

Port Cities and Urban Waterfront: Transformations and Opportunities

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ABSTRACT

In the wide and complex panorama of urban transformation, waterfront revitalisation is one of the most interesting phenomena of urban renewal of the last decades, bringing 'cities on water' around the world to a new leadership.

After years of oblivion, the presence of the natural element –water– have shown to be of great appeal as an attractive pole for the quality of every day's life.

In particular, the visual contact with water together with pedestrian paths along the waterfronts and the implementation of waterborne transports, where possible, are giving an added value to these areas, becoming even more interesting in terms of Real Estate.

Now spread out and developed at a global dimensions, involving both, big cities but also medium and small-scale cities at all latitudes and in all continents, waterfront regeneration is in many cases the starting point for the regeneration of the city itself and of its relocation in the international context.

Under this point of view, marine, port and fluvial cities can be considered laboratories for the process of urban renewal in terms of residential, transports, public spaces and quality of the environment, in view of both, the broad range of cases and the quality of the results.

In light of its 20-year long activity in terms of monitoring and studying best practices in the field of waterfront revitalisation, the Centre Cities on Water carried-out an international overview, developing a comparative analysis of the key element for the success of these operation.

To this regards, a selection of case-studies has been identified at international level, according to the main 'ingredients' for a sustainable cohabitation between ports and cities and for a lasting success in waterfront regeneration processes.

Water quality, public and free access and to water, public spaces, gradual and flexible development and shared participation in the entire process as well as a mix of functions and uses and the collaboration between public and private entities are some of the key aspects that needs to be taken into account in new interventions.

These elements, summarised in the 10 Principles for a Sustainable Development of Urban Waterfront Areas, elaborated years ago by the Centre Cities on Water, together with the German company Wasserstadt (Berlin), can be the hinge for a wide and shared transformation process as well as the key for a positive impact at urban and territorial scale.

In recent years, cities internationally have undergone radical transformations – both physically and conceptually – in the way the territory is inhabited and experienced. The changes have involved ways and means to circulate through the urban fabric and the system of relationships; the concept of border has progressively lost meaning, the relationships between public and private spaces have changed, traditional meeting places have become undefined spaces, and the great containers have become spaces for new socialization. The city of the XXIst century, complex and stratified, transforms shapes, structures and uses, taking on new configurations that tend to be open but often undefined, and offering new images as a response to the rise of social and cultural phenomena that are rapidly modifying the economic processes, the spatial configuration, the utilization of places.

It may be understood as a group of "fragments", of systems of relationships, of forms of exploitation and a diversification of elements, combined in recurrent or original ways, where the past and the contemporary coexist, and where ancient culture blends with new forms of fruition; where the evolution of the urban fabric takes place by integration, substitution and connection, often on abandoned lots and urban voids. That city planning needs to conceive of "new" places and spaces in the territory that can interpret historic values and multiple identities in contemporary terms appears evident.

The transformations have also concerned the relationship between the city and the port, generating one of the most widespread contemporary urban phenomena, *waterfront redevelopment*, which has led to many extremely interesting and successful cases. Here,

the themes of architecture and urban design experiment with innovative ways of interpreting space, but move in tandem with methods of economic and social development, protecting resources and the cultural heritage.

Magnets for resources and fluxes, capable of exploiting opportunities to generate new economies and dynamics of regional development, the waterfronts interact with the contemporary landscape in innovative ways.

They can in fact describe the evolution of cities and regions, help understand the most recent transformations and stimulate the creation of future scenarios. These are places in constant evolution, where resources and opportunities can stimulate new representations of the collective imagination to become design, generating new urban forms, relationships, new landscapes and symbols within renewed market dynamics and social needs that respect existing conditions and the local identity.

If on the one hand the city-port is the expression of a change – a change that in practical terms translates into methods and tools of city planning, architecture, innovation and modern technologies – on the other it is a place where memory is preserved and the historical legacy is protected.

This is the result of a long process of selective sedimentation that has produced original syntheses through the contamination with existing conditions.

Therefore in the changing contemporary city, the interface between land and water may be identified as an area of specialized transition, independent and in constant evolution. A new urban centrality characterized by the persistence of consolidated situations and new balances to define, by interaction and conflict: relationships between various actors, multiple levels of skill and disciplinary fields, constraints that make an integrated approach difficult, a plurality of interpretations and representations, specific and contrasting interests.

The richness and potential of the waterfront

If the waterfront appears as a complex and problematic reality, its wealth of resources and potential is equally clear.

A space relating to the historic city centre, a scenographic space with particular visibility, a space for interaction between two different systems – land and water – the urban waterfront has always been especially attractive, not only in real estate terms, but also from a socio-cultural and landscape point of view.

From a place of intense traffic and economic development, to a formerly blighted and inaccessible urban area that later became one of the most valuable in the city, often at the centre of new

urbanization projects, over time the urban-port context has progressively focused attention on its historic and cultural identity, on the natural environment and the landscape, and now represents an important opportunity for many international-level cities to delineate, promote and implement their development at the local level, and further.

There are many experiences in which the waterfront was chosen to serve as a leading value in the perspective of urban and regional development. Most of the more recent regeneration projects have primarily meant that the collectivity has been able to “reclaim” the areas facing the water.

The urban history of the past decades, both in Europe and in the international context, has turned the attention of scholars, operators and administrators to the concerns of this “part” of the city, the waterfront, sandwiched between the urban fabric and the water (be it river, sea or lake), becoming a central theme of planning and a paradigmatic element in policies for the transformation and regeneration of urban fabrics.

The 10 Principles for the Sustainable Development of Urban Waterfronts

The twenty-year research and monitoring project on the theme of *waterfront redevelopment* conducted by the Center for Cities on Water in Venice, made it possible to construct a picture of the state of the art at the international level, and to delineate an initial balance sheet that, based on a variety of disciplinary contributions from different points of view, could highlight the strongest elements in this process of transformation.

This picture became a sort of general guideline that can be referred to in case of new interventions in this field: the *10 Principles for a Sustainable Development of Urban Waterfront Areas*. These principles, previously developed by Cities on Water in collaboration by Wasserstadt GmbH, Berlin, in the course of international seminars, were approved in the context of the initiatives for the Global Conference on the Urban Future (URBAN 21) held in Berlin in July 2000 and in the course of the EXPO 2000 World Exhibition. Recently revised, they have been adopted by several institutions at international level and they are still a valid reference for waterfront redevelopment.

1 - Secure the quality of water and the environment

The quality of water in the system of streams, rivers, canals, lakes, bays and the sea is a prerequisite for all waterfront developments. The municipalities are responsible for the sustainable recovery of derelict banks and contaminated water.

2 - Waterfronts are part of the existing urban fabric

New waterfronts should be conceived as an integral part of the existing city and contribute to its vitality.

Water is a part of the urban landscape and should be utilized for specific functions such as waterborne transport, entertainment and culture.

3 - The historic identity gives character

Collective heritage of water and city, of events, landmarks and nature should be utilised to give the waterfront redevelopment character and meaning. The preservation of the industrial past is an integral element of sustainable redevelopment.

4 - Mixed use is a priority

Waterfronts should celebrate water by offering a diversity of cultural, commercial and housing uses. Those that require access to water should have priority.

Housing neighborhoods should be mixed both functionally and socially.

5 - Public access is a prerequisite

Waterfronts should be both physically and visually accessible for locals and tourists of all ages and income.

Public spaces should be constructed in high quality to allow intensive use.

6 - Planning in public private partnerships speeds the process

New waterfront developments should be planned in public private partnerships. Public authorities must guarantee the quality of the design, supply infrastructure and generate social equilibrium.

Private developers should be involved from the start to insure knowledge of the markets and to speed the development.

7 - Public participation is an element of sustainability

Cities should benefit from sustainable waterfront development not only in ecological and economical terms but also socially. The community should be informed and involved in discussions continuously from the start.

8 - Waterfronts are long term projects

Waterfronts need to be redeveloped step by step so the entire city can benefit from their potentials.

They are a challenge for more than one generation and need a variety of characters both in architecture, public space and art. Public administration must give impulses on a political level to ensure that the objectives are realized independently of economic cycles or short-term interests.

9 - Re-vitalization is an ongoing process

All master planning must be based on the detailed analysis of the principle functions and meanings the waterfront is concerned.

Plans should be flexible, adapt to change and incorporate all relevant disciplines. To encourage a system of sustainable growth, the management and operation of waterfronts during the day and at night must have equal priority to building them.

10 - Waterfronts profit from international networking

The re-development of waterfronts is a highly complex task that involves professionals of many disciplines. The exchange of knowledge in an international network between contacts involved in waterfronts on different levels offers both individual support and information about the most important projects completed or underway.

International experiences

To describe some of the most frequent innovative and conservative processes that take place in the interface between city and port, we identified a number of experiences that, based on the search for specific characteristics, elements of continuity and contemporary images, would allow us to present a synthetic interpretation of the phenomenon. The selection specifically identified cases in which the *waterfront redevelopment* projects have become particularly meaningful, even serving as authentic "models" to refer to in successive operations, obviously adapted to the conditions of the context.

In the process of enhancing waterfront areas, ideas and suggestions are often borrowed from the most famous and successful experiences; however not always is it possible to export these "models", except perhaps single components or aspects of them.

The quality of water and the landscape in residential contexts and public spaces

The city of **Berlin** traditionally displays a strong relationship with the element of "water", which becomes an integral part of the urban fabric which boasts an extended system of river banks and canals. The Wasserstadt GbM, a public-private company instituted between the late Eighties and the early Nineties with the purpose of managing the development of the city overlooking the water, has sought to make urban areas attractive with a project for the creation of public spaces, pedestrian trails, urban parks, green spaces and residential complexes, particularly oriented towards the

water and the landscape, to preserve the local resources and identity. The regeneration of the waterfront began with the construction of two urban development projects involving the city centers overlooking the banks of the Haven and the Spree, on Lake Spandau and the Bay of Rummelsburg, two areas that include the former industrial, port and military areas, on a surface of 336 hectares.

The architecture on the water was built to fit into this extraordinary landscape, where it is possible to live in exclusive "floating houses" and in an extremely peaceful context. The quality of the dialogue between the territory and the project and the "water element" has made the riverfront spaces more attractive and guaranteed sustainable development, restoring the balance between nature and the built environment. The different ways of using water have become a priority and an integral part of the design proposals, a fundamental resource in the promotion of projects in this region.

The port in the city

Rotterdam is one of the best examples of how the renovation of port functions and structures can go hand in hand with the revitalization of the city centre, the regeneration of the waterfront areas can redefine the relationship between the urban fabric and the waterfront, the establishment of new functions and service can guarantee public use of the areas. The excellent exploitation of the opportunities offered by the location on the estuary of the Rhine River made the city one of the major ports of call in the world. In this experience it is hard to distinguish the port from the city and the search for an agreement between the needs inherent to economic growth and technological development, and those inherent to urban spaces and environmental issues has brought excellent results, thanks to an excellent capacity of "institutional adaptation" and "innovative" planning based on policy coordination, on extended participation in the decision-making processes, on the cooperation between different agencies and subjects.

The project drafted by the Municipal Port Authority for the Port 2010 established the priorities for development, setting guidelines and making concrete proposals based on a provisional framework. In the Kop van Zuid area the project financed by the Dutch government will connect the urban areas along the Maas River and the two embankments, reinforce the centrality of the river in relation to the urban fabric, stimulate economic development towards the river and build new districts. The revitalization of a 202-hectare area with offices, residential units, shopping and leisure areas, educational and training spaces has transformed a particularly blighted area into a district that in a few short years has

attracted businesses, residents and tourists, thanks to integrated planning and the coordination between different work teams. In the project for the Waterstad – which will include the construction of a shopping and leisure center, a theatre, exhibition spaces, hospitality structures, offices and residential units – private capital and attention towards the preservation of the maritime landscape play a fundamental role. The Stadhavens, which occupy a particularly large area (1,500 hectares) on the banks of the Nieuwe Mass River, will be the venue in coming years of a project to establish new residential districts. The regeneration program for the port area has become an integrated urban-scale project, strategic for the city and its inhabitants, and developed with special attention to public interest and social objectives.

Reclaiming the port heritage and identity

Liverpool has been involved for many years in a process of urban revitalization led by public and private partners, which has reversed the downward trend and led to the renaissance of the city. An exemplary demonstration of sustainable development and conservation of the historic legacy, in 2004 the city was listed as a UNESCO World Heritage site thanks to the 135 km of coastline along the Mersey River, which boast a natural and architectural legacy of international interest.

Significant public and private investments and joint ventures between the two sectors have been activated – thanks to the designation of Liverpool as the European Capital of Culture 2008 – to manage a complex yet flexible system, to reinforce the cruise ship industry, to build a sports complex and a shopping center, to create new natural reserves and improve public access with the objective creating a synergy between a multiplicity of functions and to reinforce local identity.

This is a very ambitious development program with large-scale investments that includes spatial and functional projects to be completed by 2020 for the regeneration and public utilization of the waterfront, to preserve the maritime-port legacy.

Specifically, the projects include the construction of a new cruise ship terminal, the transformation of the International Garden Festival (20 hectares) into a new center of attraction, a city-planning project with sufficient financial revenue for the port legacy of the Central Docks Site, adaptive reuse for the three historic warehouses in the Stanley Dock Complex, the River of Light program which includes a series of projects along the banks of the Mersey to connect the two shores.

The investments have produced excellent results, leading to a new image for the city.

The success of a functional blend

The project for the urban development of **Amsterdam** in the area of Oosterdo – between the historic city centre, the IJ river and the central train station – intends to create a valid alternative to the city centre where available spaces are increasingly rare, by revitalizing the blighted area and building a new district with public spaces and services, with a superior level of quality from an architectural, technological and environmental point of view. The project, selected through a competition process, was approved in 2000, and entrusted to the mixed company Mab formed by the Bouwfonds Property Finance, the City of Amsterdam and several private companies. Work began in 2004 on the acquired area, a surface of 5 hectares, and will lead to the construction, in successive phases, of 225 thousand square meters of space divided as follows: a hotel and convention center (25,000 square meters), diversified residential buildings (336 units), commercial buildings (15,500 square meters), offices with extreme flexibility (80,000 square meters), recreational and cultural spaces including a conservatory and a new public library (49,000 square meters), a dock for leisure yachting and parking areas. The project, which has attracted a large number of institutional and private investors, local and international, should garner positive results given the expectations deriving from the situation in the real estate market, which suffers from a lack of supply of new urban centralities and high-standard public services.

Public spaces and city squares on the water

Bilbao, a river port that extends uninterruptedly for 20 km from the city to the sea, grew over time with the port, without creating interferences in urban activities. When the port moved from the inside of the river towards the outside and several industrial areas shut down, it became possible to revitalize the riverfront and several other areas near the mouth of the Nervion, and restore an extraordinary scenario of great public and social value to residents and tourists. The transformation of the riverbanks into qualified urban spaces, on which to establish the most representative functions of the future metropolitan area, is the primary shared objective of the program to revitalize the economic and productive sector and to increase the accessibility and utilization of port spaces. With the coordination of the Ministry of Public Works, Transportation and the Environment, in 1992 came the foundation of Bilbao Ria 2000, a private corporation with the equal participation of the Spanish and Basque administrations, and constituted by other agencies interested in the program, whose responsibility is to administer and decide specific uses and zoning classifications for the

lots of land, to address the sale, management and future maintenance of areas and structures. The schedule for the sale of the strategic areas, of Abandoibarra and the Canal de Deusto and Zorroza, put the focus on short and long term projects which, on the left bank, were aimed at the social revitalization of the urban fabric, and on the right bank were characterized by a spectacular city planning and architectural operation with considerable impact.

The short term projects consisted in the integration of the urbanized area of Abandoibarra with the urban fabric of the Ensanche and the rest of the city, in the construction of a pedestrian walkway along the estuary of the river and a number of structures (the Maritime Museum, the Convention and Music Center, Parco Ribera, Parco Ametzola, a residential and shopping complex, a financial center, etc.); while the long term operations included the opening of the Canal de Deusto, the integration of the Zorroza peninsula, a prevalently industrial port area with the trade fair grounds and the connection of the island of Zorrozaurre to the two river banks with the construction of 7 bridges and new residential and office districts.

Consultation and participation for the future of the city-port

In **Marseilles** consultation and dialogue, on both the political and technical level, were accompanied by moments of reflection and constructive debate; the urban regeneration of the port area took place with the involvement of the community in diversified actions and a process that questioned and carefully assessed possible scenarios of strategic development, to define and implement a common project to bridge the gap between the city and the sea. The port of Marseilles is characterized by the fragmentation of its spaces across a metropolitan reality in which the city and the port appear clearly divided because of a process of specialization of the productive and commercial spaces that excluded the city centre with its constant and disorderly growth. In the 1980's the idea emerged for a new urban centrality recomposed around the ancient port basins between the Joliette and the Estache, but the relationship between the city and the port, between urban architecture and port development, appeared rather complex. With the objective of justifying and supporting a strategy to reconvert the port waterfront and to build a technological hub complete with university, research laboratories and advanced tertiary activities, the city sustains the presence of abandoned port spaces and rundown warehouses to be renovated, in total contrast with the opinion of the Autonomous Port; in the debate between city and port the community of Marseilles remains attached to the idea of a port city where the port blends with the city center and the suburban area with indefinite limits. An anticipation of the Euromediterranée project was the

Schéma de Cohérence Marseille 2015, published in 1997, the Plan Directeur and the Marseille Port Global project, which the Autonomous Port began to work on the following year, at a time when the port and city seemed to have reached an agreement, established common strategies, shared issues and solutions. The Euroméditerranée project represents a great opportunity for regenerating and 'stitching together' a strategic bond between port space and public space along the waterfront, and for the ambition to create a "coexistence" between an active port and an inhabited city preserving its historic and cultural resources and its identity as a port. The planning process, divided into a series of public or private-based initiatives, concerned several different regional areas, each of which acquired a specific role within the overall vision: the new advanced tertiary hub at the Joliette, the office district and multi-modal hub at Saint-Charles Porte d'Aix, the cultural complex of Belle-de-Mai, the Cité de la Méditerranée with the museum and the training center, the hub dedicated to the sea, the new maritime station, the tourist and cultural structures, the businesses and offices, the green spaces and the public spaces.

Flexible and long-term projects for new scenarios on the waterfront

Genoa, a port city overlooking 33 km of coastline has long pursued the ambition of becoming a great international port, but has had to contend with several problems concerning the morphology of the land, the infrastructure system and a complex relationship with the inner urban fabric. This is the context surrounding the process of urban regeneration regarding the Dock and the Ancient Port in particular, whose purpose is to recreate the bond between the historic city centre of Genoa and the port. The concession of the port spaces in question (130 thousand square meters) has belonged since 1995 to the Società Porto Antico, whose shares are owned by the City in the measure of 51%, by the Chamber of Commerce in the measure of 39% and by the Port Authority in the measure of 10%: its objective is to return the areas to the city with the organization of cultural initiatives, the development of a convention industry, the construction of general-interest structures to create a center of tourist attraction.

In 1992 the Ancient Port was the venue for the celebrations in honor of Christopher Columbus and for an exhibition in the port area where many activities still take place: on that occasion the City Administration and the Port Authority collaborated to build several projects in the area between the Old Wharf and Ponte Spinola; a series of projects by architect Renzo Piano served to create the Piazza delle Feste, to restore the Cotton Warehouses which were transformed into a convention center, to build the largest aquarium

in Europe and the Bigo that supports the panoramic elevator. Other projects followed in the years after the event: the construction of a multipurpose complex, of a new venue for the Faculty of Economics and Trade in the Scio district, underground parking and public spaces that complete the seaside promenade in 2000.

With the concept of physically and functionally relating the historic city center to the water, during the G8 in 2001, more projects are brought to term: the tourist port, a movie theatre complex, the Museum of the Antarctic, the City of Children and the Biosphere. In 2004 Genoa became the European Capital of Culture, an event that brought new opportunities for the revitalization of the historic city centre near the port area (Via San Lorenzo, Via Garibaldi, etc.) and the construction of the Museum of the Sea and Navigation designed by architect Guillermo Vasquez Consuegra in the spaces of the Galata port warehouse. The renovation of the Ancient Port in coming years will include the construction on the Ponte Parodi – a port wharf located between the Darsena and the Aquarium where a grain silo had stood through 2002 – of an international center with high-impact architecture, cultural and recreational activities at the service of the city and a new cruise ship terminal with a total surface of 37,800 square meters. The structure, which will become a new "city square on the water" was designed by the firm Van Berkel & Bos for an international competition launched in 2001.

A possible long-term scenario for the future of the port and the city was recently hypothesized by Renzo Piano's *Affresco*, divided into three different phases of transformation over a period of 18 years for the 200-hectare area which the Port Masterplan attributes to the city. Uninterrupted development along 8 km of coastline, the construction of two artificial islands connected to the mainland by underground tunnels to host the new airport and shipyards, the renovation of the promenade along the urban waterfront from the Darsena to Boccadasse, the creation of three new urban parks.

Great events and cultural exchanges

Within the context of the great transformations that have taken place in recent decades, special attention must be reserved for the great temporary events underlying some of the most interesting cases of *waterfront redevelopment*. Both in Europe and in the international context, these great events and their long-term effects have turned several cities on water into the unquestionable protagonists of the most recent urban affairs.

Access to considerable and exceptional funding and resources, clear-cut construction schedules and extraordinary opportunities made it possible to transform temporary events into long-lasting and usable acquisitions.

The river cities of Valencia and Zaragoza are among the latest cities that have gambled on water as a resource and on regional marketing for their revitalization. To mix tourism and culture for local development and to project a new urban image at an international level by organizing a great event, is a widespread formula which has now been consolidated by many successful experiences.

Valencia exploited this great opportunity during the XXXII America's Cup, which resulted in a real metamorphosis of its riverbanks, regenerating the urban fabric with a number of specific projects that respected existing conditions and reconnected the historic city centre to the port and to the sea.

A series of projects were initiated on the waterfront of the city, within the context of a unitary plan, which made it possible to renovate and extend the port area, to restore blighted neighborhoods and regenerate several abandoned urban areas, creating points of interest and elements of attraction.

The design of diversified functional spaces, the reorganization of traffic and mobility, the enhancement of the Darsena Interna have generated positive effects for local development.

There has been an increase in nautical, cultural, commercial activities and new public spaces, urban parks and green areas, waterfront promenades and pedestrian-bicycle trails have been created.

The interventions in the Balcon del Mar project have revitalized the real-estate market in the areas near the water, improved the transportation infrastructure with interventions on the airport, on the High-Speed Railway and on access roads to the port, on public transportation and on urban connection axes.

The most recent experience on the waterfront, in the category of great international exhibitions, was in **Zaragoza**, which in recent months organized Expo Zaragoza 2008, dedicated to the water and to sustainable development.

The expo became an opportunity to initiate a process of urban, landscape, social and cultural transformation, along 12 km of riverbanks; and to restore continuity with the urban fabric relying on natural materials and technological innovation.

Destined in the near future to become a scientific-cultural park and a hub of strategic centrality for sustainable development, the area will restore continuity between the two banks of the Ebro River and the city centre, with the addition of a new urban unit located near the intermodal station.

The event benefited from significant public investments (estimated in 2,500 million Euro), divided between the Spanish government (70%), the Aragon government (15%) and the City Administration of Zaragoza (15%) – managed by EXPOAGUA Zaragoza 2008 SA, a

company responsible for the organization and promotion of the event.

The strategies for economic and urban development aimed at the diversification of industry and sustainable economic growth, an expansion in quality and quantity (approximately 200 works) and public structures, a new status for the city on the national and international level.

The entire process was characterized by the creation of consensus, with the active participation of citizens, and by the public-private partnership with actors from various sectors. In addition, the event was preceded by many actions concerning infrastructure and mobility: the extension of the Airport in Zaragoza (36 million Euro), the new Estación Intermodal de Delicias and the improvement of the road system (80 million Euro) along with the construction of a new city square (16 million Euro), the construction of tunnels between El Portillo and the AVE district (29,7 million Euro), the Estación Central de Autobuses (15 million Euro), the section of railroad between the Iriarte Reinoso road and the Estación Intermodal (20 million Euro), the recently built bridges, the investments in public transportation and in the Plan de Movilidad Sostenible, etc.

When the event ended, many buildings and facilities were reconverted, the city had doubled its green spaces; the pedestrian and bicycle trails in all the districts of the city and the process of refunctionalization should be completed by the year 2011. Important commercial projects, in terms of size or impact, are now "crystallizing" in the wake of the positive effects produced by the Expo. They include the *Terminal Marítima di Zaragoza (TMZ)*, a node and "access gate" from the city to the sea, directly connected by rail to the port of Barcelona.

The city of **Shanghai**, which has always been tied to the water and the port, is preparing to host a great event, Expo 2010. Recent city plans seek to transform the city into a great financial, commercial and naval centre, an international-level economic node strictly related to the development of the Yangtze River delta and river banks.

There is a project currently under completion for the construction of a new port in the suburban area, that could hold 25 million containers and rely on a 13 square-kilometer logistical area; the shipyard industry, along with a number of warehouses and other industrial activities, will be moved to an island on the Yangtze River. A 5,4 square-km artificial lake will be built for the benefit of residents and tourists, with a new landscape on the water, adjacent to the north port with its 15 kilometers of waterfront and 30 new slips.

The opening of the Pudong area – along with eastern banks of the Huangpu river – constitutes a fundamental element for the future of

the city and an important development opportunity for the regeneration of the urban space overlooking the waterfront and for the preservation of many historic buildings, for the construction of an ecological system along the shores, improved fruition of the public space and the quality of life.

Conclusions

The transformations produced by the new waterfront projects refer to the territory as a system that must be built but not planned, to a strategy that responds to renewed market dynamics and to urban and social needs and leads to interventions at various scales with a certain sensibility and a practical approach, and a certain conceptual freedom based on site observation and an urban process.

The urban project to define the interface between land and water often intends to create relationships rather than defined forms, to use gradual flexible strategies, often articulated as a succession of additions and specific limited-range actions.

The “fragmentation” therefore becomes an opportunity to trigger virtuous circles and present a program of interventions that is sustainable at several different levels (formal, cultural, environmental, etc.), making it possible to present a plan for the landscape that works at different speeds, seeking through synthesis to achieve a new logic and an overall vision, interpreting the identity of a place and of its existing conditions.

The regeneration of waterfronts represents an extraordinary opportunity for *cohesion* and for *stitching* the territory together, where water – a collective legacy – can play a central role and become the engine for sustainable development, recreating the relationship between spaces, uses and visions, building a dialogue between spatial organization, port and city functions, and their economic, environmental and social aspects.