secretary of Government of Medellín
- Secretaries of Civic Culture and of Social Development of Medellín
- Secretary of Environment of Medellín
- Company of Public Services (EPM)
- Empresas Varias de Medellín (EEVVM)
- Institute of Sport and Recreation of Medellín (INDER)
- Metropolitan Technological Institute (ITM)
- Social Housing and Shelter Institute of Medellín (ISVIMED)

system was extended, streets were improved and bridges and escalators were constructed. In addition, programs for the improvement and construction of mixed-use buildings for residents dwelling in informal arrangements were promoted. Community services and amenities, such as public libraries, schools, police stations, internet cafes and multifunctional community centers were created, and 14 business development centers (CEZEDOs) were constructed to serve as microfinance institutions: hubs for entrepreneurship and the cultivation of local economic sustainability.

The PUIs also attempted to mitigate environmental degradation through reforestation programs, construction of a wastewater system for the collection and treatment of water, controlled soil erosion, solid waste management, and restoration of the streams which feed into the City's river network. In addition, the households located in zones of high hydrological risk were relocated to new residential areas. Campaigns for environmental awareness, sustainability, and risk prevention were launched.

**With an eye towards the future**, the PUIs have coincided with a shift in Medellín's international reputation. It has long relinquished the title of the most violent city in the world and, with a 2013 homicide rate of 38.06% (per 100,000 inhabitants), is making inroads into shedding its violent reputation (Ortega, 2014).

Moving forwards, the City of Medellín has established a framework to maintain their positive momentum. The current administration (2012-2015) is committed to a Development Plan which is influenced by social urbanism and civic pedagogy, and they operate a platform that emphasizes equity and inclusion within the city. This commitment is evidenced by emblematic programs such the Metropolitan Green Belt, Articulated Life Units, and the Medellín River intervention.

## **Lessons learned**

**The Metrocable both adds to the variety of transportation available for the population and increases mobility.** There were, however, technical limitations: for example, designating the Metrocable as a mass-rapid-transit system overlooked the travel patterns and profile of specific users that live in the communes, such as merchants who cannot carry large packages in the gondolas. .

**The housing programs have benefited a large number of the population.** However, the demand for housing within the ever growing urban population in Medellín remains unanswered, and is contributing to the development of new informal settlements.

**The importance of independent public agencies such as EDU and ACI,** which maximized cooperation and coordination of the different institutions and stakeholders involved in providing services and facilities. Inter-institutional and scalar coordination have been the key to the PUI's success.

**Community participation reveals the real demands and needs of the population:** by facilitating debates, participative budgets, neighborhood committees, and public consultations, an urban project can reflect practical necessities.

**Facilitating tax collection, and the continuous revision of the cadaster were fundamental.** It assured resources would be available for developing and implementing the infrastructure projects. At the same time, the transparent management of the public resources through periodic public reports strengthened the citizens' trust in the government. For instance, the display of the slogan "Your Taxes Are Invested Here" on all public works sent the message that public re-



sources were used effectively. These strategies increased tax collection by 35% during the period from 2004 to 2007 (Laboratorio de Medellín, 2011: 77).

**Social and transport infrastructure are necessary, but not a sufficient to completely solve the social and economic issues which prevail.** The PUIs have not succeeded in entirely mitigating housing in risky locations, illegal construction, marginalization, and restrictions to mobility. Violence still persists, and Medellín remains among the 50 most violent cities in the world with 920 homicides committed per year (Ortega, 2014). However, the overall trend is positive, and the continuity of the urban project would enhance its long term impact. The current administration (2012-2015) has incorporated elements of the PUI into their Development Program, even though they represent a different political party than the two preceding administrations.

## Replication

The PUIs reveal the benefits of integrating relevant stakeholders into a transparent and trustworthy context, achieved through the agreement of political neutrality and the establishment of a shared manifesto. Following the first pilot project, the methodology of intervention applied in the northeastern zone of Medellín (diagnosis and formulation, management, design, architectural project, execution, and sustainability and appropriation) has empirically shown its replicability in four unique areas of the city. Moreover, the model has demonstrated its ability to be replicated—entirely or partially— in other areas experiencing similar conditions.

For example, officers from Peru have visited the areas of intervention to bring back the methodology for use in their own cities. In particular, the Library Park España has served as a model to improve Lima's library system (CLUES). The ACI has been a fundamental actor in establishing a route of cooperation between other cities of Latin America, including Lima, Quito, Cuenca and Buenos Aires. This collaboration provides an inspirational example of “South to South cooperation”, and the value of transferring knowledge and experience.

## Budget and Finances

The PUIs were almost entirely funded by the City of Medellín, with the remainder of financial support granted by international agencies for specific projects. For instance, USD\$250 million were granted by the AFD for the construction of the tramway. From 2004 to 2011, total investment into the PUI reached USD\$500 million (CAF, 2011), and this has translated into a total of 125000 m<sup>2</sup> of public works, including the construction and restoration of 20 parks, the provision of adequate streets for pedestrians and vehicles, and the construction of public amenities and facilities such as the Library Park España (with the support of the Spanish Government), Santo Domingo School, the Granizal sports unit, and the CEDEZOs.



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## Further Reading

- GIZ and ICLEI, 2014, Operationalizing the Urban NEXUS: towards resource efficient and integrated cities and metropolitan regions. Available at: [www.iclei.org/urbannexus](http://www.iclei.org/urbannexus)



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