

# ENRICH PROJECT

## URBAN PLANNING COURSE

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### INTRODUCTION

This is a draft lecture note prepared during the implementation of the first round of the course “Urban Planning” within the framework of the ENRICH Program.

These lecture notes provide an overview of the program and give a brief summary of the main topics and issues discussed during the sessions.

It provides the students with a guideline to review the content of the course and to guide them in broadening their knowledge via further research and literature survey.

### COURSE PROGRAM

**Period: Monday 28 May – 8 June 2001.**

Session 1: Introduction changes & shifts in planning  
Monday (28/05), 9:50 - 11:25

Session 2: Land-use Planning: tools and instruments  
Monday (28/05), 15:20 - 16:55

Session 3: Planning a new town  
Case study illustration with a video about Almere City, The Netherlands  
Wednesday (30/05), 19:00 - 21:00

EXERCISE: Brief Introduction to Action Planning  
Step 2: The Problem analysis (working groups), presentation and debate.  
Handouts to the students  
Thursday (31/05), 14:00 - 16:55

Session 4: What makes urban planning a success?  
Case study illustration with a video about the city of Curitiba, Brazil  
Monday (4/06), 9:50 - 11:25

Session 5: Urban Revitalisation and Urban Renewal  
Case study illustration with a video about Rio de Janeiro’s urban revitalisation program (Rio Cidade Program), Brazil  
Monday, (4/06), 15:20 – 16:55

Session 6: Managing Urban Densities & Sustainable Cities: tools and techniques  
Case study illustrations from Cairo, Giza (Egypt) and Sao Paulo (Brazil)  
Tuesday, (5/06) 19:00 – 22:00

Session 7: General Review and Assessment of the Course  
Wednesday, (6/06) 19:00 – 22:00

## SESSION 1: Introduction to Urban Planning The shifts in the practice and context of planning

The session formulates a series of key questions and tries to respond them with examples drawn from different cities.

### 1. Why do we need urban planning?

Analysing some images from Cairo and Giza, Egypt. It shows that explain may be necessary:

- To guide the process of land occupation
- To safeguard the quality of life in cities
- To resolve conflicts between activities and uses
- To organise the circulation of goods and people in the city
- To ensure the proper functioning of the city
- To organise the circulation of goods and people in the city
- To ensure the proper functioning of the city
- To anticipate solutions for direct and indirect impacts from urbanisation
- To safeguard the community/collective interests

### 2. What are the concepts and our understanding about planning ?

The session develops key concepts and basic understanding about planning.

“Planning is defined as **deliberated action**. It is a process through which future actions are pre-defined through a **sequence of choices** or decisions carried out within a **defined strategy** aiming at a pre-established **objective**. It involves a set of procedures that imply targeted actions - making use of available **means** - which launches a **process** to accomplish - an **end** - a new and supposedly better situation. Planning is a **problem solving** oriented process and presumes the apprehension of the present and the **forecast** of the **future** results of the actions carried out in the **present**” (C. Acioly, 1995).

One of the major aspects to be considered in the activity of planning is that it is highly sensitive to the political processes and the various interests – convergent and divergent – of the various actors and stakeholders who are directly affecting or are affected by development processes.

The activity of planning implies the need to define clear strategies or methods through which particular targets, goals and objectives can be attained. Strategies to make the best and most efficient use of the means and resources available. When working with cities and urban environments the participation of the various stakeholders and the need for a strategy becomes more than evident. The session elaborates on the concept of management and how it blends with planning. Thus the session further defines urban management as a crucial activity to allow cities to develop in an economically and environmentally sustainable and socially just manner.

#### **What is urban management?**

Urban management can be defined as a set of instruments, activities, tasks and functions that aim at assuring the well functioning of the city. It assures not only the administration of the city but also facilitates the provision of basic urban services needed for the population and the various private, public and community stakeholders to perform and maximise their intrinsic roles in a harmonic manner. Urban management assures that there is a harmonic and co-ordinated effort although interests among these actors are not always convergent. In fact it is often divergent and that makes urban management essential for conflict resolution. Urban management must be based on the principles of efficiency, efficacy and equity in the distribution of resources and public investments generated from within the city and to be reverted into its further development.

To achieve this goal, municipal governments must possess instruments that allows it to arbitrate these conflicts, mobilise efforts and take advantage from the capacities, potentials and creativity that exist among its constituents to forge sustainable and equitable local development processes.

Only then local government will be able to assume a catalyst role during the process of planning and consolidation of the urban environment. That will help to create a conducive milieu for the establishment of strategic public-private-community partnerships required to realise the functions and tasks for which it does not possess all the means and resources (Acioly, 2000).

*Claudio Acioly Jr. A Note on Governance and Urban Management in Brazil, in 'Cities Made by People' Volume II, A. Hartkorn (ed), Coplan, Tirana, Albania, 2000. (pp. 59-72).*

### **3. What are the current changes taking place locally and globally that affect the way we think and work with cities?**

The session pinpoints the process of globalisation and the internationalisation of the economy that is affecting directly local economic development in cities. Fragmentation of the industry, processes of decentralisation, increase in unemployment and poverty, with raising urban violence in some regions like Latin America are some of the phenomenon verified in many cities. Equally important is the reshaping of the State and the withdrawal of government intervention from various sectors leaving more room to private and market provision of urban services. Thus, the global trend to privatisation and deregulation seem to create a new stage for urban planning activities.

### **4. What are the most important shifts in the activity of urban planning?**

Basically, the session stressed the following:

The move from more government to less government.

From master plans and regulatory planning towards strategic and action plans, showing rather than physical preoccupation a much stronger concern with urban productivity and economic development.

From government and state provision towards enabling, privatisation and market provision meaning that governments should play the facilitator's role and allow other actors to play a role in the development process. An understanding that the government alone cannot resolve all problems in cities.

From a situation where central government decided towards a situation where local governments are in the driving seat, thus a global process of decentralisation and empowering local governments in city planning and city management.

From an emphasis on spatial planning and normative plans towards economic and financial planning, thus a much more realistic approach concerned with the means and resources and institutional arrangements to realise/execute the plan rather than only making a physical plan. So, plans are becoming less rigid, less technocratic, less top-down, less bureaucratic and less blueprint type of product. The trend is to have process oriented type of planning processes with plan resulting from the agreement and consensus of different actors and stakeholders, with many innovative characteristics and greater partnership arrangements.

Thus, more and more planners and the technical cadre are working within a rationale of horizontal co-ordination, working groups and participatory events in order to draw final plans. There is an equal attention paid to management and urban management processes as well as to issues such as environmental impacts, poverty and economic development.

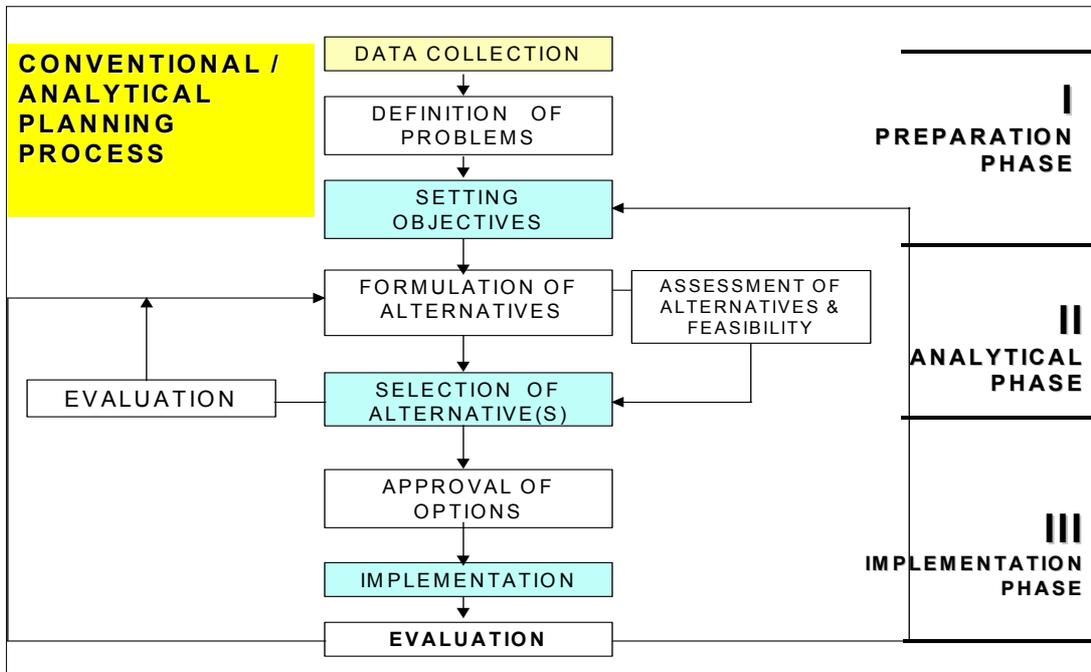
Local governments is searching out to partnerships with local actors, community-based organisations-CBO's, Non-government organisations-NGO's, private sector and different levels of governments (central, provincial, etc.) in order to foster the best opportunity and mechanism to formulate and implement plans. Furthermore, organisations and particularly many governments are pursuing policies of reform to restructure its organisational and institutional basis. As a result, organisations are becoming more hierarchical and project management structures are being established to maximise horizontal co-ordination and efficiency.

### **5. What are the most common types of urban plans?**

The session gives a brief description of the most common type of plans that are usually produced. In summary, the session described the following:

Master Plans are the results that have emerged from the planning processes of the last 30 or 40 years in the majority of countries. It is sometimes called comprehensive planning and in some

countries it is called “structure plans”, spatial plan, and/or physical plan. Basically, it is a plan that has an inseparable law and legislation attached to it. It is the result of lengthy and time-consuming process of data collection, data analysis and development of alternatives and a future view of the city in a time frame of 20 years. It draws a vision – materialised in a coloured map of land use – and appoints a number o developments and detailed designs of broad areas. Some Regional Plans are linked to specific city’s master plans, specially when it is formulated in areas under process of ‘suburbanisation / metropolization”.



By Claudio Acioly, 1999.

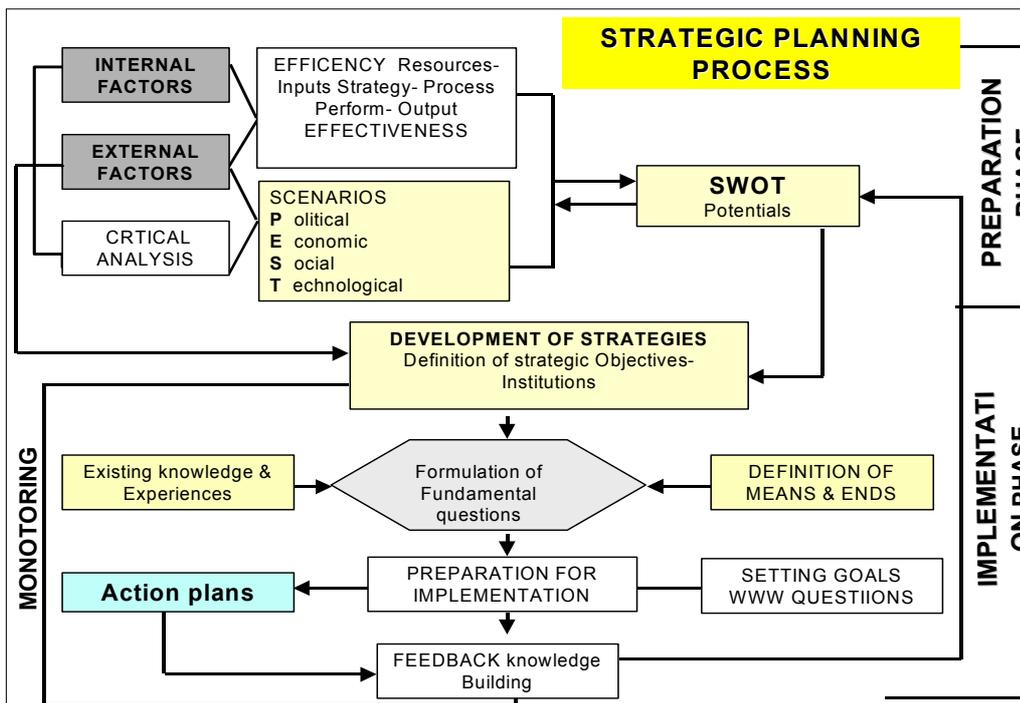
Land-use Plans are often linked with master plans. It is commonly linked to a normative in terms of land use, land occupation, and parcelling and land subdivision. Law often establishes it. Usually a municipal decrees. In some cases this is also reinforced by national legislation when it focuses on capital cities. It defines in detail all the uses and activities that exist and that will exist within the territory of the city e.g. residential, commercial, industrial, mixed-use, public use, private use, community use, urban services, high rise, low rise, high density, low density, etc.

Detailed Plan (physical plans) is usually a step further in the conventional planning process. It is a detailed design of the physical/spatial plan, giving very precise directions at the urban scale about what exactly should be developed on a particular area, site, parcel or neighbourhood. In some countries it is an inseparable part of the master plan, both established by law. In some countries it is just a step lower in the detailing of the design in order to prepare the documentation necessary for implementation. In some countries, a detailed plan is called action plan, which is not exactly the same terminology used internationally.

Strategic plans are more contemporary and last generation of plans. It is usually the result of broad consultation process within the city, its inhabitants, and its social, economic, political and cultural actors. The strategic plans are commonly a “social pact” between these groups, actors and forces in society. It develops a vision, identifies priorities, formulate indicative strategic projects and set up in motion a process to mobilise support and resources to realise the vision and the strategic projects. It usually involves public-private partnerships and a very well structured organisational process where city consultation, city congresses, working groups and plenary sessions are organised to take decisions on problems, priorities, lines of actions, vision, etc. It is common that strategic plans are not approved by means of a law. It is not a governmental plan but rather a social pact between all stakeholders from the private, public and

community sectors. In some countries like Egypt, master plans are often named strategic plans but this does not reflect the denomination used internationally.

Action plans are plans drawn locally and focused on very specific geographic area (neighbourhood, zone, and site) and focusing on a very well identified problem. It is very participatory and makes use of several strategic planning tools such as working groups, plenary session, envisioning sessions, discussion groups, task forces, and institutional analysis. Action plans are derived from previous ideas developed by Hamdi and Goethert (Making Microplanning), IHS (Action Planning) and ZOP Workshops (GTZ-German Development Co-operation). It starts as an “objective oriented project planning process”-OOPP and ends up with an ‘activity oriented project planning process’-AOPP. It helps to identify problems, prioritise issues, identify actors and responsibilities and mobilises ideas and resources to resolve a problem that is shared by those affected and directly involved in the process.



By Claudio Acioly, 1999.

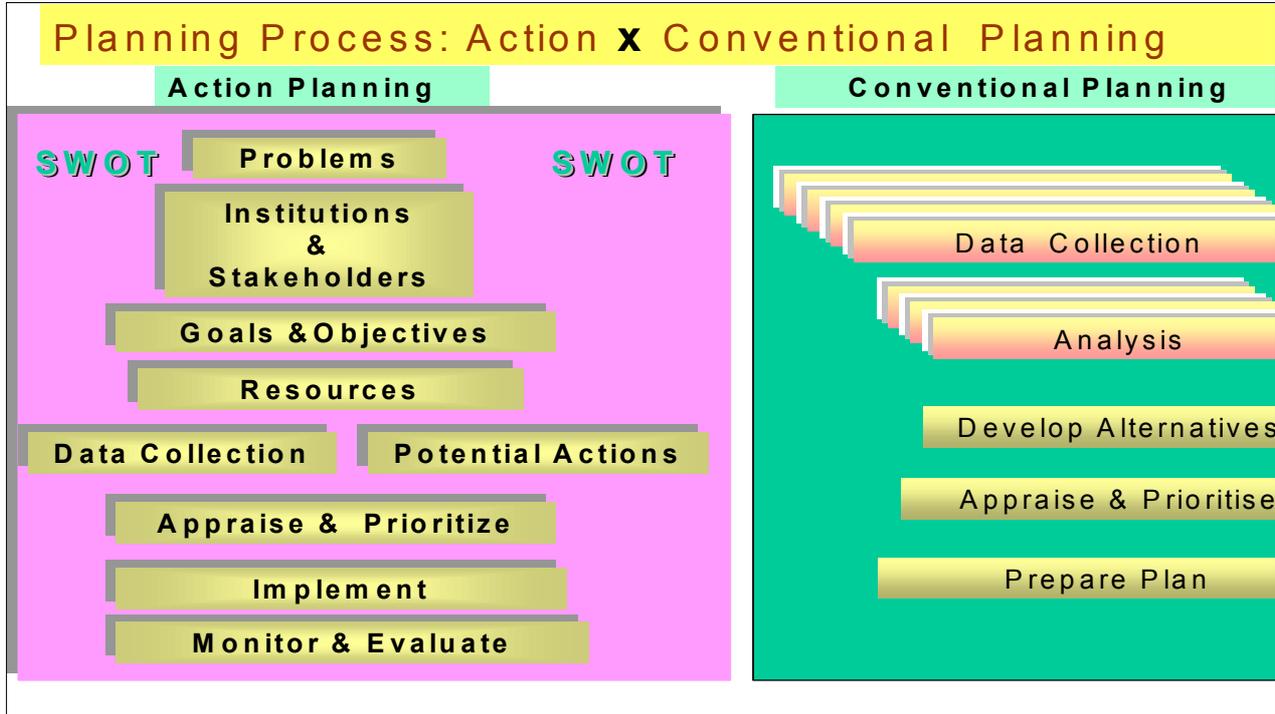
## 6 What are the differences in processes and products between each type of plan ?

Basically, the session showed some key differences between the conventional and comprehensive type of planning, strategic planning and action planning. The reason master plans became less popular in a number of countries is because it did not fit into the reality of cities, and in the institutional and financial capacities of local governments. It restrained rather than facilitated development with its strong normative and regulatory character. One of the common criticism against the conventional planning process (that resulted the master plans, land-use plans) is related to the time and resource-consuming phase of data collection. To the point that data is collected and analysis of alternatives are being conducted, the city has already changed dramatically turning the plan obsolete before it is actually completed.

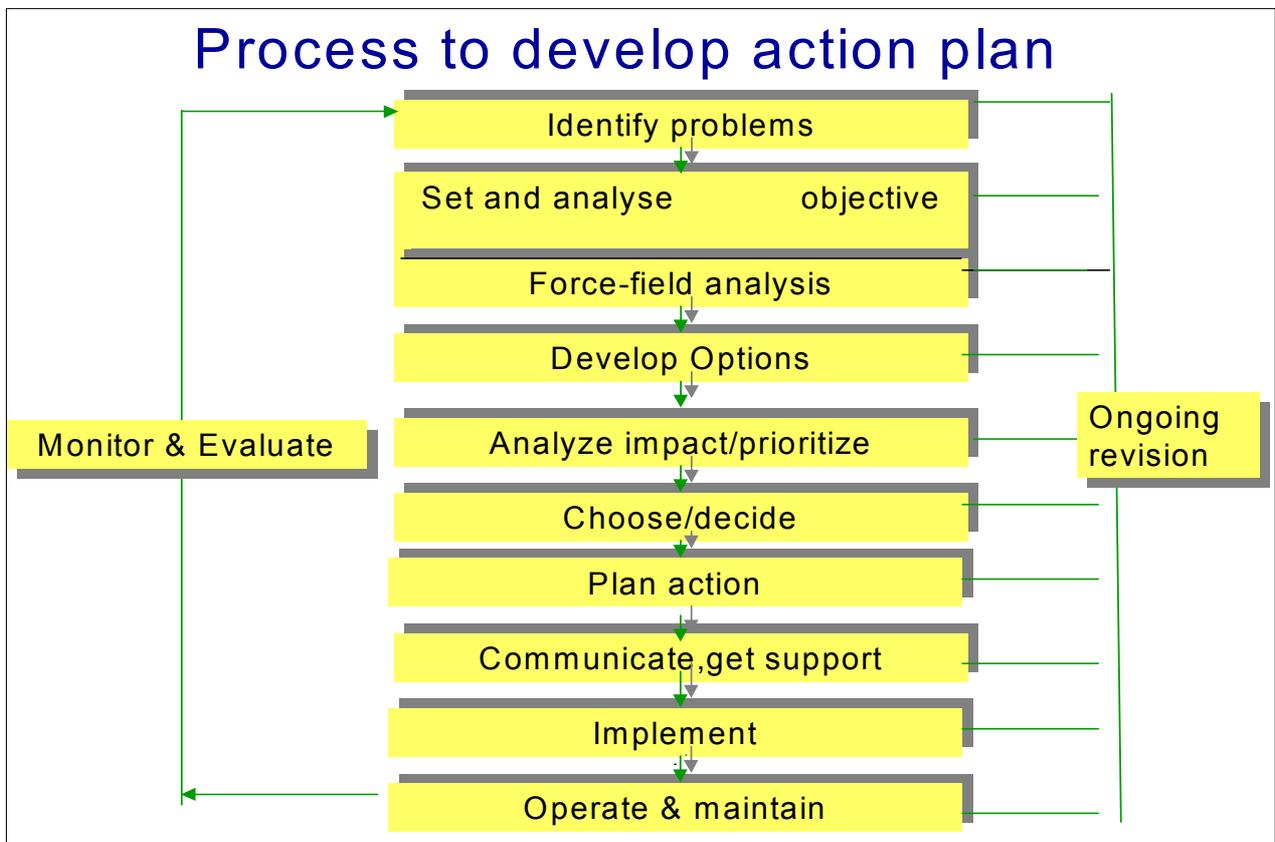
Strategic and Action plans are usually formulated on the basis of existing knowledge of the actors involved. It assumes that those living and working in and with the city already detain a substantial knowledge about the city and its problems. There is no need to reinvent the wheel. It makes an internal assessment of the weaknesses and opportunities of the city, its government, its recourse base, etc. and draw strategic actions on this basis. Some criticise Action and Strategic Planning because it leaves too much space for intuition and “less scientific” procedures. The fact is that ,

the conventional type of tools are no providing the most adequate answers for the rapid process of urbanisation and the dramatic demographic changes that developing countries are undergoing.

By F. Davidson and Claudio Acioly, 1994, 1999.



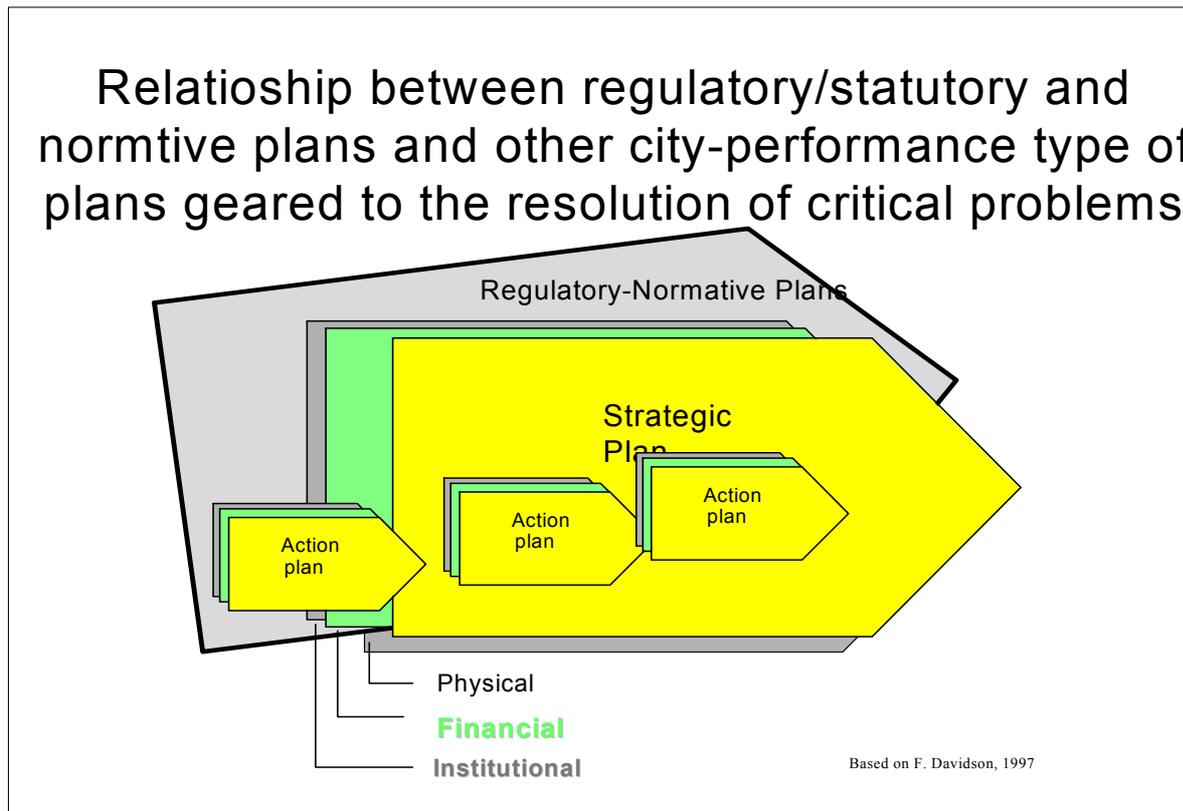
By F. Davidson, et al (1992, 1994, 1998).



It is important to note that changes in planning and that the move towards strategic planning does not exclude all the other types of plans to exist. In fact, when they do exist, they must be taken

into account as one of the inputs to the strategic planning process. In that way, their deficiencies and the bottlenecks hindering their implementation can be examined and strategies can be formulated to surpass them.

There are a number of planning initiatives and plans that must be taken into account. A combination of action plans geared to resolve clearly defined problems and some of the tools and objectives outlined within the master plans, the spatial plan, the investment plan, etc. will form an integrated strategic plan for the city. Most important to think is that the strategic plan makes explicit the problems and opportunities of these plans and it provides a forum for consensus building and articulation between the various stakeholders and interested groups. Only then it can reflect a society vision for the future of the city which is a pre-condition for full ownership and support to the plan.



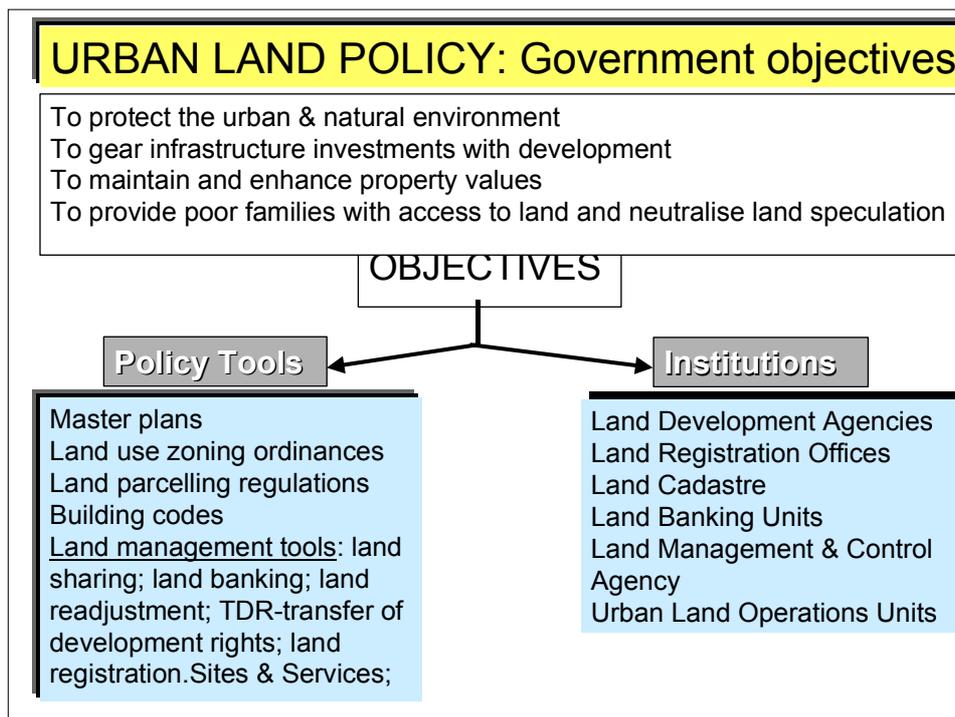
## SESSION 2: Land Use Planning: tools and instruments

The session starts with clarifying that in most capitalist societies land has a market value which is attached to its location (accessibility, nearby job locations), size, and the level of services that is linked to it e.g. infrastructure networks, public transport, paved roads, community services, etc. Land is a fundamental asset for urban planning.

Local governments usually try to exercise some degree of control or management in the land stock within its territorial jurisdiction in order to play an active role in planning the growth of the city. Local government intervention in land markets and in the land stock will determine how the land use patterns will evolve. Local governments attempt to ensure that the benefits derived from public investments and from the overall development process are equally shared by the entire population.

The vast experience in developing and developed countries shows that in a capitalist society this is not always possible.

The session showed that there is a need for government intervention. Usually at the local government level, there are many institutional and organisational arrangements made in order to allow municipalities to intervene positively in the development process with different types of objectives depending on the political motivation of the governing political structures. In this way municipalities may influence and guide urban growth. It may define the areas where investment in infrastructure is desirable and where it must play a more active role in managing the land conversion processes.



By Claudio Acioly, 1999.

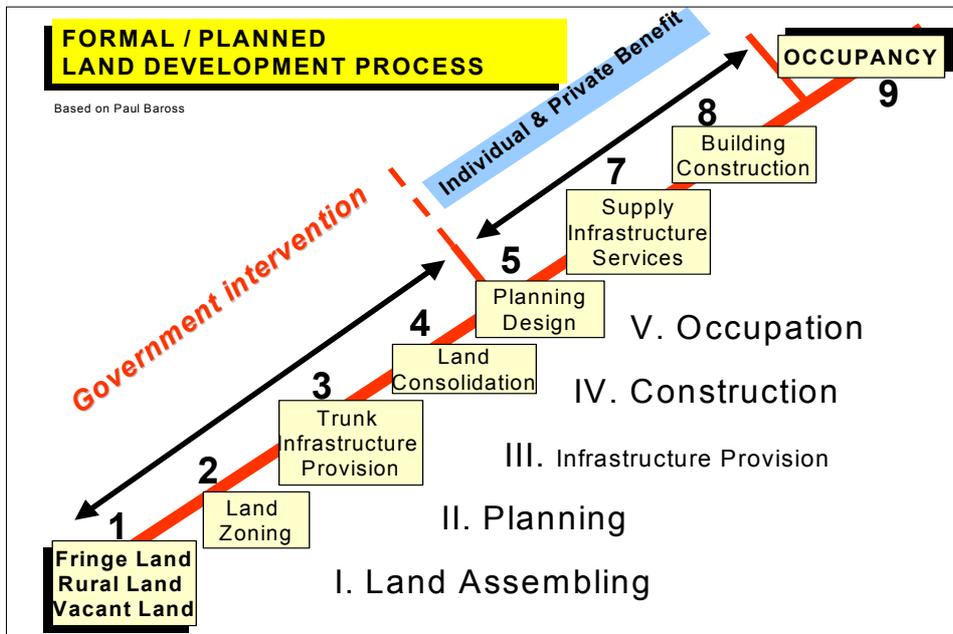
The session shows – based on experiences from different developing countries – that land is a capital good and exchanged commercially based on its attribute (values).

The conversion from agricultural to urban use is the primary and one of the most important facts that will ultimately determine the future and the value of that parcel of land. Whether it is done through land use planning or through informal, illegal processes.

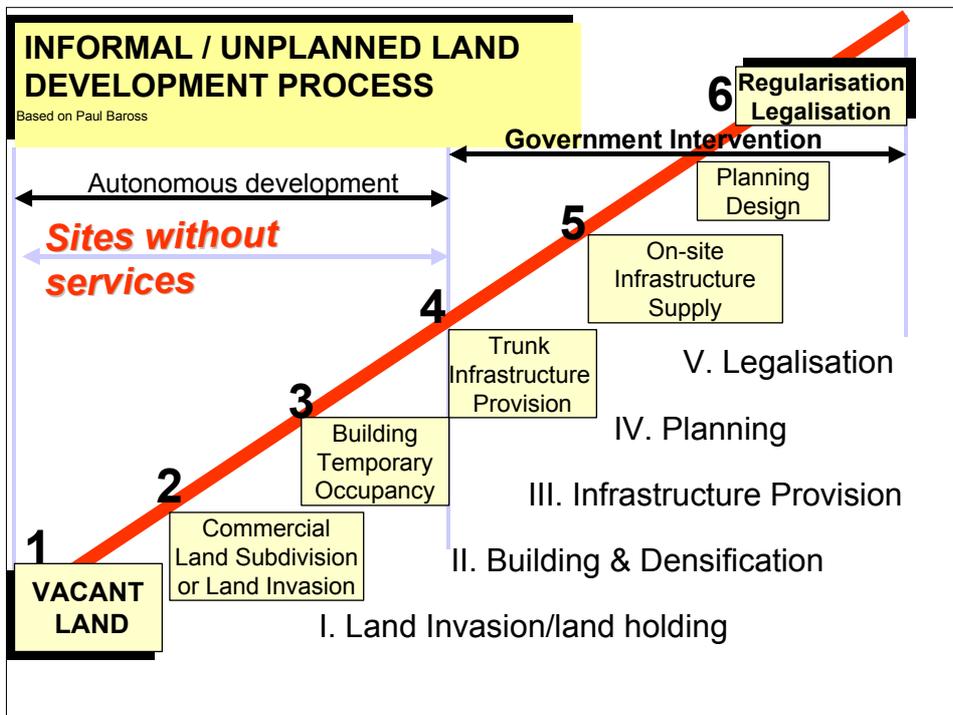
The different types of tenure of land also play an important role on how land is developed, commercialised and managed in a city. There is a wide spectrum from exclusive rights and disposition of land based on Roman laws towards public ownership, community ownership (tribal

and customary laws) and invasion, squatters and informal land possession. The session showed that there are a variety of types of land ownership and different types of human settlements resulted from different processes of land occupation.

The session further clarified the formal land development process: from land assembling, planning, servicing, and building and occupation. It showed the sharp differences that exist with the predominant pattern of land development and most common form of land occupation found in developing countries: land invasion/land holding, occupation, consolidation, servicing, planning.



By Claudio Acioly, 1999.



By Claudio Acioly, 1999.

The session reinforced the need to have adequate land management and land policy instruments in order to allow local governments to intervene positively in this process. In the end of the session we elaborated more on a few examples of the most common land use and land management instruments.

Zoning Ordinances:	. <u>Municipal decrees, laws, norms.</u>
Land Use Norms:	. <u>Linked to master plans:</u>
Planning Guidelines:	. <u>Linked to City Planning Ordinances</u>
Land Parcelling Norms:	. <u>Linked to National norms</u>
Building Permits:	. <u>Applied city-wide by municipalities</u>
Development Applications:	. <u>Requests by individuals/firms/developers</u>
Development Permits:	. <u>Approvals/concessions by municipalities</u>

The session gives a detailed information about land readjustment, a tool very popular in countries of Asia such as Korea, Thailand but also in Australia.

## Land Management Instruments

### ADMINISTRATION

Land expropriation  
Pre-emption right  
Compulsory Replotting  
Cadastre  
Land Information System-LIS

### MANAGEMENT

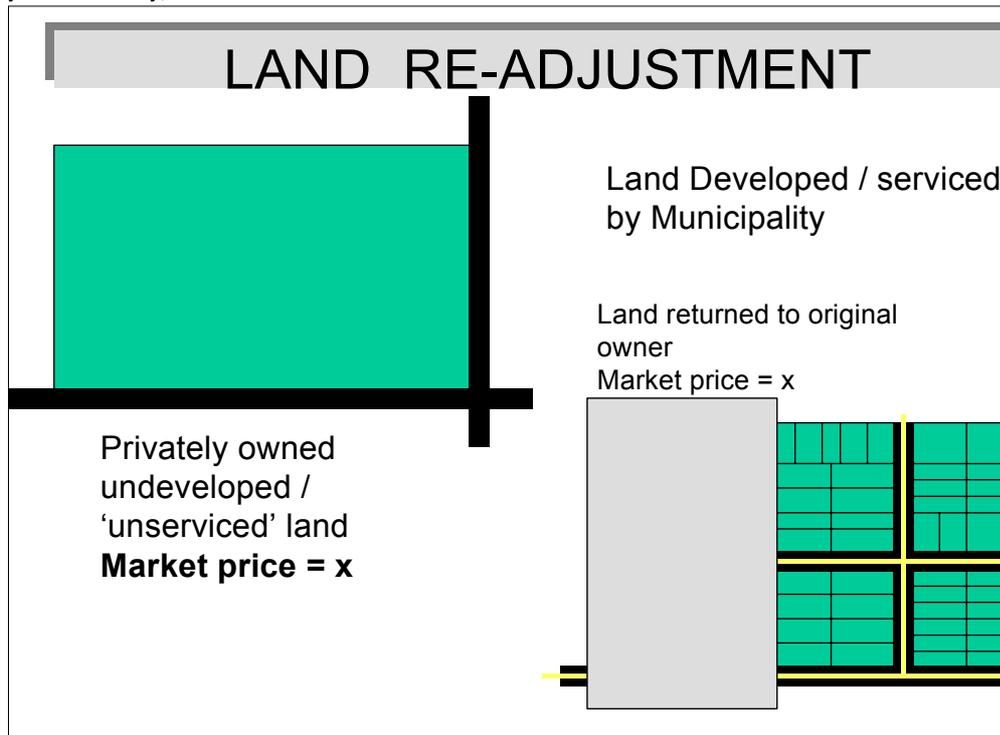
Land Bank  
Land Pooling  
Land Readjustment  
Land lease  
TDR-Transfer Dev. Rights

### TAXATION

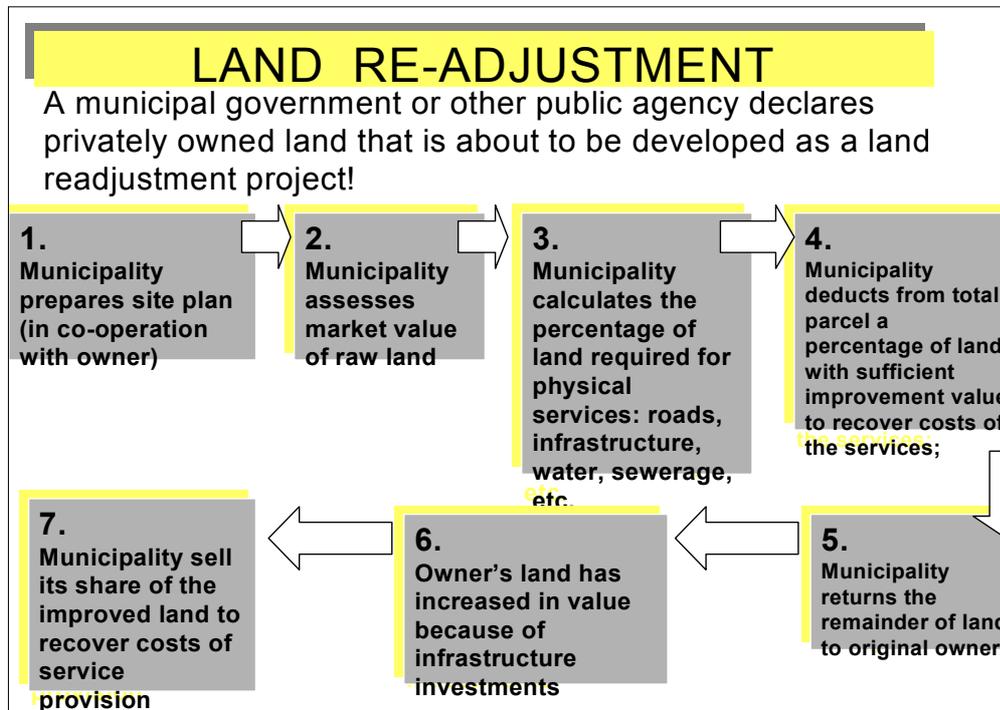
Real estate property taxes  
Land transfer duties  
Development charges  
Betterment & servicing charges

By Claudio Acioly, 1999.

By Claudio Acioly, 1999.



By Claudio Acioly, 1999.



## **SESSION 3: Planning a new town: Case study illustration with a video about Almere City, The Netherlands**

This session made an overview of the various steps that must be considered when preparing to design and implement a new town project. These steps are drawn from the bulk of experience that exists today with new town development programs. The most prominent ones are Brasilia (Brazil), the British New Town Program, Abuja (Nigeria), Chandigarh (India), Dodoma (Tanzania) and the Egyptian New Town Program. The session is based on the lecturer's long-term experience in working with the local government of Brasilia, the Brazilian capital.



It was during the second half of the nineteenth century that certain concepts of city models started to be formulated as rapid industrialisation and city growth took place in Western Europe. The incipient city planners of that time expressed their strong concern about the cleanness and healthy aspects of living spaces and the spatial organisation of the living environment which greatly influenced their visions of an ideal city for an idealised human being.

Neighbourhood projects were formulated as they searched for adequate housing solution for the emerging urban labour and some visionary proposals already presented a clear preoccupation with the visual expression and aesthetic composition of the urban space, the separation between the essential functions of city life, with more emphasis to production and the residential functions. Choay describes it as the "progressive model" shared and disseminated by Owen, Fourier, Richardson, Cabet and Proudhon. (Choay, 1965:08) and Ebenezer Howard who wrote the famous book "Cities of To-morrow", 1901.

It was only during the first half of the twentieth century that these ideas gained strength among architects and urban planners who were organised under the umbrella of the C.I.A.M.-International Congresses of Modern Architecture. These ideas were brilliantly summarised in the famous Athens Charter or Town Planning Charter formulated in the 4th congress realised in 1933; then the four basic functions of the city were defined: living, working, recreation and circulation.

The Charter became a doctrinal book for most prominent modern architects involved with city planning in this period. However, it was Le Corbusier who was able to give the guidelines and

recommendations a systematic form and a theoretical structure, proposing new concepts for city planning. He was the person who voluntarily assumed the task to widespread the new trend at international level.

*(extracted from Acioly Jr., Claudio (1995) BRASILIA, FROM PLAN TO METROPOLIS: a critique from the perspective of low income housing policies, working paper prepared for the RIW-Research Institute for Housing and Urban Renewal, Delft University of Technology, Faculty of Architecture and Planning, The Netherlands).*

The new town concepts were really a reaction against the dirty, crowded and socially volatile cities of the Industrial Revolution in Europe. Early twentieth century the British Garden City Movement took up these precepts and disseminated the idea of cities clearly contained in limited boundaries, with limited growth possibilities, located well away from the urban centres, contained open land, and limited commercial and industrial activities.

The various programs and contemporary new towns have incorporated many of these paradigms in their spatial plans. Equally important is to know exactly what is the motivation to start with a new town project. Governments are usually initiating the development of a new town with a clear urban, demographic or economic policy in place.

### **Summary of the lecture:**

#### **STEP 1**

##### **Political Decision and Policy Guideline**

###### Motivations of the Government:

- Deconcentrate population and economic activities
- Growth pole
- To give impulse and guide human settlement and land occupation towards a particular region
- To give impulse to regional economic development
- Define the character of the city: industrial, service, administrative centre, etc.

#### **STEP 2**

##### **Defining the Mechanisms and Finance**

###### Implementation Arrangements:

- Assembling and Allocating land: expropriation, purchase, ??
- Establishing a City Development Agency
- Prepare procedures to launch Planning and Design Process
- Define all the legal procedures and legislative matters and has clearance from the competent levels of the State, government, etc.

#### **STEP 3**

##### **Defining the Location and the Site Selection**

###### Issues to consider / selection criteria:

- Topography and suitability of the soil and site
- Expected growth possibilities and trends
- Availability of water resources
- Accessibility and potentialities for development
- Careful survey of physical and environmental aspects
- Possibilities for disposition of sewage
- Convenience for amenities and leisure opportunities

#### **STEP 4**

##### **Preparing for the Design Process**

###### Organisation and Definition of Parameters

- Prepare all conditionalities and Terms of Reference
- Rules, norms and guidelines for preparing the plan and layout design
- Invitation by “recognition of knowledge and capacity”

- Public competition of projects
- Selective bidding
- Final selection of winning designs, ideas, project designer

## **STEP 5**

### **Preparing the Urban layout design**

#### Defining the general outline of the land-use plan of the city:

- Urban layout (in scale 1:2000)
- Identifying the natural features: woods, rivers, creeks, hills...
- Defining civic areas and government areas
- Defining commercial and shopping areas
- Defining location of factories, residential zones and industries
- Defining location of sports facilities and amenities
- Defining basic grid, accessibility, circulation and transport

## **STEP 6**

### **Designing the final plan and urban layout**

#### Issues to consider for the final plan:

- Comfort of the residents
- Differentiation of means of transportation and circulation
- Housing typology
- Density (inhabitants/ha and building/housing per hectare)
- Efficiency (land-use/occupation & infrastructure costs)
- Width of the streets, roads, pedestrian accesses, public space
- Plot sizes, height of buildings, occupancy rates

## **STEP 7**

### **Preparing for Implementation**

#### Defining the procedures and detailed designs:

- Preparing project packages
- Inventory and letter of interest by building contractors
- Designing and preparing bidding documents (competition)
- Announcement of bidding and project packages
- Detailed designs (in scale 1:500, 1:50)
- Organising bidding selection committee
- Preparing contracts and supervision arrangements

## **STEP 8**

### **Project Execution and Plan Implementation**

#### Organising Project and Construction Management:

- Organising project management structures
- Organising building inspection, measurement and supervision
- Invoicing, book-keeping and Financial Management
- Formal delivery and receipt of buildings, projects, works
- Quality control and definition of standards

The video about the city of Almere situated in the Northeast part of The Netherlands, nearby Amsterdam, showed the entire process of planning and implementing the new town. The motivation and rationale behind the decision to build this town in a land reclamation area was to deconcentrate population from the Randstad (Western conurbation) and to provide growth possibilities and housing opportunities for residents from Amsterdam who are unable to find adequate and affordable housing within the city.

## **SESSION 4:      What makes Urban Planning a success?                       Case study illustration with a video about Curitiba                       Brazil**

This session addresses a few prerequisites for urban planning to succeed. It must be stated that there is no fixed solution or recipe for planning a city. Each city is a case in itself with its own peculiarities, problems, opportunities, organisations and local diversities. What works in one city may not work in another. A planner must be aware of this. However, there are some sine-qua-non conditions that one must satisfy in order to succeed with urban planning activities. Despite of being confronted with rapid processes of urbanisation and increasing pressure for housing, employment, infrastructure and community services, the example of Curitiba shows that it is possible to create an environmentally sound and well functioning urban environment with good quality of life for its inhabitants. The city has actually around 1.7 million inhabitants. It is situated in the southern region of Brazil at about 400 Km south of Sao Paulo. It is the capital of the state (province) of Parana.

The session elaborates on 9 prerequisites and illustrates that with Curitiba and the peculiar position of local governments in Brazil.

### **1. Having the Right Mandate and Authority**

Brazilian municipalities are one the most autonomous local governments in the world. It has a political, administrative and financial autonomy guaranteed by the national constitution. Mayors and municipal councillors are elected by all citizens who have 16 years of age or older. Municipalities levy and collect major taxes and is entitled to draw its own “municipal constitution” as much as it does not conflict with the national and state constitutions and laws.

Urban planning, among different other tasks, is a direct responsibility of the local governments. The constitutions says that cities with more than 20,000 inhabitants are obliged to prepare and install an urban development plan that must be the result of a consultation with the local population and civil society organisations.

So, municipal governments don't depend on any other level of government to draw its own plans and to establish the mechanisms and instruments to implement them. It can organise its own planning tasks, departments, and institutions to assure its proper management and implementation. It can contract out activities, can tender works and have the freedom (within limits of the law) to recruit professional cadre to perform the most important planning and management tasks.

### **2. Having the Adequate Concepts and Understanding**

As seen in session 1, it is essential that planners and professionals do have a good understanding about the planning process, its limitations, potentials and its various dimensions. Concepts need to be adapted to the local social, economic, technological and political contexts so that there is no discrepancies between ideas and their chances of success. In Curitiba, particularly, there was a high level of involvement of the technical cadre in developing the first draft of the plan (1964) and monitoring its implementation throughout the years until this date. Simple, adaptable and problem solving oriented-type of solutions was embedded in Curitiba's planning process from scratch. This made possible the immediate adequacy of the plans and ideas to the local conditions. Planners had a great degree of knowledge of the local situation and solutions and spatial patterns were not imported.

### **3. Having the Adequate Means and Resources**

As said before, municipalities in Brazil have their own budget. Mid 1990 Curitiba had a municipal budget of nearly US\$380 million from which it drew its resources to pay its personnel, to maintain public spaces and public facilities and to implement public investment programs.

Municipalities are also allowed to borrow money from capital markets including from international banks (such as the World Bank and the Inter American Development Bank) up to a certain ceiling established according to its total revenue and debt capacity. This creates additional resources for heavy and costly infrastructure investment programs.

Furthermore, municipalities are continuously engaged in partnerships with private sector and business organisations in local economic development projects and key infrastructure investments projects. Particularly during the 1990's this has become more intensive. So, in order to realise its plan, the municipality's planning department must count on the necessary finance, personnel, equipment and all means not only to formulate the plan but to make it happen in reality and to further monitor its implementation and adaptation. With a bit of creativity municipalities can realise a lot in terms of planning its spatial development.

#### **4. Having a PLAN, the adequate STRATEGY and the right INSTITUTIONS to implement it.**

The plan of Curitiba is a conventional master plan, with its land use plan, zoning, planning instruments and complementary legislation that made it official and gave it legitimacy towards the law and civil society.

But what was special about this plan and made it different than other conventional planning processes is that the plan was first the result of a national competition of projects and ideas.

The competition established that it was mandatory to involve the local municipal planning team in the entire process of plan making right from the start. This guaranteed that plan was locally bound.

Secondly, the plan was the result of a wide consultation with the population via public meetings, debates in the radio, special gatherings with professional associations (engineers clubs, architect's institutes, and chamber of commerce, etc.). This allowed the mobilisation of public support and the integration of ideas and comments into the final form of the plan. Within a context of military dictatorship this dialogue and public discussion was really a breakthrough in civil engagement in urban planning.

Thirdly, a municipal agency was created to implement and monitor the entire execution of the plan. This was called IPPUC-Urban Planning and Research Institute of Curitiba. It was to become a kind of "think tank" in the city responsible for a series of innovative designs and very specific solutions in public space design, urban furniture, reuse of old/derelict buildings, etc. IPPUC was established as a semi-autonomous institution with the necessary resource allocation, mandate, autonomy, staffing and infrastructure that turned it into a very successful municipal institution that survived throughout all changes in the political leadership in the city.

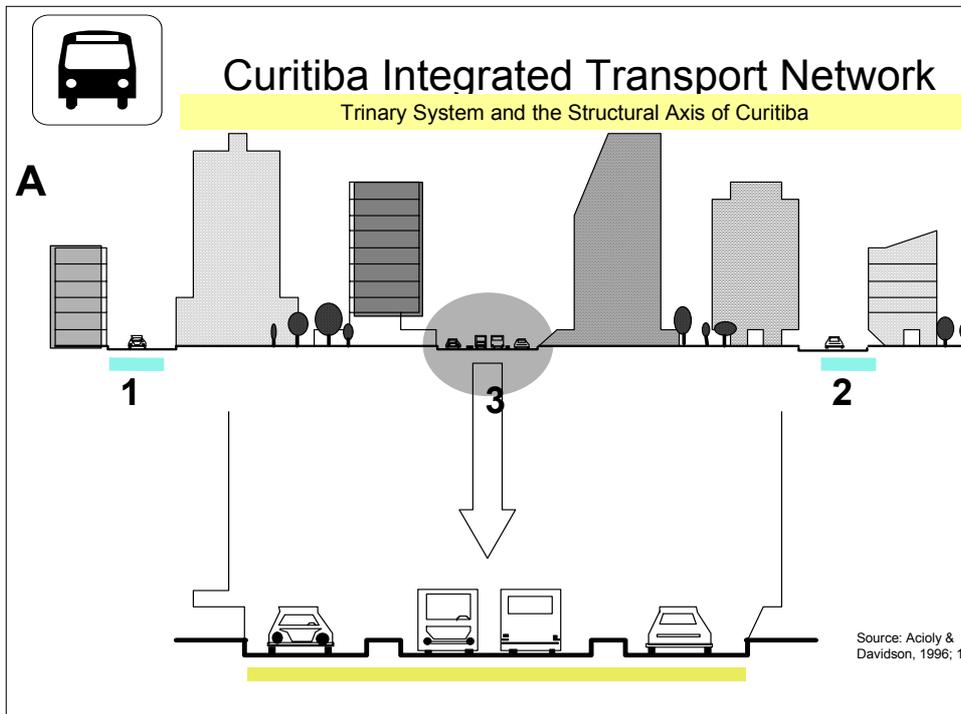
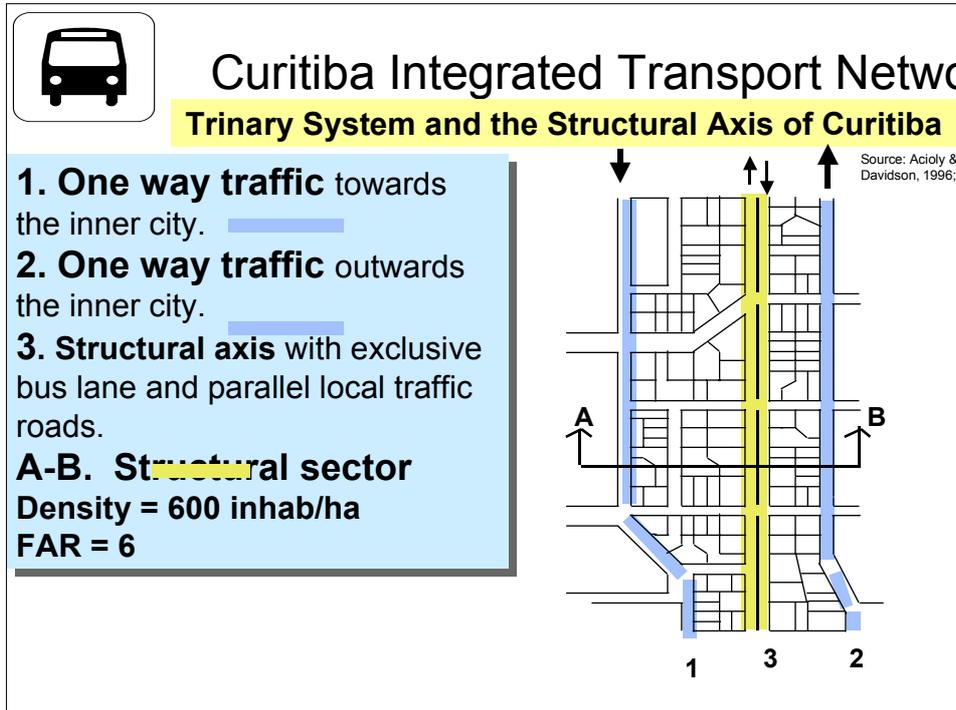
IPPUC was staffed with technical cadre recruited locally or with personnel transferred from the municipality. Its first president was the architect Jaime Lerner who was involved in the making of the plan since the very beginning. Later on he would become mayor of the city for three different terms of 4 years.

So, there was a plan, it was accepted and was legitimate within the population; there was a technical cadre capable to take over planning and management responsibilities and an institution specifically responsible for its execution and monitoring. What else was needed? The answer is: a good strategy!

The strategy was to be embedded in the concept of the plan. To decongest the inner city and revitalise its urban and architectural heritage while changing the growth pattern of the city from a radio-concentric to a linear form (south-north direction). This was meant to protect the environmentally sensitive areas in the western part of the city where green areas and water management sites were situated. In order to realise this change a first north-south structural axis was introduced allowing for high-density occupation and public transport and high transit planning. This became the embryo of one of the most successful urban public transport system in the world.

A process of compulsory land acquisition was launched in order to guarantee that the municipality could realise the plan and extend the public transport and the structural axis that would turn around the urban growth pattern of the city.

By Claudio Acioly, 1999.



By Claudio Acioly, 1999.

### 5. Having the Most Appropriate Policies and Land Management Instruments

The urban plan was just one of the instruments in urban policy of the local government. Equally important were the instruments to capture betterment taxes derived from public investments in all real estate properties of the city. An urban information system had been established already since early 1980's allowing the municipality to have an accurate knowledge of plots, land use, property status, development rights, land prices, etc.

This proved to be an important tool to allow the municipality to negotiate transfer of development rights from plots where buildings considered as architectonic heritage were situated. Owners were given development rights elsewhere in the city in exchange of the giving away their properties to the municipality, a type of soft expropriation. The municipality engaged in negotiations with many owners and realised two objectives in one action: it preserved the buildings, mobilised financial resources (taxes and fees involved in these transactions) and stimulated public-private partnership in managing and planning the city.

#### **6. Having an integrative view of urban development: Housing - Land Use - Transportation**

The linkage between housing, land use and transportation implicit in the “tri-lane” system and structural sectors (with the exclusive bus lane in the centre and floor area ratio-FAR up to 6) provided an optimal utilisation of land and efficient use of infrastructure. It also generated sufficient population density that made the public transport system economically viable. Residential use is mixed to other uses provided that there is no excess or disturbance in transit and traffic management. Densities decrease as much as the distance increases from public transport resulting in an interesting skyline for the city.

There is no dissociation in planning. There is no sector approach. There is indeed a holistic approach that integrates all various dimensions of urban development.

Land use is continuously revisited. It is continuously reviewed so as to keep urban areas responsive to changes in demand, circulation, and patterns of population mobility and economic development.

#### **7. Involving key stakeholders in the implementation of the vision.**

From the beginning of the planning process there was a significant degree of involvement from the population in the preparation of the plan and in developing the vision of the city. IPPUC maintained a systematic process of consultation through short survey in order to measure opinion and level of satisfaction. As democratisation winds swept around Brazil, Curitiba started to adapt to a more demanding social urban movements during the first half of the eighties. Public participation was not so intensive as in other Brazilian cities of that size and it had its peak and low points. Nevertheless one cannot deny that there was involvement of the population in the design and implementation of urban management strategies. The result of this involvement is that the plan, the municipal programs and the municipal administration has one of the highest level of population approval in Brazil.

Thus the most important result of a participatory planning process is the total ownership of the process and its results from the part of the population apart from resulting in higher commitment to support and maintain the benefits accomplished by the plan.

#### **8. Decentralising City Management and bringing citizens closer to municipal administration**

Within the process of decentralisation of the municipality, gradually the city administration established a type of 8 sub-municipalities spread in different districts of the city.

The “Citizenship Roads” as it is called the regional headquarters of the municipality receives delegated authority on a number of tasks and it is where citizens should move to address their various requests: from planning and building applications, to tax and fee payments, job demand, documents, registration, etc.

Furthermore, the city government keeps a line of communication with the citizens through the internet ([www.curitiba.pr.org.br](http://www.curitiba.pr.org.br)) where anyone can inquire about a particular law, norm, regulation, and his/her application, including the property taxes.

The plan and its various indicative laws are also made public and anyone can consult it.

#### **9. Having A Vision and the Political Will to Realise it.**

The mayor is elected and is accountable to city population. He/she is an important figure. The political will of the mayor and its government is also a sine-qua-non condition to have a plan successfully implemented. A plan without the will to implement it and to assume the positive but also negative impacts of it is just transformed in another obsolete document in the shelf.

## BASELINE INFORMATION ABOUT CURITIBA

SOURCE: [www.curitiba.pr.org.br](http://www.curitiba.pr.org.br)

### Urban Economy

With the establishment of 4 different car manufacturers, the economic profile of Curitiba's metropolitan area is changing. In total, industrial investments amounted to US \$5.9 billion by the end of 1997, according to the Industry, Trade and Tourism Municipal Authority. And so, once more Curitiba is becoming unique in Brazil - a city catalysing incentives and developments in neighbouring municipalities as a result of its quality of life and urban infrastructure. Job creation, one of the ultimate goals of the current administration, is assured by this and other municipal administration initiatives. The prospects of industrial development "boost a positive business climate in the city," remarks mayor Cassio Taniguchi.

The Gross Internal Product of Curitiba closed out 1996 at R\$11.47 billion, showing a 7.2 % increase compared to the previous year. The performance is above the rates for Paraná and Brazil, which experienced growth of 5 % and 2.9 % respectively, according to data from Iparde (Paraná Institute of Economic and Social Development) and Brazil's Central Bank. By the same measure, Curitiba's per capita income (US \$7,827) is also higher than the state (US \$5,253) and national (US \$4,742) averages.

Greater Curitiba, with a GIP of US \$17.6 billion, accounts for 37.5 % of the state economy and intends to reach the rank of fourth economic power in Brazil by the year 2000. Along with the addition of car makers Renault, Audi / Volkswagen and engine factories for Chrysler, BMW and Detroit, the region steps forward to becoming the second car manufacturing centre in Brazil.

### Average growth

Since the creation of the Industrial District in 1973, the city's economy has grown remarkably, if compared to national rates. The average growth of Curitiba's economy is 7.1 % against a national average of 4.2 %. To have an idea of this, the city's GIP in 1975 was US \$1.15 billion, a figure that today is more than 10 times that. The Industrial District contributes 26 % of Paraná's industrial GIP. If considered as the metropolitan region, Greater Curitiba encompasses an impressive 59.8% of Paraná's total industrial GIP.

### Diversification

Curitiba's economic activity has diversified in the last few years, a result of the consolidation of the municipality as a catalyst for high-tech industries and specialised services. From an economy in the '70s based on wood processing, the city moves towards the status of durable goods manufacturing centre, with an emphasis on electronics and transports. Curitiba has been solidifying its position as a centre for excellence in the areas of urbanism (projects), surgical medicine, environmental technology, biotechnology, precision mechanics, telematics, industrial automation, information technology (software engineering), biomedicine and metal-mechanics (capital goods).

Curitiba's economic performance and its metropolitan region are backed up by the collective contributions from all regions of Paraná. It is one of the primary agriculture and cattle producing states in Brazil. Soybeans, corn, wheat, beans, potatoes, coffee and tobacco are worth mentioning, in addition to hogs, chickens and cattle.

Metropolitan Integration guarantees economic expansion with quality of life

During the last 30 years Curitiba has been focused on its urban planning . While other cities nowadays are busy designing their master plans, Curitiba takes a step forward in an attempt to extend its services and solutions to its metropolitan area. Such is the case with public transportation, which now reaches 8 neighbouring cities, and with selective garbage collection, which was adopted by 12 municipalities. Curitiba's 432 km<sup>2</sup> are nearly all developed, requiring its administration to plan and implement actions within a metropolitan approach, with the goal of maintaining and improving the established quality of life.

Encompassing [25 municipalities](#), with a population of 2.42 million, Greater Curitiba boasted a US \$17.69 billion Gross Internal Product in 1996 and is likely to experience the largest growth cycle in its history. Curitiba consolidates its position as a great booster of the most up-to-date technology while at the same time decentralising its investments. As proof of this, the most

significant industries (in terms of job creation) are located in surrounding municipalities such as São José dos Pinhais, with both Renault's and Audi's headquarters; Campo Largo, home to Chrysler; and Fazenda Rio Grande, with Electrolux.

The Special Municipal Secretary for Metropolitan Affairs links Curitiba to the remaining 24 local governments, advising them. The current mayor, Cássio Taniguchi, was elected president of the Association of Municipalities of Greater Curitiba, which aims to mobilise mayors toward common objectives. Until now, neighbouring municipalities had implemented isolated policies - although they share many of the same difficulties and rely on joint efforts.

Metropolitan integration re-establishes Curitiba's tradition of foreseeing solutions to both environmental and urban problems, as it used to during the '70s and '80s. During that time, highlighted by demographic expansion indicators of up to 5.7 % annually, Curitiba reinforced its position as an international reference point for urban planning in the areas of transportation, environmental action and social services. The annual growth rate within the metropolitan area is 3.4 % above the 1.53 % annual average recorded in all other Brazilian cities.

### **The City's Profile**

The capital of Paraná is 304 years old and is located in the south of Brazil. Its Gross Internal Product amounts to US \$12.1 million a year, with an annual per capita income of US \$8.000 significantly higher than the US \$5.000 Brazilian national averages. The city aims to be the fourth largest economic city in Brazil by the year 2000.

Most of its 1.5 million population is descendants of immigrants from Italy, Poland, Germany, Ukraine, Japan, Syria and Lebanon.

Acclaimed nationally and internationally for its innovative urban solutions, the city relies on the country's most efficient public transportation system and boasts 52 m<sup>2</sup> of green area per inhabitant, causing it to be called "Brazil's Ecological Capital."

The current administration, led by Mayor Cássio Taniguchi, is supported by 3 basic guidelines: job creation, shared administration and integration of the metropolitan area. The latter is bringing successful experiences to the other 26 municipalities that comprise the city's metropolitan area. In a partnership with the Paraná State government, the city is attracting industrial investments that amount to US \$5.9 billion to the area. Car manufacturers Renault, Chrysler, Volkswagen-Audi and Detroit are worth mentioning in this respect.

Curitiba is preparing for the future by investing in job creation and social services while preserving its cultural identity.

### **URBAN PLANNING**

During the last 30 years, Curitiba has been focused on its urban planning. While other cities nowadays are busy designing their Master Plans, Curitiba moves forward by extending its services and solutions to its metropolitan region. As is the case with mass transportation, which today covers 8 neighbouring cities, selective garbage collection is being extended to the 24 surrounding municipalities.

Considered an outstanding feature of the population's commitment to planning, the Master Plan of Curitiba is being debated throughout society - which has already happened once, when the city's development guidelines were formulated. This time, Curitiba wants to keep growing in an orderly way. In doing so, it will continue to use the principle that the city's occupation and use should be guided, so that the growth in population density may be compatible with the available infrastructure.

IPPUC (The Research and Urban Planning Institute of Curitiba) played a major role in the process of defining the course of Curitiba's urban growth. By establishing orderly development along structural axes, the Master Plan enabled the population to acquire a global view of Curitiba. Thus, each curitibano has a kind of map of the city, since the axes are highly visible and useful within the urban network. Curitiba's traffic system is made up of 13 types of circulation routes that keep traffic in order. IPPUC is focused on producing new technologies for the development of the city. Ideas born there are today part of the daily life of the city, such as tube-stations and electronic speed bumps. IPPUC also monitors vehicle traffic, through the Area Traffic Control.

## **IDÉIAS FORÇA (Core Ideas Projects)**

Matrix Projects are the 24 main projects of Curitiba's current administration, encompassing actions that link several administrative branches and public institutions. The concept, a result of a globalised approach to administrative applications, aims to set out tasks and shared goals for administration, following a pre-established timetable. Each of the programs, called **Idéias Força**, has its own co-ordinator, an expert in the subject who attempts to direct the flow of activities and unite the efforts of other parties. The main feature is that all projects evolve simultaneously with the everyday duties of each administrative branch or institution.

## **PUBLIC TRANSPORT**

Curitiba's collective transportation system is one of the most efficient in Brazil, as evidenced by a series of international awards. The most recent was granted by the prestigious English Building and Social Housing Foundation, and is only one example.

It is also worth mentioning that the system was classified by the Worldwatch Institute, one of the largest US environmental research institutes, as "exemplary."

Begun in the '70s with the aim of prioritising mass transportation, the system is acknowledged as combining low operational costs with quality service. Around 1.9 million passengers are transported daily with an 89 % user satisfaction rate, according to a survey by URBS, which runs the system.

The most significant edge within Curitiba's transportation scheme is the availability of an integrated tariff, which allows commutes throughout the whole city for just one fare. Each user can make his or her own itinerary, since the system is integrated by means of [terminals](#) and [tube-stations](#). Those commuting long distances, which are the case in most low-income populations, are subsidised by those making shorter trips. It is estimated that around 80 % of users are benefited by the integration. Nowadays, the Integrated Transport Network operates with 1,902 buses, making about 14,000 journeys daily, totalling 316,000 km every 24 hours.

Today the system is integrated with several metropolitan area municipalities, servicing 8 cities within Greater Curitiba: Almirante Tamandaré, Colombo, Pinhais, São José dos Pinhais, Araucária, Fazenda Rio Grande, Campo Magro and Campo Largo. Conventional bus routes, metropolitan buses, expresses and *ligeirinho* (speedy) buses transporting about 250,000 passengers daily who either live or work in the neighbouring cities support integration.

## **O SISTEMA TRINÁRIO (THE TRINITARIAN SYSTEM)**

From 1974 onward, an express bus system - called the "surface subway" - has been operational in Curitiba. It consists of a revolutionary solution for linking downtown to the neighbourhoods through exclusive traffic lanes. The Trinitarian system of lanes was therefore created, flanking an "express bus only" middle lane with two outer lanes for slower traffic. The express lanes enable a considerably higher average bus speed without jeopardising passenger safety.

There is now 58 km of exclusive lanes, which criss-cross the city along its north, south, east, west and Southwest axes. 270 km of feeder routes and 185 km of interdistrict routes, servicing about 65 % of the urban area complement the great axes. If added to the conventional routes, Curitiba's urban transportation system covers the entire municipal area.

## **ENVIRONMENTAL MANAGEMENT**

Curitiba offers the largest proportion of green area per inhabitant - 52m<sup>2</sup> per person, totalling 21 million. Pioneering the implementation of recyclable waste exchange schemes in Brazil, Curitiba today separates 13 % of its garbage and is also ranked first among the 4 Brazilian cities that separate recyclable biodegradable waste (cans, glass, metal, plastic, paper), followed by Porto Alegre (5 %), Florianópolis (4 %) and São Paulo (the largest Brazilian city separates just 1% of what it collects).

Awarded the highest environmental prize in 1990 by the United Nations Environment Program (UNEP), the recyclable waste scheme has accomplished the separation of 419,000 tons of recyclable waste since its 1989 start-up. Such volume would fill up 1,200

20-story buildings with 280 m<sup>3</sup> of trash each. Inorganic waste (plastic, paper, glass and aluminium) amounts to 13 % of all garbage collected.

In its newest stage, the recyclable waste scheme reaches the 13 municipalities of Greater Curitiba. These city governments understand that this increase is critical to the preservation of Curitiba's fresh water supply.

The preservation of green areas is another central instrument of municipal environmental and sanitation policy. The 21 million m<sup>2</sup> of parkland (parks, woods, gardens and squares) maintained within the urban perimeter are visited by over 150,000 people during weekends. Such recreational alternatives mean quality of life and particularly the balance between the city and its environmental assets. Most of Curitiba's parks, called linear parks, are located along river banks and in valley bottoms. They work like a kind of barrier that prevents illegal occupation of such areas, subject to floods, in addition to keeping rivers and streams from becoming landfills. The park lakes are used to hold back floods and function as water flow regulators during the rainy season.

The population's motivation to cooperate with environmental programs increases proportionally to the benefits generated by environmental schemes. **Câmbio Verde** (Green Exchange), for example, exchanges recyclable trash for sacks of foodstuffs, toys and teaching material.

In the **Olho d'Água** (Fountain) scheme the community plays an active role in environmental education activities. All 2,600 municipal school students carry out, through water analysis, a complete survey about river quality. The idea is to assess and eventually intervene with concrete actions to recover the quality of the water supply.

## Curitiba and its visionary mayor

*Summarised from an article by Donella Meadows entitled 'The city of first priorities' in Whole Earth Review (Spring '95; subs \$35; 27 Gate Five Road, Sausalito, CA 94965, tel 415 332 1716; fax 415 332 3110). See also the article about Curitiba on page 183, The Book of Visions (Institute for Social Inventions, 1992).*

Residents of Curitiba, Brazil, think they live in the best city in the world, and a lot of outsiders agree. Curitiba has 17 new parks, 90 miles of bike paths, trees everywhere, and traffic and garbage systems that officials from other cities come to study. Curitiba's mayor for twelve years, Jaime Lerner, has a 92 per cent approval rating.

There is nothing special about Curitiba's history, location or population. Like all Latin American cities, the city has grown enormously - from 150,000 people in the 1950s to 1.6 million now. It has its share of squatter settlements, where fewer than half the people are literate. Curitiba's secret, insofar that it has one, seems to be simple willingness from the people at the top to get their kicks from solving problems.

Those people at the top started in the 1960s with a group of young architects who were not impressed by the urban fashion of borrowing money for big highways, massive buildings, shopping malls and other showy projects. They were thinking about the environment and about human needs. They approached Curitiba's mayor, pointed to the rapid growth of the city and made a case for better planning.

The mayor sponsored a contest for a Curitiba master plan. He circulated the best entries, debated them with the citizens, and then turned the people's comments over to the upstart architects, asking them to develop and implement a final plan.

Jaime Lerner was one of these architects. In 1971 he was appointed mayor by the then military government of Brazil.

Given Brazil's economic situation, Lerner had to think small, cheap and participatory - which was how he was thinking anyway. He provided 1.5 million tree seedlings to neighbourhoods for them to plant and care for. ('There is little in the architecture of a city that is more beautifully designed than a tree,' says Lerner.)

He solved the city's flood problems by diverting water from lowlands into lakes in the new parks. He hired teenagers to keep the parks clean.

He met resistance from shopkeepers when he proposed turning the downtown shopping district into a pedestrian zone, so he suggested a thirty-day trial. The zone was so popular that shopkeepers on the other streets asked to be included. Now one pedestrian street, the Rua das Flores, is lined with gardens tended by street children.

Orphaned or abandoned street children are a problem all over Brazil. Lerner got each industry, shop and institution to 'adopt' a few children, providing them with a daily meal and a small wage in exchange for simple maintenance gardening or office chores.

Another Lerner innovation was to organise the street vendors into a mobile, open-air fair that circulates through the city's neighbourhoods.

Concentric circles of local bus lines connect to five lines that radiate from the centre of the city in a spider web pattern. On the radial lines, triple-compartment buses in their own traffic lanes carry three hundred passengers each. They go as fast as subway cars, but at one-eightieth the construction cost.

The buses stop at Plexiglas tube stations designed by Lerner. Passengers pay their fares, enter through one end of the tube, and exit from the other end. This system eliminates paying on board, and allows faster loading and unloading, less idling and air pollution, and a sheltered place for waiting - though the system is so efficient that there isn't much waiting. There isn't much littering either. There isn't time.

Curitiba's citizens separate their trash into just two categories, organic and inorganic, for pick-up by two kinds of trucks. Poor families in squatter settlements that are unreachable by trucks bring their trash bags to neighbourhood centres, where they can exchange them for bus tickets or for eggs, milk, oranges and potatoes, all bought from outlying farms.

The trash goes to a plant (itself built of recycled materials) that employs people to separate bottles from cans from plastic. The workers are handicapped people, recent immigrants, and alcoholics.

Recovered materials are sold to local industries. Styrofoam is shredded to stuff quilt for the poor. The recycling programme costs no more than the old landfill, but the city is cleaner, there are more jobs, farmers are supported and the poor get food and transportation. Curitiba recycles two-thirds of its garbage - one of the highest rates of any city, north or south.

Curitiba builders get a tax break if their projects include green areas.

Jaime Lerner says, 'There is no endeavour more noble than the attempt to achieve a collective dream. When a city accepts as a mandate its quality of life; when it respects the people who live in it; when it respects the environment; when it prepares for future generations, the people share the responsibility for that mandate, and this shared cause is the only way to achieve that collective dream.'

## **SESSION 5: Urban Revitalisation and Urban Renewal**

### **Case study illustration with a video about Rio de Janeiro's urban revitalisation program (Rio Cidade Program), Brazil**

The session started with an explanation about the concept of urban renewal and urban revitalisation and how it emerged in Western European countries (England, Germany, France, Holland) and North America (USA).

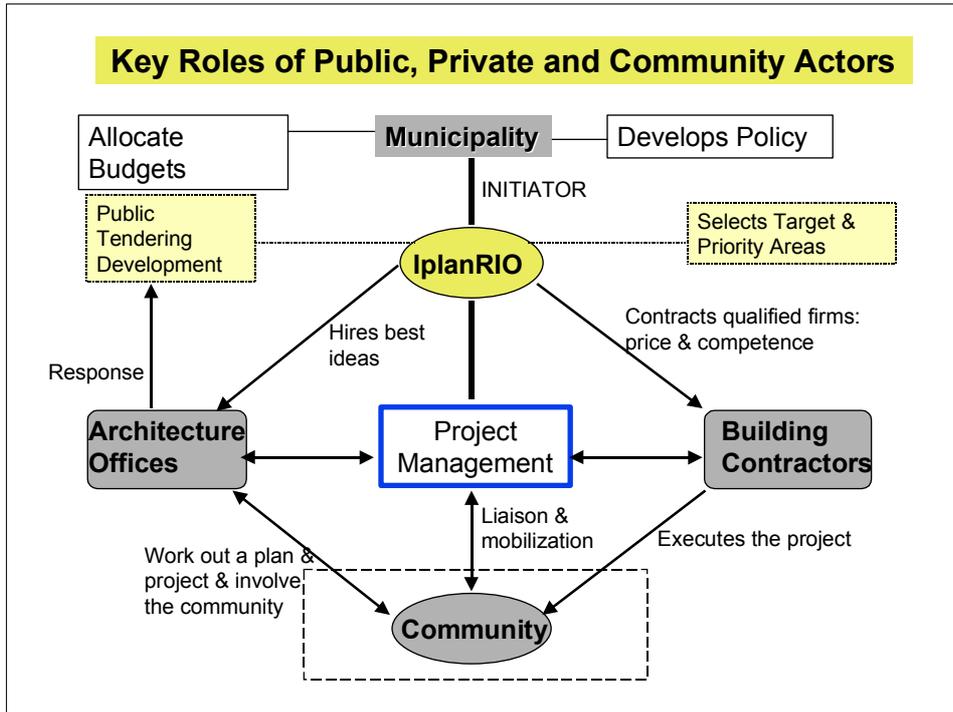
The process of physical and economic decline that hit hard some neighbourhoods and urban zones of cities resulted in a rapid decrease in the quality of life, in the quality of buildings and public space, and the eroding infrastructure networks. This was very evident in inner city districts and older neighbourhoods mostly dating from the late 1800's and beginning of the 1900's, mostly constructed before World War II. At first urban policies focused on the demolition of these areas followed by redevelopment projects that would give these areas a totally new character and urban configuration. This implied the eviction or displacement of the original population to other newly created areas situated in the outskirts of cities or in publicly sponsored housing estates further than the original location.

As residents resisted against these policies and community-based organisations started to mobilise against eviction new policies were drawn focusing on the rehabilitation of neighbourhoods, public spaces and physical structures maintaining the character and the urban futures that gave identity to the sites, districts and neighbourhoods. At first urban renewal policies gave a prominent attention to physical rehabilitation and physical improvements and not giving too much emphasis to management of public spaces, improvement of open spaces and economic recovery. Small businesses and economic activities that existed or should be reinforced in these areas were not given an equal importance. Gradually, the principles of urban revitalisation – physical, social, economic and cultural renewal – started to receive greater acceptance. Projects and programmes started to give equal attention to recapture the values, the economy, the vitality and peculiar development processes found in different areas and neighbourhoods of cities. Port cities, like Rotterdam, Baltimore, Boston, Barcelona just to mention a few have increasingly opted to policies of urban revitalisation mixed with redevelopment strategies to tackle the problems resulted from the technological changes in port activities derived from type of container shipping and container's storage and outlet. This has turned large tracts of land obsolete. Large structures and large parcels of derelict land were vacant awaiting for re-use or demolition. This has launched a third generation of revitalisation policies and projects that are bringing vitality and centrality for these cities.

The experience of Rio de Janeiro shows that in situations of rapid urbanisation it is no longer possible for the city and its local government to await for a total plan for the city with ultimate detailed urban design for its total territory. Urban problems and the physical and economic decline in some key areas of the city urge immediate action. The programme Rio-Cidade shows how the municipality launched urban revitalisation projects to recover the identity, character and value of first key corridors, shopping streets and structural axes that give of the city its peculiar identity. The programme focused on the recovery of public space, the redesign of urban spaces and urban furniture as well as in the modernisation of the infrastructure networks. Aerial cabling were replaced underground and often renewed completely. Cable TV and fibre optic cables for data communication as well as drainage and sewerage networks and telephone lines were introduced in specifically designed galleries. There was a total refurbishment of the city's infrastructure networks, the public squares, etc. that created a pleasant environment for pedestrians and the population in general to enjoy again the use of streets. In Rio de Janeiro, the streets always had a social and cultural value. And this was recovered by Rio-Cidade Programme interventions.

The presentation further gave light into the strategic plan of the city, which managed to mobilise civil society around the envisioning the future of Rio de Janeiro, its problems and dilemmas, and priority areas where the local government should pay attention. Thus, the programme Rio-Cidade appears within a context of transformation in the relationship between local government and civil society.

The case study presentation showed once more how important it is to create programme and project implementation arrangements to allow the smooth implementation of large scale projects and urban operations within a complex institutional environment. The creation of project management structures and the delegation of responsibilities to project managers proved to be a key condition for success.



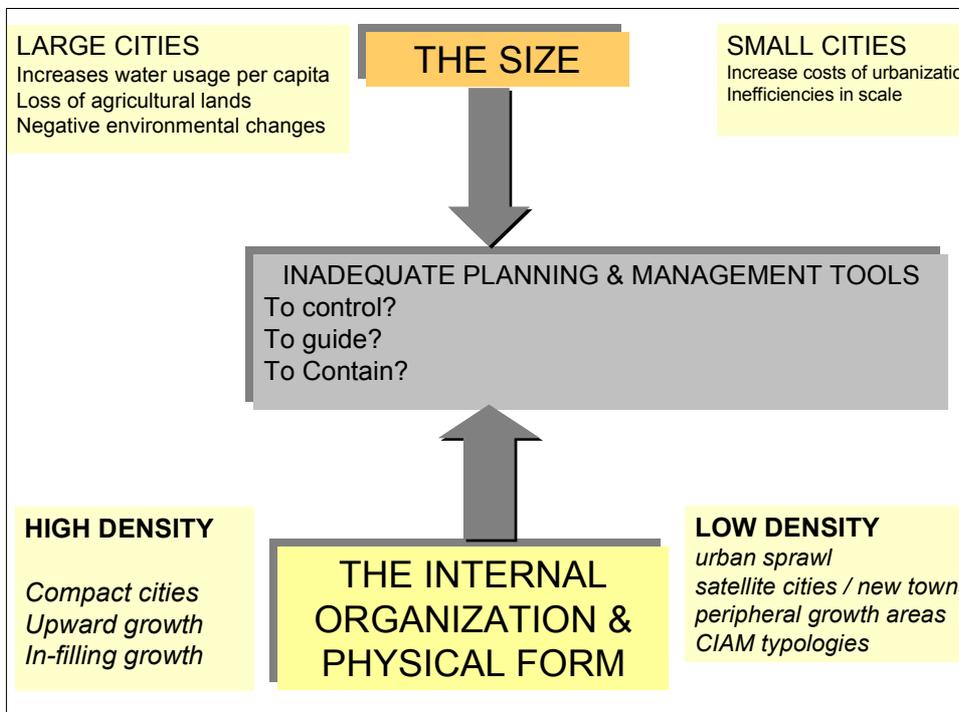
## SESSION 6: Managing Urban Densities

What will be the form of the sustainable city in the 21<sup>st</sup> Century? Case study illustrations from Cairo and Giza (Egypt), Sao Paulo and Curitiba (Brazil).

The session draws from previous work of the lecturer. Particularly the research on urban densities carried out for the Swedish Government as part of its contribution to the UN Habitat II Conference (1996, Istanbul). The following publications are used as background for this session:

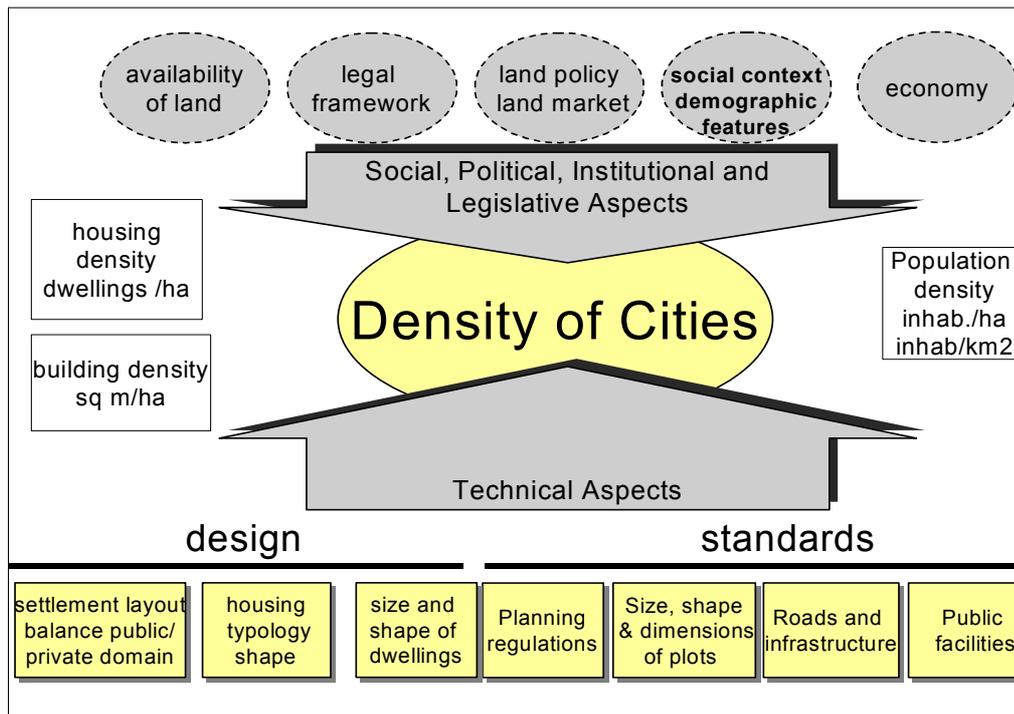
- Claudio Acioly and Forbes Davidson, "Density in Urban Development ". *Building Issues*, No. 3, Volume 8. Lund University, Lund Center for Habitat Studies, 1996. 24 pp.
- Claudio Acioly and Forbes Davidson, "Densidade Urbana e Gestão Urbana". Mauad Editora, Rio de Janeiro, Brazil, 1998. 58 pp.
- Claudio Acioly, 'Guided densification' in Brazil versus informal compactness in Egypt: can urban management provide a pathway to a sustainable city", in R. Burgess and M. Jenks (eds) *Compact Cities: Sustainable Urban Forms in Developing Countries*, UK, Spon Press. (pp. 127-140)..

This session was divided in three main parts. The first part focused on building a common understanding about the main features and dimensions that one must look at in order to assess whether the current pattern of urban development is sustainable or not. Particular attention is given to urban densities and the patterns of urban development. Some key questions are raised and responses will be tried out during the subsequent parts of the session. Can cities continue to grow indefinitely towards its natural environment without endangering its own future and long-term sustainability? Is there a threat? What is the solution? Compactness or spatial decentralization? Examples drawn from Egypt show the adverse effects of dramatic levels of densities and compactness in urban development.



The second part of the session strengthens the basic understanding about densities. What affects it has on the urban environment, human development and urban economic development. It also

makes evident the various aspects that are affected by or affects the densities of urban development and cities as a whole. The session shows many concrete figures and indicators about how densely occupied or how disperse cities in different regions of the planet and what are the trends. The session further outlines a number of tools and instruments that allow planner to intervene into the processes of urbanisation and guide the “densification” of urban environments within a principle of sustainable development, maximisation of land and infrastructure, optimal use of public transport and ultimately the more efficient use of public investments.



Source: Acioly and Davidson, 1896;1998.

The final part of the session gives examples of a series of urban planning and urban management instruments that are utilised by North American cities and actually very popular among city planners working in the large Brazilian cities. The so-called of urban operations, inter-linked operations and the TDR-Transfer of Development Rights. The application and use of these tools shows that local governments and planners in particular can play an active role in the creation of sustainable urban patters and make the best and most optimal use of resources like land, infrastructure and public finance.

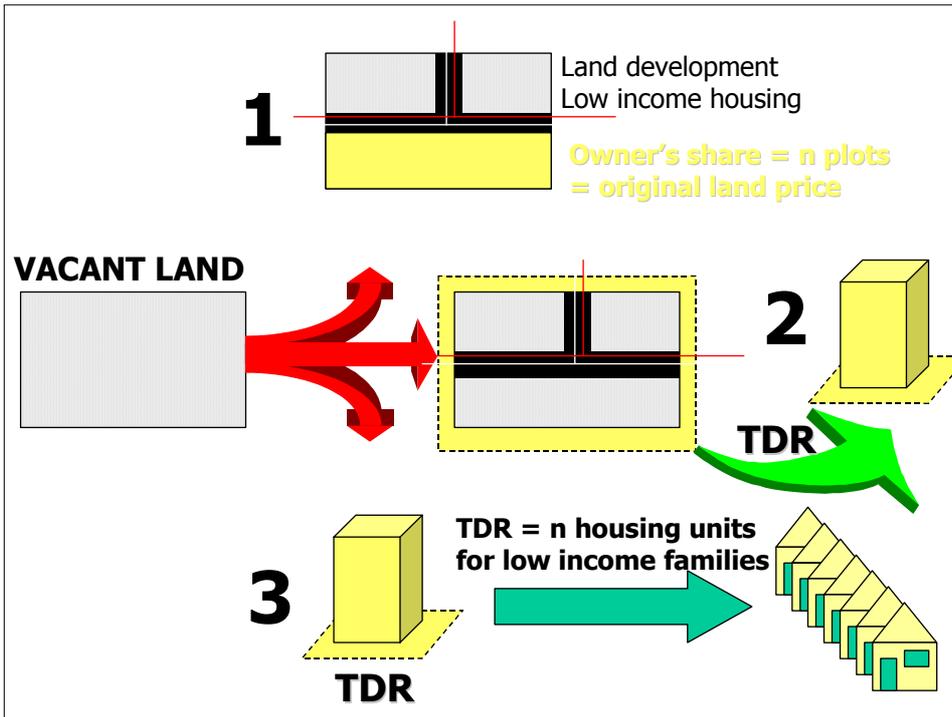
A detailed explanation of TDR is given. TDR is land management and land policy instrument and defined as:

“The sale of one parcel’s development rights to the owner of another parcel, which allows more development on the second parcel while reducing or preventing development on the original parcel” (Johnston & Madison, 1997; Giordano, 1988).

The use of TDR in land management and in the overall urban management process leads to:

- Flexibility in planning;
- Release of land use regulations & restrictions;
- Opportunities for local governments to manage the built-up space of cities in a responsive manner;
- Opportunities for negotiation and public-private partnerships, and revenue generation;

- Opportunities for programmatic and pragmatic densification.



## ABSTRACT

### 'Guided densification' in Brazil versus informal compactness in Egypt: can urban management provide a pathway to a sustainable city?

Claudio C. Acioly Jr.

The chapter draws from previous case studies on densities and urban development in cities in India, Egypt, Brazil, Mexico, Netherlands, Hong Kong and Tanzania. The proposed paper gives more focus to experiences in Egypt and Brazil, particularly Cairo/Giza, Curitiba, Porto Alegre and São Paulo.

Most of the Egyptian cities are situated in a land strip along the river Nile reflecting a concentration of population in only 5% of the total territory, nearly 62.5 million inhabitants. The remaining 95% comprise of desert land. On one hand, the claim for land is enormous. On the other hand, the available land surrounding cities are exactly the fertile agricultural land from where the country feeds part of its growing population. The transformation of agricultural land into urban use is currently a military question that halts urban expansion towards their surrounding natural environment. The outcome in terms of urban growth is twofold: high-density developments and informal roof top constructions and informal land subdivision on agricultural land. In some cases informal urbanization is accountable to nearly 90% of urban growth. Some neighborhoods of Cairo and Giza reach densities of more than 3,000 inhab/ha. Poverty, environmental degradation, inadequate infrastructure and overcrowding are common features in the informal settlements. The problem is worsened by the weak capacity of local governments that do not have the sufficient means, resources, autonomy and adequate policy, planning and management instruments to cope with these problems adequately.

The government pursues a spatial decentralization program to ease the congestion, concentration of jobs and economic activity and the adverse effects of the compactness of

Cairo/Giza. New towns built in the desert linked to industrial developments, job creation programs and state-supported housing programs did not manage to reverse or decrease the process of compactness of Cairo and Giza.

The first part of the chapter analyses the problems and opportunities provided by compact urban environments in Cairo and Giza. It reveals key indicators and looks at various dimensions such as urban vitality, social interaction, and local economic development transportation, pollution and traffic congestion's. It analyses the current capacities of local governments to deal with the magnitude of the problems, the current tools in use and the results thereafter. In view of the peculiar Egyptian context, the chapter elaborates on the debate on urban sprawl, compact city concepts and the idea of sustainable cities.

The second part of the chapter focuses on Brazilian cities. Currently, more than 75% of the Brazilian population already lives in urban areas spread throughout more than 5300 municipalities. Local governments in Brazil enjoys a significant degree of autonomy which allows them to pursue their own policies and development approaches relying on their own resources and tax base.

This part of the chapter reviews the experience of Brazilian cities with urban management and land use planning instruments that reveal urban intensification processes – called here as “guided densification” - that lead to more compact urban environments. This is done through the transfer of development rights to/and from parcels situated in the existing built-up area via shifts in land use zoning and floor area ratio all based on the principles of enablement and public-private negotiations. At times the transfer of development rights – TDR are used to preserve and reuse buildings with heritage importance. It is also used as a mechanism to generate public revenues that are linked to infrastructure improvement programs in poorer areas and social housing programs addressed to low income families like in it has been done in Curitiba, São Paulo and Porto Alegre. Thus, instruments to reach compactness of cities become mechanisms for social justice. This approach is becoming increasingly popular as a revenue regeneration instrument and re-distributive tool since they produce a financial surplus to invest in needed areas of the city.

The chapter demonstrates how ‘guided densification’ maximises the available infrastructure and public services and optimises the use of the available built-up spaces while enhancing housing opportunities and local economic development. The experience shows that these measures are geared to urban revitalisation and to tackle social exclusion. Furthermore, it recaptures some of the principles of the compact city that redresses the issue of sustainable urban development and the role of the inner cities.

“Guided densification” is being systematically pursued and that raises the question whether a compact city - with its diversity, mixed land uses and high density - will be capable to reverse the trend of peripheral development and horizontal city expansion towards the green fields. Furthermore, several local governments are rediscovering housing in the city center as a way to increase population and investments in the city core. Altogether, it helps to combat the process of decline found in downtown areas.

Nevertheless, the environmental impacts found in densely occupied urban environments - air pollution, noise, traffic congestion that is so apparent in Cairo/Giza - need to be carefully measured in order to respond whether a sustainable city will emerge or not as a result of this approach.

Major Brazilian cities are pursuing a more entrepreneurial approach and the experiences with TDR may provide municipalities with the necessary skills to deal with the private sector in a more collaborative manner. Despite the trend towards ‘enabling the market to work’ and the increasing private sector participation in urban revitalization programs, the experiences show that the leading role of the public sector is still a sine-qua-non condition for success.

The concluding part of the chapter links the problems and opportunities of compact urban environments as found in Egypt with the potentials and requirements of urban management tools and urban policies pursued by enabled local governments in Brazil. It argues in favor of proactive local governments and compact urban environments as a way to achieve sustainable city forms.

## Summary of Experience

Ir. Claudio Acioly Jr. (1957)

Mr. Acioly is an architect and urban planner – holding the Brazilian and Dutch nationalities - with over 17 years of experience with planning, design, management, implementation and evaluation of housing and urban development projects.

As a development planning and management expert he has carried out a variety of professional assignments for governments, bilateral and multilateral organizations providing technical assistance, training and research services.

He is the author of three books focusing on neighborhood upgrading and density and urban management, with long-term experience in Brazil, The Netherlands, Egypt and Guinea-Bissau and a variety of short-term assignments in Bolivia, Moldova, Albania, Mozambique, Angola, Kenya and Portugal.

Mr. Acioly has an extensive experience as a practitioner and docent dealing with various sub-fields of housing and urban development. He built up his professional career through direct involvement with projects, urban policy making and implementation working from within the local government in Brasilia, Brazil (1983-1987) and Guinea-Bissau (1989-1992).

In Brasilia, capital of Brazil, he worked in a number of different projects, formulated housing policy documents and occupied project management positions within housing programs and informal settlement upgrading projects.

His experience in The Netherlands helped him to broaden his views and experience with social housing and urban renewal programs and computer-supported research projects in Amsterdam and Utrecht.

He worked for several years in the Department of Housing and Urban Renewal of the Faculty of Architecture of the Delft University of Technology where he earned his Master Degree in 1992.

He joined the Rotterdam-based Institute for Housing and Urban Development Studies-IHS in 1993 from where he carried out several short-term and long-term assignments for several governmental, bilateral and multilateral organizations.

In Rotterdam he conducted several short-courses of 5 and 3 months, coordinated specialized modules on housing and urban information systems, lectured on a variety of subjects related to housing, urban planning, urban management and community-based action planning and provided thesis guidance to MSC students and participants of the regular courses.

His latest work for IHS focused on technical assistance, capacity building and on-the-job training in the fields of informal settlement upgrading and housing programs, urban revitalization projects, community-based action planning and urban environmental management strategies.

Mr. Acioly was a key player in the planning, management and implementation of the neighborhood upgrading program in Bissau, Guinea-Bissau (1989-1992) where he was entirely responsible for project design, policy making, housing development strategies and training of municipal staff.

He has also played a vital role in the housing sector reform program of Moldova providing technical advisory services to both the Ministries of Housing Land and Construction, the UNDP and the World Bank (1995-1997).

He worked as a senior advisor to the Urban Planning Institute of the Municipality of Rio de Janeiro (IPP) and trained nearly 80 professionals, urban managers, architects, planners and technical cadre of the municipality who were involved in urban renewal and urban revitalization projects.

He was responsible for the establishment of the Urban Training Institute of Egypt - UTI under the framework of an institutional development project with the Ministry of Housing Public Utilities and New Urban Communities of Egypt financed by the Dutch Government (1997-1999). He coordinated different research and training programs, provided assistance and on-the-job training to counterpart staff and took over several managerial tasks.

From 1999 onwards he has been working continuously in Albania. First with the Ministry of Public Works and till this date with an NGO called Coplan. He provides assistance in project activities in support to local governments and housing reform programs.