

GUIDE OF GOOD <u>PRAC</u>TICES







GOOD PRACTICES

CREATED WITH THE SUPPORT OF :











SUMMARY

Preamble

SPATIAL ORGANISATION

A. WHAT TO DO ABOUT THE LACK OF AVAILABLE SPACE?

A.1. Redevelop the port within its existing boundaries	р.	13
A.2. Share the use of the water and waterfront between urban and port functions	р.	15
A.3. Mix urban and port functions	р.	18
A.4. Move the city to the water	р.	21
A.5. Remain flexible, and avoid freezing land uses	р.	24

B. WHAT TO DO WITH TRANSITIONAL SPACES BETWEEN THE PORT AND THE CITY?

B.1. Highlight the transitional elements between city and port	p. 28	8
B.2. Showcase port city landmarks and scenery	p. 3	1
B.3. Conceive a type of spatial organisation which allows or preserves scenic views of the port and the water	р. З:	3
B.4. Create urban / port / green buffer areas	р. З	7

C. HOW TO DEAL WITH THE ISSUES OF CONGESTION, TRANSPORTATION AND ACCESSIBILITY?

C.1. Ensure consistency between urban mobility plans and port connections	р.	39
C.2. Turn the demand for new connections into an opportunity for creating new spaces	р.	44
C.3. Rely on - and complement - the existing traffic grid	p.	45
C.4. Use the waterway as a logistics tool for the urban distribution of goods	p.	48
C.5. Promote environmentally friendly transport	p.	50



D. HOW TO ENLIVEN AND VITALISE THE WATERFRONT?

D.1. Promote the temporary use of available structures and spaces	p. 53
D.2. Put an emphasis on architectural /symbolic elements	p. 56
D.3. Showcase exteriors, features and spaces	p. 57
D.4. Carefully choose the location of passenger terminals and promote links with urban centres	p. 61
D.5. Create walking circuits and promenades	p. 62

E. HOW TO SAFEGUARD ARCHITECTURAL AND PORT IDENTITY?

E.1. Identify all elements having heritage / historical / scenic value	р.	65
E.2. Stress the symbolic value of port elements, and make them		
part of new projects	р.	68
E.3. Safeguard and reuse the existing port / architectural patrimony	р.	69

ENVIRONMENTAL CHALLENGES

F. WHAT TO DO ABOUT THE RISK OF MARINE SUBMERSION?

F.1. Combine infrastructure and natural functions	р.	75
F.2. Make the possibility of marine submersion an integral part of building design	р.	77

G. HOW TO DEAL WITH THE PROBLEM OF INDUSTRIAL/PORT NUISANCES?

G.1. Compile an inventory of the different types of environmental impact	p. 80
G.2. Formalise community acceptance of certain nuisances	p. 82
G.3. Undertake a cooperative approach with all industrial stakeholders	p. 83
G.4. Seek innovative technological solutions in order to mitigate sound pollution	p. 85
G.5. Reconcile port functions and environmental concerns, with a view to improving air quality	p. 86





H. HOW TO OPTIMISE ENERGY USE?

H.1. Use the potential of the presence of water to meet energy needs	р.	89
H.2. Apply bioclimatic architectural principles	р.	91
H.3. Pool resources on the basis of industrial ecology principles	р.	93

I. HOW TO CONSERVE BIODIVERSITY?

I.1. Implement biodiversity conservation plans in port areas	p. 96
I.2. Modify infrastructure or build new facilities to protect ecosystems from	
the negative effects of port / industrial activities	p. 97

ECONOMIC DEVELOPMENT STRATEGIES

J. HOW TO ATTRACT RESIDENTS, VISITORS AND BUSINESSES?

J.1. Establish maritime clusters to maximise city / port competitiveness	р.	103
J.2. Establish cultural clusters	р.	105
J.3. Turn leisure sailing and yachting into a financial and tourism asset for the city and the port	р.	107
J.4. Adapt vocational training programmes to include the specific skills required by city/port territories	р.	110

K. HOW TO FINANCE DEVELOPMENT PROJECTS AND MAKE THEM PROFITABLE?

K.1. Finance development projects through cross-financing between city and port	р.	112
K.2. Turn the holding of events into a source of funds to invest		
in development projects	р.	114



GOVERNANCE AND PROJECT MANAGEMENT

L. WHAT IS THE ROLE OF STAKEHOLDERS, PORT AND LOCAL AUTHORITIES?

L.1. Formalise framework agreements regarding urban projects at the interface with the port	р.	117
L.2. Turn the port into an active player in city life	р.	118
L.3. Make port activities known to the citizens	р.	120

M. HOW TO STEER CITY/PORT PROJECTS?

M.1. Facilitate dialogue between the city and the port through joint communication structures	р.	122
M.2. Let the community become involved in designing new projects	p.	123
M.3. Adopt a long-term approach to projects and achieve citizen support through proactive communication strategies	р.	126

INDEX OF THE PORT CITIES





Preamble

A little over thirty years ago, port wastelands began to appear mainly as a result of the relocation of port activities due to the shift to container traffic. These port wastelands were considered opportunities for the city, and the trend was viewed as a type of re-conquest. Today, more than a quarter century after the creation of the AIVP in 1988, there is still much debate about the future of port wastelands. And, although in many port cities new port facilities are still being developed outside of the city, we have also witnessed the arrival of a new vocabulary and new strategies: no longer simply the urban reconquest of abandoned port spaces, but also the survival of active ports in the city; no longer a sharp dividing line, but a balanced mix and an integration of functions. Through AIVP's worldwide network and our frequent exchange of experiences, we have also witnessed – these last few years - the return of the port to the city.

The recently held 14th World Conference Cities and Ports, held in Durban, South Africa has again strongly confirmed that in port cities, faced with global and local challenges, the time has come for partnerships and for shared use of resources and territories. Modern technological developments make it possible to conceive operational solutions that promote a positive industrial ecology in the city/port territories, as well as improved mobility and flows through the interfaces, optimisation of renewable energies, and real integration of port dynamics into the life of the city and the community. The smart port city, which takes into account the concepts of "connected objects" and "big data" in the design of projects and sustainable development strategies, is now a reality in several port cities.

Therefore, the purpose of this Guide is to provide decision makers and stakeholders a decision support tool for addressing the problems they will face when putting into practice the ideal of "Planning the city with the port". The guidelines contained herein, and the examples provided, do not claim to be complete or exhaustive. They are meant as sources of inspiration to address four major topics: spatial organisation; economic development strategies; environmental challenges, project management and governance. The guidelines are the result of the intense exchange of experiences that has taken place during the international meetings organised by AIVP these last quarter century, and of the AIVP's constant monitoring of the implementation of development projects at the city/port interface.

SUMMARY



SPATIAL ORGANISATION

City/port interfaces are complex territories where the inherent competition and complementarity between city and port play out in the face of limited spatial resources. The search for the right balance calls for solutions that guarantee a good spatial and functional mix capable of transforming and rejuvenating not only the city/port interface but also the entire territory of the port city.

- A. WHAT TO DO ABOUT THE LACK OF AVAILABLE SPACE?
- **B.** WHAT TO DO WITH TRANSITIONAL SPACES BETWEEN THE PORT AND THE CITY?
- **C.** HOW TO DEAL WITH THE ISSUES OF CONGESTION, TRANSPORTATION AND ACCESSIBILITY?
- **D.** HOW TO ENLIVEN AND VITALISE THE WATERFRONT?
- E. HOW TO SAFEGUARD ARCHITECTURAL AND PORT IDENTITY?

A. WHAT TO DO ABOUT THE LACK OF AVAILABLE SPACE?

- A.1. REDEVELOP THE PORT WITHIN ITS EXISTING BOUNDARIES
- A.2. SHARE THE USE OF THE WATER AND WATERFRONT BETWEEN URBAN AND PORT FUNCTIONS
- A.3. MIX URBAN AND PORT FUNCTIONS
- A.4. MOVE THE CITY TO THE WATER
- A.5. REMAIN FLEXIBLE, AND AVOID FREEZING LAND USES



A.1. REDEVELOP THE PORT WITHIN ITS EXISTING BOUNDARIES

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Worldwide, many ports are faced with a lack of available space as a result of different material reasons or environmental regulations. One solution that has sometimes been implemented is the optimisation of existing port usage by reassigning physical spaces to new port functions. The redevelopment of the port on itself can go even further, by combining optimisation of uses, greater efficiency, and less environmental impact.

• LONG BEACH (UNITED STATES)

Work on the Middle Harbor Redevelopment Project started in the Spring of 2011, and should be completed in 2019. The project aims to merge several old port terminals into one. Apart from improved efficiency, the project will expand capacity to 3.3 million TEU. The cost of the project is estimated at US\$ 744 million. The project is also supposed to greatly reduce harmful emissions and will create 14,000 permanent jobs in southern California.



WHAT TO DO ABOUT THE LACK OF AVAILABLE SPACE?

3D model of the final project – Copyright: Port of Long Beach

Existing port, first stage of the project. The northern half of the container terminal (Dock E) will be completed first, while the current tenant, LBCT, continues to operate in Dock F – Copyright: Port of Long Beach





Phase 2016 Construction of the second platform Copyright: Port of Long Beach



Final phase of the project Copyright: Port of Long Beach



A.2. SHARE THE USE OF THE WATER AND WATERFRONT BETWEEN URBAN AND PORT FUNCTIONS

The city/port interface is characterised by the presence of water and dock basins. The waterfront can provide land solutions for both the port and the city. Shared use of the waterfront can be planned on the basis of a full survey of existing port infrastructure and urban amenities, their functions, and uses by the port and/or the city.

• MELBOURNE (AUSTRALIA)

In 2005, an exhaustive survey was made of the various uses made of the waterfront (port-related activities, leisure/recreational, sports, etc.) and the facilities involved. Based on this survey, the

different uses made of the waterfront were modelled in terms of time (i.e., at what time? by whom? which activities?), and in terms of space (where?, for what kind of land uses?). The model was used to design a new strategy for the use of dock basins, based on time sharing and space between sharing the different types of activities. This also led to the relocation of some of the activities.



WHAT TO DO ABOUT THE LACK OF AVAILABLE SPACE?



Space sharing - Melbourne - Copyright Parks Victoria

Copyright Parks Victoria

• PARIS (FRANCE)

As part of the redevelopment of Paris' Tolbiac industrial port in 2010 and the rehabilitation of its public spaces, a HQE (High Environmental Quality) concrete plant belonging to the CEMEX Group was inaugurated. The plant is located in Tolbiac, within an urban zone. More than half of the area was left untouched in order to create two promenades, the first behind the quays and the other along the quays, to ensure continuity with the recreational amenities located in the port of the Gare. Both banks of the Seine will remain accessible to the public outside of the plant's working hours, (i.e., after 5 PM, as well as on weekends and holidays).

Special attention was paid to the scenic and environmental integration of the facilities, in accordance with the "Sable in Seine 2" Charter, subscribed by CEMEX in 2008. The plant is built on pilotis, so as not to obstruct the view of the Seine. The concrete plant is also illuminated at night, adding to the visual beauty of the industrial facilities and docks, while ensuring safety.



Port of Tolbiac, Holcim Plant - Copyright: HAROPA-Ports de Paris / Magdeleine Bonnamour



Port of Tolbiac, Holcim Plant, shared quay Copyright: HAROPA-Ports de Paris / Magdeleine Bonnamour



Governance



Port of Tolbiac, Holcim Plant, shared quay... Copyright: HAROPA-Ports de Paris / Magdeleine Bonnamour



... and lighting , Port of Tolbiac, Holcim Plant Copyright: HAROPA-Ports de Paris / Magdeleine Bonnamour

Tolbiac is just one example of the principles of urban integration and shared usage adopted by the Ports of Paris at several of their sites. These principles have been adopted by Ports de Paris and their main business partners in the public works and civil engineering sector, which is a signatory to the "Sable in Seine" Charter.

A.3. MIX OF URBAN AND PORT FUNCTIONS

The mix can be either a horizontal mix that relies on a juxtaposition of functions, or a vertical mix that combines, within a single venue, both port and urban activities. This later solution, which is still not often seen, is particularly suited to passenger terminals. It also offers the added advantage of requiring less physical space.

In both cases, the mix of urban and port functions will be an added attraction for the site. It will reinforce the site's identity and its attractiveness, both to economic stakeholders, and to the general community.

• AMSTERDAM (NETHERLANDS)

Horizontal mix: inaugurated in March 2000, this passenger terminal designed by architect Larry Malcic combines - within a single sector - shops, a convention hall, a hotel, and a cultural space dedicated to music.



Copyright: AIVP



Copyright: AIVP



• MARSEILLES (FRANCE)

Vertical mix: "Terrasses du Port", which offers passenger reception facilities, а shopping centre, and scenic views port, of the was inaugurated in late May 2014. On the 23,000 m² ground floor, the entrance to the shopping mall coexists with various port functions (passenger boarding areas, vehicle storage, etc.).



Source: GPMM - Copyright: Hammerson

Underground, there are 3,000 parking places in 6 levels. A total area of 61,000 m² is occupied by 190 shops located mainly on Levels 1 and 2. In level 2, there is also a 260m exterior promenade overlooking the Marseilles roadstead and port activities. There are offices on the 3rd floor of the mall. A terrace of 1200 m² which can be rented for holding events completes the installations. Hammerson, which operates the shopping mall, has a long-term occupancy agreement with the Grand Port Maritime de Marseille (GPMM).



Source: GPMM - Copyright: Hammerson



Source: GPMM - Copyright: Hammerson

The port of Marseilles continues to become integrated with the city and to offer a number of urban functions, without sacrificing its own ground-level activities. It also generates revenue from renting spaces for ground-level activities.



Source: GPMM - Copyright: Hammerson



Outdoor promenade on Level 2 and views of the port and the bay Copyright: GPMM -Grand Port Maritime de Marseille



And a view of the city from the roof terrace - Copyright: GPMM -Grand Port Maritime de Marseille



A.4. MOVE THE CITY TO THE WATER

Examples of urban amenities on the water, such as floating restaurants, floating cinemas, housing boats, etc., are now permanent fixtures of many port cities. In many cases, these amenities are located on reconverted port sites now dedicated to urban functions, which nevertheless retain a definite maritime air. By increasing the number of anchorage points within the port and allowing them to be mobile again, they will help reconnect the city to its port and breathe new life into the waterfront. But this migration of urban functions onto the water is also an opportunity to preserve sometimes scarce or limited land space.

• ROTTERDAM (NETHERLANDS)

The "floating pavilion" is located between Katendrecht and Kop van Zuid. It consists of 3 connected semi-spheres anchored in the old port of this Dutch city. The pavilion is 12 metres high and is used as an exposition and reception area. The pavilion's light structure allows it to be moved. The pavilion will stay at its present location until 2015, and will then be moved to another of the city's dock basins.

The pavilion is also a symbol of the city of Rotterdam's determination to prepare for the challenges of climate change and rising sea levels.

In fact, the importance of the water and of innovation, including floating buildings, were at the heart of the invitation made by the City of Rotterdam in September 2013 to help determine the future of Rijnhaven's 21 hectares for the next 30 years.



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SUMMARY

• COPENHAGEN (DENMARK)

Construction of "Kalvebod Waves" – designed by JDS Architects – started in 2012. This sector of the waterfront will offer a broad range of public spaces, recreational areas, and pedestrian promenades. The design of "Kalvebod Waves" relies on the visual interplay between different horizontal levels, one of which extends out onto the bay itself. The project was inaugurated in August 2013.



Copyright: JDS Architects





Copyright: JDS-klar-photograph-by-Henning-Stuben



• VEJLE (DENMARK)

The Vejle Harbour development project will host a marina and the new head offices of *Kirk Kapital*, as well as *Harbour Island*, a man-made island on which twelve office and residential buildings are to be built. The project is aimed at promoting a dynamic relationship between the downtown area and the Vejle fjord.

The architectural design of the *Kirk Kapital* head office and its open spaces – to be located at the southern end of Harbour Island - is original and unique. There will be restaurants and cafés on the ground floor, while the rest of the building will be used for office space.





Visualisation of KIRK KAPITAL A/S Headquarters and Harbour Island, Vejle, Denmark, Copyright: Olafur Eliasson Architect

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A.5. REMAIN FLEXIBLE, AND AVOID FREEZING LAND USES

In the interface between city and port, temporary land use will often be a provisional solution designed to comply with zoning requirements related to safety, noise, dust, traffic, and other aspects of port activities. This way, projects can evolve over time, depending on future urban and port needs. These temporary uses can be seen as an intermediate stage of the project, and will typically involve:

- temporary, "light" urban equipping such as prefabricated / modular units that can be moved, etc.
- construction of evolution-capable buildings initially dedicated to a given use office space, for example – but easily adaptable to other functions such as housing, depending on future urban requirements and the evolution of port activities, legislative changes, etc.

AMSTERDAM (NETHERLANDS)

Dutch regulations impose zoning bylaws based - in part - on the noise level of port activities. This prevents residential units from being located close to such activities. In order to meet the high demand for housing units, Amsterdam has adopted a strategy of temporary occupation of abandoned port sites close to the active port. Student housing units have been created in transition areas such as Houthaven and NDSM Wharf, to help meet housing needs for this population segment, which typically only requires temporary accommodation.

The establishment of student housing units in containertype modules blends in nicely with the port identity, while maintaining their mobile and provisional nature, allowing the city of Amsterdam to recover the sites in future, for other uses.

The creation of a student housing unit in an old cruise ship is another example. Housing is provided for this transient population, while retaining the symbolic characteristics of the port.

Copyright: AIVP







Student Housing, NDSM Wharf - Copyright: AIVP

The principle of flexibility is at the heart of the design of certain other buildings. These evolutioncapable buildings are located close to port activities, and are being used for offices. The site will eventually become a mostly urban sector, and the units will then be adapted for residential use, though they may also be kept as offices, if the need for enhancing port activities becomes a share priority.



Flexible building under construction at Minerva Haven – Copyright: AIVP, 2006

• SEVILLE (SPAIN)

Seville has bet on complete flexibility for its new cruise terminal. Designed by Hombre de Piedra and Buró4, this terminal located in Las Delicias is based on reusing cargo containers. The building is capable of being reconfigured, depending on how passenger traffic evolves, but it could also be moved elsewhere. In architectural terms, the building was also designed to blend in with the nearby historical centre.



Copyright: Hombre de Piedra – Buró4



Copyright: Hombre de Piedra – Buró4



27

Space

B.1. HIGHLIGHT THE TRANSITIONAL ELEMENTS BETWEEN CITY AND PORT

B. WHAT TO DO WITH TRANSITIONAL SPACES BETWEEN THE

B.2. SHOWCASE PORT CITY LANDMARKS AND SCENERY

PORT AND THE CITY?

- B.3. CONCEIVE A TYPE OF SPATIAL ORGANISATION WHICH ALLOWS OR PRESERVES SCENIC VIEWS OF THE PORT AND THE WATER
- **B.4. CREATE URBAN / PORT / GREEN BUFFER AREAS**

B.1. HIGHLIGHT THE TRANSITIONAL ELEMENTS BETWEEN CITY AND PORT

Special attention must be paid to the development of the urban/port interface, and to the links between these two worlds (bridges, footpaths, etc.). This includes making a careful choice of materials for visible surfaces, installing adequate urban and port equipping, and generating thoughtful designs to create an interesting transition between the two sectors.

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• LE HAVRE (FRANCE)

On one edge of the Eure district, residential units have been built in close proximity to ship-repair facilities. Special attention was paid to the boundaries between the two areas: rather than building a traditional type of fence, the planners chose a carefully-designed metal screen. The landscaping along the 250 m of the screen softens its lines, making for a more attractive visual aspect and allowing views of the ship repair activities. The fence also complies with international standards relating to security in port areas (ISPS code).



Copyright: AIVP





Copyright: AIVP



Copyright: AIVP



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• BRUSSELS (BELGIUM)

In Brussels, the emphasis on architectural and urban integration extends to the entire port area. In 1996, the Port of Brussels signed a "Development Charter" with the companies operating at the port. The document was updated in 2007. Under the charter, the parties undertake to modernise their installations in keeping with the urban environment, paying special attention to the vicinity (signage, green areas, access, fencing, maintenance, etc.) and the architecture itself (recommendations on colours, materials, dimensions, etc.).

This global approach ensures visual continuity and harmony between the various port infrastructures, while making the port a more visitor-friendly environment and asserting its presence. The most recent example is the "Construction Village", due to be developed by 2016 on the left shore of the Vergote dock basin. It will reduce heavy vehicle traffic by carrying construction materials directly to the heart of the Belgian capital. Requirements also covered the quality of urban and architectural integration, which resulted in the project being awarded to the firm Tetra Architecten. In recognition of its design, combining recycling, logistics hub and urban integration, it was awarded the Holcim Foundation's 2014 international sustainable development prize).





Illustration Construction Village - Copyright: Tetra Architecten BVBA





Space

B.2. SHOWCASE PORT CITY LANDMARKS AND SCENERY

At the border between land and sea, the urban/port landscape offers a rich, specific spectacle that combines the technical elements associated with port functions, dock basins and shipping, with typically urban views. The topography of port cities frequently provides natural viewing platforms or allows for paths overlooking this spectacle, creating unity between the active port and the city. But these views can also be deliberately planned during the design stage of projects, by including roof terraces or creating specific viewpoints.

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HAMBURG (GERMANY)

The view point created at the foot of the "Marco Polo" tower and close to the cruise terminal commands 360° panoramic views of the Hafen City and Hamburg, the river, and the port areas located on the far bank. Both the view point and the cruise terminal were built in 2004 by Hamburg firm RHW Architekten. The 120,000 euro cost of the building was partly financed by local communities as part of the EU's NORTHSEA- INTERREG III B programme.

Copyright: AIVP



It forms an attractive reference point with its spectacular design, 13.20 metre height and orange colour. The building's shape is reminiscent of both a periscope and the outline of the port cranes.

Copyright: AIVP



Its upper platform has capacity for up to 25 people, allowing them to enjoy the spectacle of a fast-growing city undergoing extensive redevelopment, and an active port.



Copyright: AIVP

• MELBOURNE (AUSTRALIA)

In 2013, the Port of Melbourne ordered the start of work to reconfigure the Webb Dock area in the south-west of the city, along with the construction of a container terminal with a minimum capacity of up to 1 million TEUs per year.

The creation of a "waterline" forms an integral part of the project. It involves building and/or



redeveloping buffer zones around this port area, to promote its integration within the expanding city. Independent experts have assessed its visual impact from twelve different view points.

On one side of the Webb Dock East, the "Web Trail" will be created. This promenade for pedestrians and cyclists will provide access to an observation platform called Webb Point, with commanding views of the bay and the city, as well as the container ships at sea and in the terminal.

The waterline project was submitted for consultation and public feedback in 2013, and work began at the end of that year.



Webb Point, Future Observation Deck - Copyright: Port of Melbourne



B.3. CONCEIVE A TYPE OF SPATIAL ORGANISATION WHICH ALLOWS OR PRESERVES SCENIC VIEWS OF THE PORT AND THE WATER

Occupied and empty spaces, visual perspectives, building heights and volumetric shapes are all factors that can be altered in order to optimise the way city/port interface sites are integrated into the existing urban and port context. With careful planning, it is possible to preserve and/or create visual perspectives of the water, dock basins, reclaimed port patrimony, the port and its activities.

• LE PORT (REUNION ISLAND – FRANCE)

When it was founded in 1895, Le Port was originally a sole-purpose city, a tool organised specifically to further the economic development of the port and designed exclusively for the shipping of goods. During the 1960s, a dividing line gradually came to separate the city from the port and the sea. The railway closed down and buildings were erected around the dock basins, forming a physical and symbolic boundary with the city.

The election of a new city government in 1971 marked a change. The first master plan ushered in a new approach to planning, centred on a commitment to creating a green, ocean-facing city. The new initiative was based on a major land acquisition programme that extended to over 75% of the territory. It inspired a project dubbed "Ville et Port, la ville est port" (City and Port, the city is the port), which in March 2000 led institutional partners to adopt a charter for its implementation.

With the objective being to break down the barriers between the city and its port, a radically new approach was required. The challenge was to transform the purely functional city, originally designed for the sole purpose of shipping, and to adopt a more permeable design with a new traffic layout and open spaces, opening up the waterfront area which would become a new point of interest in its own right. Another challenge involved consolidating the city to cope with population growth (from 40,000 residents to an expected 60,000 by 2020) in a limited space, while achieving energy self-sufficiency by 2030.



« Mail de l'Océan » - Copyright: City of "Le Port"

One of the major developments in response to these issues is the creation of a central thoroughfare, the "Mail de l'Océan", on which work began in spring 2009. It now runs through the city for 2 km from east to west. The new road will culminate at the Pointe des Galets, a public space designed around the three "Grandes maisons", large colonial-style houses, one of which may be turned into a museum. Overlooking the quays, there are plans for small blocks combining housing and shops. To satisfy the requirement for permeability, these blocks will be laid out in such a way as to preserve views of the port for neighbouring streets, while the buildings' facades will be staggered down to the new sea front.



From the purely functional to the permeable - Copyright: City of "Le Port"



Volumetric view from the City – Copyright: Agence Ter

• HAIFA (ISRAEL)

The city of Haifa has lost its access to the sea since the port was built in the 1930s. Its narrow quays are now obsolete and most of the port activity has been relocated elsewhere. A dynamic new urban space to attract businesses and investors is planned, with priority on public spaces and a commitment to maintaining the port's identity.

A vast open public space will be created along a 2 km promenade. The remaining warehouses, along with new buildings constructed in the same vein, will house cafés, restaurants, small hotels, offices and cultural activities. These structures will retain their original industrial character, in perfect harmony with the nearby cranes and overhead conveyors used for cereals.

Limits on the height of all the structures along the coast will preserve the beauty and extent of the sea views from the city heights (and in particular from the famous Bahai hanging gardens).





Eight City-Port Connectors. First Stage Copyright: Ami Shinar, Amir Mann - Architects & Planners

The plan was approved on January 2015 by the National Planning Council. The train track that separates the city and the port does, however, represent a major obstacle for the project. The Council also decided that it will be depressed. By way of an interim solution, two "bridge-buildings" will be constructed to act as the main gateway to the new promenade. They will remain in service once the railway line has been buried.







First Stage- train track still present



Ben Gurion plaza from west, final stage, with train depressed Copyright: Ami Shinar, Amir Mann - Architects & Planners


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B.4. CREATE URBAN / PORT / GREEN BUFFER AREAS

The creation of buffer areas between the existing or future urban front and the port activity allows the city and port to coexist more easily, while also providing living space. There are a variety of possible solutions:

- Urban buffer areas, containing infrastructures compatible with the port activity: offices, small businesses, cultural facilities, etc.
- Port buffer areas containing low-impact port facilities: small-scale logistics, river traffic linked to the urban economy, a base for vessel services, river boat "parks", etc.
- Green buffer areas obtained either by preserving predominantly rural zones or by creating new green spaces.

• LE HAVRE (FRANCE)

In Le Havre's port districts, the green spaces of the "riverside gardens" along a former canal have been renovated to provide a transitional area between the city and the ship repair activities and coldstorage warehouses opposite. The site commands views of an active port while acting as a buffer zone, ensuring the physical distance necessary for port and urban activities to coexist in harmony. It also provides a leisure and living space in the heart of a district that contains both residential units and small businesses.





The area has been landscaped in a way that maintains the link to its industrial and port heritage (with some rails being retained, paving stones used, etc.), thereby helping to preserve its identity and attractiveness.

Copyright: AIVP

C. HOW TO DEAL WITH THE ISSUES OF CONGESTION, TRANSPORTATION AND ACCESSIBILITY?

- C.1. ENSURE CONSISTENCY BETWEEN URBAN MOBILITY PLANS AND PORT CONNECTIONS
- C.2. TURN THE DEMAND FOR NEW CONNECTIONS INTO AN OPPORTUNITY FOR CREATING NEW SPACES
- C.3. RELY ON AND COMPLEMENT THE EXISTING TRAFFIC GRID
- C.4. USE THE WATERWAY AS A LOGISTICS TOOL FOR THE URBAN DISTRIBUTION OF GOODS
- C.5. PROMOTE ENVIRONMENTALLY FRIENDLY TRANSPORT



Space

C.1. ENSURE CONSISTENCY BETWEEN URBAN MOBILITY PLANS AND PORT CONNECTIONS

Well in advance of the implementation of city/port redevelopment projects, plans for improving access to the port must always take into account the local urban mobility plans. This must include plans for the transport of both people and goods, as well as all different modes of transport.

Planners should be familiar with existing construction bylaws covering roads that are shared by both port and urban transport (width of roadways, dimensions of traffic circles, etc.), possibility of expanding or separating each of the transport modes, technological solutions for real-time management of traffic flows, etc.

• BARCELONA (SPAIN)

The port of Barcelona needs more space for developing port activities and has undertaken an ambitious programme to expand towards the south, where some of the logistics functions will be relocated.

The programme involves the internal reorganisation of port spaces and uses, as well as adapting the access points to the new facilities.



Copyright: Barcelona Regional

The coastal ring road and the Corridor de Llobregat constitute the principal link between the port, the metropolitan area, and the hinterland. The city of Barcelona makes intensive use of this road infrastructure, and this sometimes causes traffic congestion and limits the port's capacity.

To address these problems, the city has undertaken the reorganisation of the rail and road access points from the south, as well as expansion of the ring road.

The new road access points, the expansion of the coastal ring road and the separation of port and city traffic flows provide opportunities for rail-road transport.

New rail access



Provisional access through the port

The planned new routes



New rail access, a Ministry project Copyright: Barcelona Regional, 2012





New access point from the South - Copyright: Barcelona Regional, 2012

Expansion of the Ronda Litoral (Calle 3 – Morrot, sector Morrot)



Copyright: Barcelona Regional, 2012

SUMMARY

The creation of this new access infrastructure and the rehabilitation of the spaces involved, will open the way for new uses for the city/port interface.



Copyright: Barcelona Regional, 2012

Also, the construction of a dedicated lane for truck traffic along the entire Corridor de Llobregat is planned in the long term.



Copyright: Barcelona Regional, 2012

Regarding passenger traffic, the construction of a new cruise terminal at the entrance to the port has made it possible to receive the largest cruise ships and to optimise the administration of passenger traffic, thanks to the creation of this dedicated port access road.





Location of the cruise terminal - Copyright: Port of Barcelona



A dedicated port access road - Copyright: AIVP



A dedicated port access road - Copyright: AIVP

C.2. TURN THE DEMAND FOR NEW CONNECTIONS INTO AN OPPORTUNITY FOR CREATING NEW SPACES

Establishing a new road layout for the city and the port is one way of improving port competitiveness, reducing the environmental impact of port activities and optimising the accessibility of city/port sites. The creation of new access points can also result in the availability of new spaces

• VALPARAISO (CHILE)

The port of Valparaiso is one of Chile's two principal container ports. The port is located near the city centre, and there is very limited potential for expanding along the coast. This situation, along with the related congestion problems, have forced the port to pursue the optimisation of existing space and to



implement a new logistics model. In the mid-nineties, an onshore outer port was created, along with – a few years later - a Logistics Support Zone (ZEAL) outside the city and its 11.6 km access road dedicated to port traffic. These changes have made it possible to maintain port efficiency and to undertake urban development projects, by freeing seafront land for an urban and commercial redevelopment programme.

Situation of the port of Valparaiso prior to 2008 - Copyright: Empresa Portuaria Valparaíso





Zona Externa de Actividades Logísticas - ZEAL Copyright: Empresa Portuaria Valparaíso



C.3. RELY ON - AND COMPLEMENT - THE EXISTING TRAFFIC GRID

Extending the network of existing physical communication infrastructure (road and rail) to city/port territory under development is a means of integrating these territories into the urban structure. Also, new types of connection infrastructure are needed to help end the physical isolation of these sites: pedestrian access, bicycle paths, tramways, buses, etc. These new links - including bridges, footpaths, tunnels, bypasses, to name a few - will be particularly important when parts of the port have been cut off by railways, highways, etc.

• MARSEILLES (FRANCE)

The demolition of a highway overpass which separated the Joliette Docks from their maritime façade, plus the construction of a tunnel, made it possible to create a 2.5 km urban boulevard between Fort Saint-Jean and the CMA-CGM tower on the new city/port interface: the "Boulevard du littoral", inaugurated in May 2013. It was named "Best urban regeneration project" at the MIPIM Awards in 2015.

The project was designed by a team comprising Yves Lion, the architect François Kern and landscape architects Ilex. The new boulevard is 45 m wide, with room for pedestrian and cycling paths, will benefit the extensive installations located on this perimeter of the Euroméditerranée operation: the Mucem, Villa Méditerranée, the Regards de Provence Foundation Museum, Terrasses du Port, Quais d'Arenc, etc.



Copyright: Euroméditerranée

Over the last ten years, the Grand Port Maritime de Marseille and Euroméditerranée have contributed to a sweeping transformation in the waterfront area.

SUMMARY

• MIAMI (UNITED STATES)

The port tunnel under construction since May 2010 will provide a direct link between two highways and the cargo and cruise ship ports located on Dodge Island. Apart from increasing the ports' competitiveness and its cruise activity, it will help ease traffic congestion in the city: in 2009, about 16,000 vehicles travelled through downtown streets each weekday, going to and from the port of Miami (up to 28% of these vehicles were trucks). The tunnel now opens the way for new developments on the northern part of Miami's business district (CBD). The waterfront located in front of Dodge Island will also benefit from these new developments.

The total cost of the design and construction of the tunnel is estimated at US\$ 663 million. The tunnel project was built by a public-private partnership between the State of Florida, the concessionaires MAT and LLC, Miami-Dade County, and the city of Miami. The tunnel was officially inaugurated in August 2014.





Copyright: Port of Miami







Copyright: Port of Miami



C.4. USE THE WATERWAY AS A LOGISTICS TOOL FOR THE URBAN DISTRIBUTION OF GOODS

Urban pressure to create new housing units, services, etc. is always intense in urban ports. This increased urban presence also implies greater demand for goods and more intense use of roadways. Considering the typical congestion problems that affect cities' land transport networks, the option of using the waterways for goods distribution is becoming more and more attractive. However, for this alternative to become feasible, all stakeholders must agree on these new logistics strategies.

• PARIS (FRANCE)

Since October 2012, the food products destined for 80 Franprix stores located in the heart of Paris are being distributed via the Seine. The goods are first transported in containers between the port of Bonneuil-sur-Marne and the port of Bourdonnais in the centre of Paris, before being delivered by truck on the last leg of their itinerary to the retail stores, all of which are located within a radius of 4 km. Long term, the objective is to transport 48 containers per day, which is equivalent to a savings of 450,000 km / year and a 37% reduction in CO² emissions. This initiative is also enabling development of the quays located within the urban area and will make port activities more acceptable to the Paris population.

Ports of Paris plans to develop this strategy at other sites within the capital. A call for expressions of interest was published in November 2013 for the creation of a multimodal logistics centre at the port of Austerlitz, in the old Magasins Généraux which date from the beginning of the XX century.



Copyright: HAROPA - Ports de Paris / Agnès Janin





Copyright: HAROPA - Ports de Paris / Franprix Highco



Copyright: HAROPA - Ports de Paris / Franprix Highco

C.5. PROMOTE ENVIRONMENTALLY FRIENDLY TRANSPORT

Promoting alternative modes of transport to automobiles makes it possible to improve accessibility and reduce road congestion in city/port territories: going on foot, by bicycle, or on shared transportation (tramway, cable cars, etc.). In certain port cities, the local geography makes "Blue transport" an attractive option: public transport on the waterway (water-taxi, shuttle services, etc.). This solution provides other benefits apart from improved accessibility to city/port sites: environmentally, because of lower road traffic, and in symbolic terms, because it reinforces the maritime character of the territory.

• TANGIERS (MOROCCO)

The project to reconvert the port of Tangiers covers an area of 84 ha, and aims to position Tangiers as a mainstream tourist and cultural destination in the Mediterranean. The project includes a cable car system linking the downtown area, the marinas, the new fishing port and the Kasbah, and will have a capacity of 2800 passengers per hour. There will be view points towards the port, the marinas, the bay, and the Medina.



Copyright: SAPT – Société d'Aménagement de la zone Portuaire de Tanger-Ville



Copyright: SAPT – Société d'Aménagement de la zone Portuaire de Tanger-Ville



Space

• BRISBANE (AUSTRALIA)



In 2011, extensive flooding caused serious damage to Brisbane's 25 river terminals. Eight of the terminals were completely destroyed. The City of Brisbane finally settled on proposals by Cox Rayner Architects, Derlot and Aurecon, with floating terminals specifically designed to adapt to, rather than resist floods. The project was the winner in the "Infrastructure" category in the 2013 World Architecture Festival.

Floating ferry terminal - Copyright: Cox Rayner Architects

The architectural quality of the terminal's design and its visual integration into the surroundings will help promote public transport on the river.





Milton CityCat Terminal was inaugurated in January 2015.

Milton Ferry terminal Copyright: Aurecon



D. HOW TO ENLIVEN AND VITALISE THE WATERFRONT?

- D. 1 PROMOTE THE TEMPORARY USE OF AVAILABLE STRUCTURES AND SPACES
- D.2 PUT AN EMPHASIS ON ARCHITECTURAL /SYMBOLIC ELEMENTS
- D.3. SHOWCASE EXTERIORS, FEATURES AND SPACES
- D.4. CAREFULLY CHOOSE THE LOCATION OF PASSENGER TERMINALS AND PROMOTE LINKS WITH URBAN CENTRES
- D.5. CREATE WALKING CIRCUITS AND PROMENADES



D.1. PROMOTE THE TEMPORARY USE OF AVAILABLE STRUCTURES AND SPACES

The delays involved in the gradual rehabilitation of city/port interfaces may result in the presence of empty installations or spaces awaiting reallocation, which will detract from the general attractiveness of the district and the existing infrastructure. In order to make these rarely visited sites more attractive and dynamic and to fill the gaps in the overall appearance of the area, a strategy based on temporary uses will make it possible to attract resident population and visitors to the sites being rehabilitated on the city/port interface. The strategy will also bring economic benefits, due to the arrival of visitors, local tourists, etc.

• MELBOURNE (AUSTRALIA)

"Renew Newcastle" is an ONG financed by the government of New South Wales, whose purpose was to find short- and long-term uses for buildings that were vacant or awaiting development in the CBD of Newcastle. After the success of the initiative in Newcastle, this pioneering operation will now be implemented in the entire country, through the entity "Renew Australia".

The operation was implemented in Melbourne, and a call for tenders was published in late 2012, inviting all interested parties to submit proposals for the temporary occupation of vacant or underutilised structures in the area of Docklands waterfront Piazza. The initiative, named "*Docklands Spaces*", is being administered by the City of Melbourne, MAB Corporation, and Places Victoria. This is a win-win strategy for all stakeholders, and it makes the territory much more dynamic and attractive to the entire Melbourne community.



Copyright: City of Melbourne

• NANTES (FRANCE)

At Nantes, SAMOA (Société d'Aménagement de la Métropole Ouest-Atlantique) has implemented a temporary occupation strategy for brownfield areas in the Ile de Nantes. Attractive contract conditions and low rental fees are being offered to businesses and/or to artists and creators.

This was the case for Halles Alstom 4 and 5 which architect Franklin Azzi transformed into an Institute of Fine Arts. It was also the case for the three warehouses of the firm Larivière, at the west end of the island. Thanks to some limited renovation work on the buildings and some landscape works conducted by architect Christophe Theilman, the site will host the offices and workshops of "Solilab" for the next twelve years. Solilab offers services to associations and entities involved in social economy.



Copyright: SAMOA



Copyright: SAMOA



SUMMARY

• HONG KONG (CHINA)

In Hong Kong, an 850-seat theatre made of bamboo was built in 2014 at Victoria Harbor. Designed by Hong Kong architect Raymond Fung, this temporary tenant is located on the site of an extensive project aimed at developing a new cultural district: the West Kowloon Cultural District. The festival that was organised heralds the creation of the Xiqu Centre dedicated to Chinese theatre, which is currently under construction (to be completed in 2016).



Copyright: West Kowloon Cultural District Authority



Copyright: West Kowloon Cultural District Authority

D.2. PUT AN EMPHASIS ON ARCHITECTURAL / SYMBOLIC ELEMENTS

The use of symbolic or typical architecture for new buildings is an increasingly widespread solution in areas where cities and ports meet. This new architectural approach aims to galvanise the image of port cities. It may also involve enlisting the talents of renowned architects. By opting for bold and original designs, port cities can pique the curiosity of visitors and stimulate areas where the port and city meet, by creating references to a clear identity.

• ANTWERP (BELGIUM)

Construction of the Mas Museum was completed in 2010. The project is located right in the heart of the old port area, between the former "Het Eilandje" docks and the city. The port was one of the project's founders and lead financiers.

The quayside location chosen for the museum means the building is reflected in the water. Its simple volumetric design, balanced stone and glass construction and 60 metre height make the museum a focus point and an emblematic structure for the Eilandje port/city area, of which it commands panoramic views.



Copyright: AIVP



To design the new "Port House", Antwerp chose the world-renowned architect Zaha Hadid. A structure reminiscent of the shape of a boat will be constructed atop the former fire brigade building (itself a listed building), to house 500 employees at the new headquarters of the Antwerp Port Authority.

Copyright: Zaha Hadid-Architect

Located in the heart of Eilandje, the 46 metre high Port House will be a powerful symbol, thanks both to its dynamic shape and as a visible link between the past and the future.

Work began in 2012 and should be completed by the end of 2015. The project is set to cost €49.9 million, with €2.1 million of that total earmarked for renovation of the former fire brigade building.



D.3. SHOWCASE EXTERIORS, FEATURES AND SPACES

Light, colour and materials are all important elements that can be used in the architectural composition of new or existing public spaces and buildings, to revitalise the often negative industrial image of port cities. They can serve to highlight projects' best aspects, adding new dimensions or stimulating new ways of looking at certain spaces.

• SAINT-NAZAIRE (FRANCE)

At the outset of the Saint-Nazaire city/port project, the submarine base posed a significant challenge, not only due to its immense concrete mass but also owing to its association with the Second World War. With its night-time illumination by Yann Kersalé in 1991 as part of the "La Nuit des Docks" project, along with redevelopment work on some of the submarine pens by Manuel de Solà Moralès, the building has become a symbol of Saint-Nazaire and fostered a new relationship between the city and its port.



A light show in four of the base's pens was inaugurated in November 2014. Illuminating the interior of the pens, it aims to showcase the site's unique character and poetry. The project, which cost a total of €560k, was carried out by the City itself in collaboration with lighting designer Virginie Voué.

New light show at the submarine base, November 2014 Copyright: Christian ROBERT / Ville de Saint-Nazaire



New light show at the submarine base, November 2014 Copyright: Christian ROBERT / Ville de Saint-Nazaire



Eventually, there are plans for an "illuminated trail" running between the downtown area of the City, the city-port area and the sea front.

The illuminations serve to confirm the status that the submarine base has acquired. As a driving element of the city-port project, the base also acts as a cultural and tourist gateway with the facilities it houses. These include "Escal'Atlantic", a centre explaining the history of ocean liners, "Life", a venue for concerts, cultural events and exhibitions, or the "VIP" area dedicated to contemporary music.

The silo –«"La nuit des Docks », 2007 Copyright: Dominique MACEL / Ville de Saint-Nazaire

• NINGBO (CHINA)

Ningbo, one of China's leading ports, sits at the confluence of three rivers and the sea. The competition for the Lighting Plan launched by the City of Ningbo was won in 2009 by the firm Light Cibles and its Chinese subsidiary, along with the lighting design agency of Pr H.Rong, a scientist at Beijing University's Department of Lighting Design & Research.

The lighting plan itself was realised the same year, and is based on a concept that combines three colours, each one referring to one of the three rivers - gold for the Feng Hua River, blue for the YuYao and blue and gold for the Yong River –, with white representing the tide. The plan uses colour changes to relate the city's maritime history, calling to mind the movement of the sailing ships that travelled up and down the waterways, and the movement of the tides that carry water inland. "When the tide rises, the Fenghua and YuYao rivers become white as the waters of the Yong River flow upstream; when the tide ebbs, the blue and gold run back down towards the centre of the city".

A light monument stands at the confluence of the rivers, a symbolic location of the first port. It consists of three large masts of gold, blue and white, and changes colour like the river banks. The three changing colours motif can also be found on the facades of the main buildings, in the form of vertical columns of light that are reflected in the water. Street lamps in the shape of ships' masts provide illumination for 9 kilometres of promenades along the river banks.



🕜 aivp

Space

• BRUSSELS (BELGIUM)

The challenge was to give back meaning to the port's activities in a renewed urban atmosphere, and to counter the port's old image as a no man's land, making it visible and accessible once more, while rebuilding a "proud awareness of the port" in the Brussels spirit. Transforming the port's image in this way was one of the key objectives of the urban integration programme between 1993 and 2007.

The Béco basin in the centre of the city was the first target of this strategy. Its left bank (the "Quai des matériaux" or materials dock) was redeveloped between 1993 and 1999 to create a public space for walking and leisure, with new infrastructures for tour boats.

The right bank (the "Quai des Péniches" or barge dock) was redeveloped into a multi-purpose public space between 2000 and 2002. The project revolutionised the local landscape, with references to the canal and the various port elements created around the basin.



Regeneration of spaces - Barge Dock, Béco Basin - Copyright:Port of Brussels

The 2008-2018 urban integration programme consolidated these efforts to regenerate the port landscape, while also supporting the development of a leisure-oriented centre around the Béco basin.

The facelift project for the Molenbeek and Aderlecht locks, undertaken as part of the previous programme, was completed in 2011. It has not only enhanced the attractiveness of these locks in an urban district that is itself in the process of conversion, but has also made the sites safer and more secure.



Lock facelift - Copyright: Port of Brussels

In the same spirit, a programme to renovate and illuminate Brussels' old bridges, fine remnants of the industrial era, was finalised in 2010. The programme smartened and showcased the Pont des Armateurs, which marks the gateway between the city and port, while the Pont des Hospices and the Pont de Buda were also renovated. The final aspect of the programme was a new global lighting plan, to illuminate and enhance the attractiveness of the night-time canal landscape.



Pont de Buda © Port of Brussels

Pont des Armateurs © Port of Brussels



Pont des Hospices © Port of Brussels



D.4. CAREFULLY CHOOSE THE LOCATION OF PASSENGER TERMINALS AND PROMOTE LINKS WITH URBAN CENTRES

HOW TO ENLIVEN AND VITALIZE THE WATERFRONT?

Passenger terminals may be constructed entirely from scratch or created by redeveloping existing port buildings that were previously used for other purposes. However, where there is a choice of different sites available, priority will be given to that which offers the best access to the city centre: distance, safe pedestrian paths, landscaping, etc. The quality of links between passenger terminals and the city is crucial for promoting tourism and generating added value.

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• LISBON (PORTUGAL)

In 2010, a project put forward by architect João Luís Carrilho da Graça was selected for the new cruise terminal in Lisbon. Chosen by a panel made up of representatives from the port authority, the Chamber of Commerce, the college of architects and the college of landscape architects, the project drew unanimous praise for the way in which it proposed to integrate the terminal into the city. While it does indeed meet the stated medium-term aim of doubling the terminal's capacity to over 1 million passengers, it also includes an urban park and promenade, leading through the building's different storeys up to the roof, where there are views of the city and the Tagus.



Copyright © João Luís Carrilho da Graça



D.5. CREATE WALKING CIRCUITS AND PROMENADES

One of the key features of the changing relationship between the city and port is a form of spatial dissociation, signalling the end of the symbiotic relationship that had prevailed for many years. Promenades can be used not just to enliven the waterfront, but also to reconnect the city with its port. The inclusion of promenade routes in city/port projects is both a means of revitalising newly reassigned spaces and introducing new visual perspectives of the city and port.

• MALAGA (SPAIN)

The special Port plan adopted in 1998 made reconciling the city and port its key objective. It enshrines the creation of an urban port at the boundary between the city centre and the industrial port, with a clear emphasis on recreational and cultural activities and entertainments.

Culture has become the focal point of a strategy designed to restore the links between the historic centre of the city and the old port installations of the waterfront area. The cultural facilities at quay n°1, the "Palmeral de las Sorpresas" at quay n° 2, and the future Auditorium at the San Andrés platform go hand in hand with efforts to renovate heritage sites and build new infrastructures in the city (Picasso Museum, City Museum, Modern Arts Centre, etc.).

"Las Palmeral de las Sorpresas", the waterfront promenade designed by Spanish architect Jerónimo Junquera at quay n°2, is notable not just for the creation of a high-quality public space, but also for its re-creation of a route linking the city centre with the sea, through the port.

More generally, the entire project entails a rethink of the links between the city centre and the port. In 2008, a park between the city and quay n°2 was renovated and new access paths were created between the park and quay n°2, while the links between quays 1 and 2 were also redesigned, etc. Permeability, continuity and accessibility were identified as the key priorities when considering how best to restore the links between the city centre and port.



Linking cultural facilities in the city centre with those in the urban port Copyright: Ayuntamiento de Málaga (AIVP Days, Helsinki, 2013)





Considerations on permeability Copyright: Ayuntamiento de Málaga (AIVP Days, Helsinki, 2013)



Las Palmeras - Copyright: Ayuntamiento de Málaga (AIVP Days, Helsinki, 2013)



E. HOW TO SAFEGUARD ARCHITECTURAL AND PORT IDENTITY?

- E.1. IDENTIFY ALL ELEMENTS HAVING HERITAGE / HISTORICAL / SCENIC VALUE
- E.2. STRESS THE SYMBOLIC VALUE OF PORT ELEMENTS AND MAKE THEM PART OF NEW PROJECTS
- E.3. SAFEGUARD AND REUSE THE EXISTING PORT/ARCHITECTURAL PATRIMONY



Space

E.1. IDENTIFY ALL ELEMENTS HAVING HERITAGE / HISTORICAL / SCENIC VALUE

City/port interfaces are being transformed in ways that constantly change their landscapes. By clearly identifying aspects of the port to be preserved on account of their particular heritage or other value, it is possible to establish a connection between the past and the future of the city/port, well in advance of any development plan. The process of identifying precisely what constitutes the port's heritage and which aspects should be considered for preservation implies an evaluation: why and how should certain elements be saved? But it also encourages stakeholders to consider how preserving and reusing that heritage will serve to affirm the port's identity, and set their project apart from other such operations elsewhere in the world.

• OSLO (NORWAY)

With the Fjord City project, the city of Oslo committed to a major transformation involving the relocation of certain port activities. As in many port cities, their distance from the central urban areas had also led to decreased public awareness of the port's importance.

Launched in 2007 and completed in 2011, the Oslo port authority's plan to preserve the maritime cultural heritage resulted in a detailed survey of all the elements of heritage, historical or scenic value. They were then assessed, in order to decide which of them should be kept and used as part of the new-look port. The document was also drafted in a format that allowed it be used as a communication resource, to reforge links with local residents through the port's patrimony.

A document of this kind serves as a basis for deciding the future of the port's patrimony, but the Oslo authorities treated it as a strategic tool also, taking advantage on the specific features of the city's own heritage to avoid the risk of standardising the areas earmarked for redevelopment.



Akershusstranda in the 1960s. Photo: Copyright: Unknown Oslo archives / City Of Oslo

This strategy will be used in the case of Vippetangen, a district located between the Akerhus fortress and the new urban area currently being developed on Bjorvika, where the famous Oslo Opera House is already based. A new ferry terminal is set to be built and cruise activities may also be developed there. The harbour promenade, а 9 km esplanade linking different parts of Oslo's waterfront, will pass through Vippetangen.

A number of specific elements have been identified as likely to help give Vippetangen a distinct identity:

 warehouse 38, built in 1915 and one of the first in Norway to use concrete, was used for maritime traffic destined for the United-States and the United Kingdom, before Oslo Havn KF set up its headquarters in the building in 1987;

- a grain silo built in the early 20th century with the intention of integrating it visually into the surrounding environment, which led the architect to make reference to the nearby churches and fortress. Reusing the silo represents a major challenge, and several architects have already "played" with the idea;
- three of the fifty cranes built by the port for its own use between 1949 and 1961, along with a special crane for heavy loads (up to 200 tonnes) built in the 60s with a highly distinctive design, one of only a few examples remaining in the world.



Grain silo in the 1920s, Vippetangen Copyright: Anders Beer Wilse /'Oslo Museum.



Grain silo in the 1920s, Vippetangen Copyright: Oslo Museum



• LOS ANGELES (UNITED STATES)

In May 2013, the port of Los Angeles adopted an action plan for its heritage. Over a two-year period, the port will be drawing up a comprehensive survey of its historical, cultural and architectural resources. The process will then be repeated every five years. Based on the findings, an action plan will be devised with priorities determined for preservation and, where possible, heritage will be reused.



Warehouse N°1 – Copyright: AIVP

E.2. STRESS THE SYMBOLIC VALUE OF PORT ELEMENTS AND MAKE THEM PART OF NEW PROJECTS

Port cities have a shared identity that sets them apart from other cities. Yet each port city also draws on its history to forge its own distinct identity. By including symbolic port installations (rails, cranes, containers, etc.) in urban planning and architectural projects, and by making reference to port-related terminology in the choice of materials, colours and so on, project stakeholders can preserve and capitalise on this dual territorial identity.

• HELSINKI (FINLAND)

Described as Finland's answer to Silicon Valley, Ruoholahti is a district in West Harbour, very close to the centre of Helsinki. The district sprang up in the 90s after the port's container terminal and coal activities were moved, and is now home to offices and housing. The district's development has earned several distinctions, including an award from the New York Waterfront Center in 1996.

Constructed in Ruoholahti in 2002, HTC Helsinki is a business centre comprising five buildings designed by Kai Wartiainen Architects. More than 30 companies are based at the centre. Its high-tech architecture incorporates industrial elements in the buildings' design, with particular reference to the structure of the port's cranes and the port site itself.



Copyright : AIVP

Copyright : Thierry Bogaert, Bogaert' Architecture



E.3. SAFEGUARD AND REUSE THE EXISTING PORT/ARCHITECTURAL PATRIMONY

Patrimony or heritage is a particularly complex concept, which refers not just to the background of a building or site, but which also gives the port city its place in history and imbues it with a part of its specific identity. This does not necessarily mean setting existing heritage in stone, but developing it and creating new ways and places for the city and port to interface, where the past and present visibly coexist.

A comparison of the costs of renovating existing architectural and port heritage with the cost of building entirely new constructions may reveal which is the better option. Reusing existing heritage is about more just a simple calculation, however, and should be considered in terms of the possibilities for enhancing the port city's attractiveness and identity, as well as its compatibility with port activities in certain cases.

CAPE TOWN (SOUTH AFRICA)



How to turn a grain silo into a museum? The challenge was to take a listed building constructed in 1921, measuring some 57m in height and housing 42 concrete tubes, and turn it into a museum for contemporary African art.

For architect Thomas Heatherwick, the solution was to create an atrium in eight of the tubes and use transparent materials to show the building in its best possible light. Some pieces of machinery will be retained.

Copyright: Victoria & Alfred Waterfront Ltd





The Zeitz Museum of Contemporary Art Africa -Zeitz MOCAA will occupy 9500 m² across nine floors, including 6000 m² of space set aside for exhibits. One whole floor will be dedicated to educational activities.

Copyright: Victoria & Alfred Waterfront Ltd

The exhibits to be housed in the silo will ensure that the building, a prominent feature of the Cape Town skyline, is properly showcased and continues to contribute strongly to the city's identity.



Copyright: Victoria & Alfred Waterfront Ltd

• STRASBOURG (FRANCE)

In recent years, a number of Strasbourg's old port buildings have been redeveloped. In 2003, the Urban Community of Strasbourg ran a competition to convert some former grain silos into a multimedia library. The silos of the Médiathèque André Malraux library opened in 2008 and currently house some 160,000 documents across 18,000 m², based on a design by architects lbos et Vitart. The project took two years and cost a total of \in 64.5 million, most of which was financed by the Urban Community of Strasbourg.





André Malraux Media Library - Copyright: AIVP

In 2011, a second project was undertaken to convert and extend a building at the Austerlitz port. The project concerned the former Seegmuller armaments warehouse dating from 1932, the first construction to be rebuilt by the autonomous port of Strasbourg after a fire in 1928. The building was abandoned in 2000 and plans to redevelop it into 67 homes and offices were designed by Heintz-Kehr et associés, with the contract awarded to Icade. The most spectacular aspect of the project is the addition of three new levels atop the warehouse building, corbelled on the north and south facades and with a 15 metre cantilever section on the western side. Windows and steel structure refer to the port's identity. The old part was refurbished in a way that respects the original materials, while the office tower will also be raised slightly. An artistic and cultural space was also planned. "Les Dock's" was inaugurated in September 2014. The investment budget is €17 million euros excluding VAT.



HK et associés (Georges Heintz and Anne-Sophie Kehr) project - Copyright: Heintz-Kehr et associés



Seegmuller warehouse in 2004 - Copyright: AIVP



Seegmuller warehouse - Copyright: Heintz-Kehr et associés



The site also includes a converted silo that currently overlooks the site between the Seegmuller warehouse and the André Malraux Media Library. There are plans to create an "international centre" for the university nearby.


ENVIRONMENTAL CHALLENGES

Climate change and rising water levels are a major consideration in large-scale projects for port city developers. A new approach to waterfront planning is gradually emerging, which could see the development of pioneering solutions, not just to protect the environment but as an opportunity to create new spaces.

However, planning the city with the port necessarily means optimising environmental performance. In this too, the city-port is a useful place for rolling out strategies and measures to reduce the environmental footprint, with a clear emphasis on anticipation and cooperation.

F. WHAT TO DO ABOUT THE RISK OF MARINE SUBMERSION?

G. HOW TO DEAL WITH THE PROBLEM OF INDUSTRIAL/PORT NUISANCES?

H. HOW TO OPTIMISE ENERGY USE?

I. HOW TO CONSERVE BIODIVERSITY?



F. WHAT TO DO ABOUT THE RISK OF MARINE SUBMERSION?

- F.1. COMBINE INFRASTRUCTURES AND NATURAL FUNCTIONS
- F.2. MAKE THE POSSIBILITY OF MARINE SUBMERSION AN INTEGRAL PART OF BUILDING DESIGN



F.1. COMBINE INFRASTRUCTURES AND NATURAL FUNCTIONS

Port cities were originally founded in commercially strategic locations, and environmental considerations were not taken into account. Although subject to much debate, studies of climate change and rising sea levels have highlighted the vulnerability of coastal areas and many port cities around the world.

Waterfront areas and those where cities and ports meet are at particular risk, and can serve as testing grounds for resilience strategies inspired by natural functions.

• NEW YORK (UNITED STATES)

Hurricane Sandy provided a timely reminder of the vulnerability of port cities to rising water levels. Landscape architect Kim Mathews, whose firm is involved in a number of projects for the New York waterfront, proposes using the higher land-based access routes and intermodal transport roads essential for ports, as corridors designed to filter and manage rainwater at a level that is starting to become significant.



Copyright: Mathews Nielsen Landscape Architects

One of their projects in New York (Hunts Point Landing 1, Bronx): a decommissioned road is used for accessing a waterfront area that includes a new quay, kayak launch ramp, educational resources and management of rain and tidal river water.

Runoff water flows into a pool in the park, where it is biofiltered before running back into the East River.

Copyright: Mathews Nielsen Landscape Architects

• AUCKLAND (NEW ZEALAND)



Waterfront Auckland opted to make the redevelopment of its waterfront part of a wider sustainable development programme. The project is based on the concept of Water Sensitive Design, an approach that involves reusing natural features to regulate water flows, filter out pollutants and create new public spaces.

Such was the thinking behind the rain gardens created on a 600 m² plot in Jellicoe Street, a pedestrian street in the Wynyard Quarter (North Wharf Promenade and Silo Park). The gardens are planted with native vegetation and drain runoff water from 9000 m² of local roads and land. They also filter rainwater, in particular stormwater, reduce contaminants dumped at sea and irrigate urban vegetation.

High-quality street furniture and a sculpture by Michio Ihara have made the area a pleasant urban space that is popular with residents.

Copyright Wraight+Associates



Wind Tree Sculpture – Copyright: TCL– Waterfront Auckland



Copyright: TCL– Waterfront Auckland



F.2. MAKE THE POSSIBILITY OF MARINE SUBMERSION AN INTEGRAL PART OF BUILDING DESIGN

Irrespective of debate surrounding the extent of rising water levels due to climate change, this growing risk can be taken into account at a very early stage of development projects, specifically in their urban planning and architectural aspects. However, rather than merely adapting existing facilities to cope with greater environmental challenges, this resilience strategy also offers the opportunity to create brand new spaces.

• HAMBURG (GERMANY)



3D model of the proposed layout Copyright: Michael Korol, HafenCity Hamburg GmbH

The Hafen City project in Hamburg is currently one of the largest urban redevelopment projects in Europe. By the early 1990s, dock basins had become too small to accommodate increasingly large vessels. This led the port of Hamburg, like many other port cities, to move to a much larger site near the Old Elbe Tunnel area.

The abandonment of the old 157 hectare site in the heart of the city offered a unique urban redevelopment opportunity. Under the master plan produced in 2000 by KCAP Architects and Planners, in association with ASTOC Cologne, a total of eleven districts and one new residential area are planned by the mid-2020s, providing housing for up to 12,000 residents and creating 40,000 new jobs.

This new urban area is surrounded on all sides by the river and the canals. The master plan emphasises the need to preserve the site's unique character and maritime atmosphere. But since the site is regularly exposed to flooding of the Elbe, it also needed to take into account the risk of submersion.

The designers' response was the "Floating City", a concept that combines several solutions:

• Altering the topography of the site itself, by creating "terps" or artificial hills designed to raise buildings between 8 m and 8.50 m above sea level;



The use of terps and high-water protection measures in the HafenCity district Copyright: HafenCity Hamburg GmbH



Copyright: KCAP Architects & Planners

 Applying the floodable quay concept to the quayside buildings, which are built in cantilever fashion to free up space that can be used as a promenade when water levels are lower;

 Creating outdoor public spaces that can be flooded temporarily in some areas: a floodable quay concept that provides high-quality spaces while preserving the existing maritime heritage.



Copyright: KCAP Architects & Planners



SUMMARY

G. HOW TO DEAL WITH THE PROBLEM OF INDUSTRIAL/PORT NUISANCES?

- G.1. COMPILE AN INVENTORY OF THE DIFFERENT TYPES OF ENVIRONMENTAL IMPACT
- G.2. FORMALISE COMMUNITY ACCEPTANCE OF CERTAIN NUISANCES
- G.3. UNDERTAKE A COOPERATIVE APPROACH WITH ALL INDUSTRIAL STAKEHOLDERS
- G.4. SEEK INNOVATIVE TECHNOLOGICAL SOLUTIONS IN ORDER TO MITIGATE SOUND POLLUTION
- G.5. RECONCILE PORT FUNCTIONS AND ENVIRONMENTAL CONCERNS WITH A VIEW TO IMPROVING AIR QUALITY

G.1. COMPILE AN INVENTORY OF THE DIFFERENT TYPES OF ENVIRONMENTAL IMPACT

The restrictions imposed by national and supranational environmental legislation offer an opportunity to adopt a proactive rather than a reactive approach, by committing to dynamic, forward-looking environmental strategies. Before practical steps can be taken to monitor and manage the environmental impacts of ports, especially in city-port interface areas, those impacts first need to be clearly identified and assessed.

VALENCIA (SPAIN)

The environment and eco-efficiency have been central to the Port of Valencia's development strategy for some time. They formed the core issue of its Ecoports programme and the Sympic project ("Environmental Integration of Ports and Cities") funded by the European LIFE programme. Completed in 2007, the project allowed Valencia and its partner cities Toulon (France) and Livorno (Italy) to develop a system of indicators, used to identify responsibilities and define a joint programme of environmental actions for the city/port interface.

As part of the Climeport project (2009-2012), a carbon footprint measuring tool was created in conjunction with the other Mediterranean ports involved in the project (Algeciras, Koper, Livorno, Marseilles, Piraeus). The method used allows four different carbon footprints to be calculated: the port's overall footprint, and the specific footprints of port activities, services, and facilities. The tool has also been used to draw up an action plan and define 30 best practices for these four categories.

This project, like the previous ones, also highlighted the importance of cooperation between different members of the port community for reducing environmental impacts, as was the case in Valencia between 2008 and 2012.



Objetive: Reduction of Green house gas emissions

Copyright: Autoridad Portuaria de Valencia



Año 🚽	2008	2010	2012
Emisiones Totales de CO2e (Kg de OO2e)	161.685.275	158.026.709	160.770.152
Producción Anual (Tráfico de Mercancias en Toneladas)	51.897.937	56.893.676	60.517.225
Indicador (Kg CO2 e' Tm Mercancia)	3,12	2,78	2,66

The above figures have been calculated based on the methodology from Climeport project but excluding the effect from staff mobility. These figures have been Verified by Universe Hagester according to 190 14064 standard.







G.2. FORMALISE COMMUNITY ACCEPTANCE OF CERTAIN NUISANCES

In city/port interface areas, cities committed to a deliberate marketing strategy to sell office or housing space "with port views" will be careful to ensure that the presence of an active port is indicated in sale or rental documents. The aim is to reduce the number of subsequent appeals and secure the long-term future of the port's activities.

• FREMANTLE (AUSTRALIA)

Fremantle is located at the mouth of the Swan River, around twenty kilometres from Perth. It is home to the state of Western Australia's largest working industrial port. As a vital economic player in a fast-growing city, it also has to coexist with the residential area close to the active port, and deal with complaints from local residents and businesses concerning noise and fears about the port's impact on property prices.

To ensure sustainable future development and successful coexistence between the port and the city, the port of Fremantle has adopted a multi-faceted strategy. This strategy is based on the creation of buffer and transition zones, with the area split into three zones with possible urban uses based on risk levels and the potential impact of port activities. Legal arrangements have also been adopted to minimise the likelihood of successful lawsuits, along with specific legislation on the port's protection. This legislation recognises the port's right to exist on its current site, and that its activities do not constitute a nuisance provided appropriate control procedures are put in place.



Inner harbour and Central Business District © Fremantle Ports



G.3. UNDERTAKE A COOPERATIVE APPROACH WITH ALL INDUSTRIAL STAKEHOLDERS

By working together with all of the businesses present in the industrial-port area from an early stage, all of the appropriate legal options can be examined, along with the range of solutions that businesses can adopt in order to comply with environmental legislation. This process begins in the very first stages of a project to maintain, extend or establish industrial and port activities.

DELFZIJL (NETHERLANDS)

In Delfzijl, the very close proximity between port activities (Groningen SeaPorts), industrial activities and the city centre makes for a particularly complex and challenging situation.

Work was carried out with all of the businesses concerned, focusing partly on providing information about the environmental impacts and various legal constraints (such as laws on "noise zoning", safety and habitations). But most importantly, it entailed cooperating with the businesses to examine and adapt the whole range of solutions, including abandoning projects and/or relocating activities.



Deflzijl, Noise zoning in the industrial-port zone Copyright: Municipality of Delfzijl (AIVP Days, 2007, Le Havre)



Deflzijl, Safety zoning: <u>Green</u>: habitation zones, where high-risk businesses, especially petrochemical activities, are prohibited; <u>Blue</u>: intermediate zones, where high-risk businesses are permitted only if necessary measures have been taken; <u>Red</u>: unrestricted zone. Copyright: Municipality of Delfzijl (AIVP Days, 2007, Le Havre)

ANTWERP (BELGIUM)



The Port of Antwerp has made cooperation with stakeholders the cornerstone of its sustainability commitment. This collective approach resulted in the publication of a first sustainability report in February 2012. It supposes close involvement by the various partners concerned, and encourages exchanges of expertise and feedback. It also promotes acceptance and adoption of sustainable practices and solutions, in particular for stakeholders such as small businesses, for whom this may be more challenging.

The approach is also progressive: the partners' critical analysis and recommendations on the first report were taken into account in the second report, published in October 2013. The next update is due in October 2015. To complement this approach, a communication strategy has been adopted with a dedicated website.



G.4. SEEK INNOVATIVE TECHNOLOGICAL SOLUTIONS IN ORDER TO MITIGATE SOUND POLLUTION

There are now a multitude of technological solutions available (insulation and other treatments of buildings, lights, port equipment, coverings, etc.) to reduce nuisances and allow contact between heavy port activities and urban activities. Research and innovation in this area will be intensified, to produce ever more effective solutions.

• BREMERHAVEN (GERMANY)

Completed in 2008, the construction and operation of container terminal CT 4 in this location required compensation measures and work on buildings in the nearby urban zone.



Container terminal, with CT 4 under construction on the right side - Copyright: Bremenports

Bremenports, the company which runs the port, contacted around 85 homeowners and residents in the centre of Weddewarden and certain districts of Imsum, to offer to equip their homes with highquality soundproofed windows and insulated doors. Each home situated near the terminal has also been equipped with a new ventilation system, to guarantee clean air in houses with new class III windows.

These noise protection measures are also aimed at residents of Weddewarden and Imsum living further from the terminal. Specialists review cases individually, based on forecast exposure to noise pollution.

• STOCKHOLM, HELSINKI, NAANTALI, TALLINN, TURKU

European regulations and the development of residential areas closer to ports have put the issue of noise pollution at the very top of the list of environmental priorities for Europe's ports. The ports of Stockholm, Helsinki, Naantali, Tallinn, Turku and three research institutes took up the challenge through the European Penta project, which was completed in August 2013.



For the members of the Penta project, while there are technological tools available for measuring and reducing noise (noise barrier, quayside electricity, handling methods, ship machinery, port layout, access roads, etc.), these are not enough.

Their approach to noise management can be summed up in three key words: reduce, anticipate, cooperate. This complex issue requires a proactive strategy relying heavily on cooperation between port and urban authorities. It also requires a procedure that ensures complaints are passed up the chain, coupled with a strong communication strategy aimed at raising awareness among partners, and the population at large, of actions taken to reduce noise pollution and their results.

G.5. RECONCILE PORT FUNCTIONS AND ENVIRONMENTAL CONCERNS WITH A VIEW TO IMPROVING AIR QUALITY

Port and industrial activity is one of the main sources of air pollution in port cities. Architects can use innovative designs to reduce this pollution and transform environmental restrictions into sources of inspiration. Another effective solution involves combining the use of groundbreaking technologies with cooperation with stakeholders.

• A CORUNA (SPAIN)

The coal terminal at the port of A Coruna was designed and built by Cymimasa SA for the company Union Fenosa. It was inaugurated in July 2007, and has a capacity of 100,000 m3. The terminal has a dome measuring 105 m beneath which coal is stored, after being carried from ships on covered conveyors. The system used to transfer and store the materials is designed to prevent dust being carried into the air.

Combining the twin concerns of efficiency and ecology, the structure has been adopted by the local population who refer to it by the evocative name "La Medusa". It constitutes both a unique piece of architecture, clearly identifiable within the port, and a functional infrastructure that preserves air quality and mitigates the risks inherent to this type of traffic for the nearby city. It represents a qualitative long-term solution for bulk terminals.



Copyright: Autoridad Portuaria de A Coruña

• ROTTERDAM (NETHERLANDS)

The "We-nose" network currently relies on close to 100 electronic sensors, used to identify the nature and location of odours so that action can be taken more quickly. It has been rolled out in the Rotterdam Rijnmond area, and is set to have its coverage area extended with 300 sensors by 2016. The network is designed to protect the health and safety of people living or working in the area.

While the Port of Rotterdam has played a leading role, it sees the project as a joint effort based on cooperation with the local environmental authority (DCMR Milieudienst Rijnmond), the companies present at the port, the City of Rotterdam and the other municipalities concerned.





The project also represents an opportunity for dialogue with the population. A platform has been set up for consultation with local residents and the private sector.



Copyright: Port of Rotterdam

• KOPER (SLOVENIA)

The economic growth of the port of Koper has made environmental issues a key focus of debate in recent years. A variety of initiatives have been adopted, aimed at managing and reducing the port's environmental impact. Technical measures specifically concerning air pollution were found to be insufficient.

A coal and mineral terminal and dust emissions posed a particular problem. The solution adopted in December 2013 is based on a more global approach to waste management, namely a circular



approach summed up by the slogan "no waste, just resources" which earned an award from the ESPO in 2014. The process involves reusing waste from the paper industry which is sprayed on the heap of coals and mineral and then dries, creating a protective crust. The quality of the coal and mineral is unaffected by this process, and measurements taken in windy conditions with gusts exceeding 100 km/h have confirmed its efficacy. It replaces the more traditional spraying techniques, while saving some 3000 m3 of water annually.

Copyright: Luka Koper

H. HOW TO OPTIMISE ENERGY USE?

H.1. USE THE POTENTIAL OF THE PRESENCE OF WATER TO MEET ENERGY NEEDS

H.2. APPLY BIOCLIMATIC ARCHITECTURAL PRINCIPLES

H.3. POOL RESOURCES ON THE BASIS OF INDUSTRIAL ECOLOGY PRINCIPLES



Space

H.1. USE THE POTENTIAL OF THE PRESENCE OF WATER TO MEET ENERGY NEEDS

Water, present by definition in all port territories, is a natural asset and a source of energy. Faced with the challenge of climate change, using water in port basins as a source of energy represents a sustainable economic concept that can be exploited by port cities.

• CHERBOURG (FRANCE)

Since May 2013, more than 1300 homes have been heated using water from the commercial port. The sea water heat pump system has been developed by EDF Optimal Solutions and Daklia. It covers 84% of the district's energy demand and avoids 1730 tonnes of CO2 emissions annually. The cost of the installation is estimated at \in 1.8m excluding tax. In addition to the environmental benefits, the system is also economically advantageous for residents, who have seen their bills drop by 30%, in a district with a high proportion of social housing.

• MARSEILLES (FRANCE)

The environmental evaluation authority has approved the creation of a chilled water plant in the East dock basins of the port of Marseilles. It will be used to run the air-conditioning inside the buildings

(housing, hotels, and offices) making up the planned Euromed Centre, located behind the Silo d'Arenc. Cofely (GDF Suez) began work on the new installation on 30 September 2014.

The plant will be installed at the port (under a long-term agreement with the Grand Port Maritime de Marseille). Water will be drawn from the port's dock basins, to take advantage of their stable temperatures.

The plant will cover 500,000 m² of office space and will reduce energy use by 40%, water consumption by 65% and greenhouse gas emissions by 50%. The project is due to be completed in 2016, but the first clients will be connected as early as mid-2015.

Fonctionnement de la Centrale Géothermique

1 Aachines thermo-frigorifiques
2 Aachines frigorifiques
3 Chaudières gaz appoint/secours

Copyright: Euroméditerranée



Source : Grand Port maritime de Marseille - Copyright : Thallasia/Cofely

The process of renovating and refurbishing San Francisco's built heritage began hesitantly in the 1960s. Fifty years later, converting a loft in a warehouse has become the stuff of cliché. But since the early 2000s, the quest for sustainable architecture appears to have become a priority, as evidenced



for example by the warehouse on Pier 1 or the Exploratorium, a museum on Piers 15/17 which uses water from the bay to provide air-conditioning. With San Francisco's stated ambition of using exclusively energy generated from renewable sources by 2020, this new approach is set to be developed further.

Copyright: Port of San Francisco, Photo courtesy of ZUM

TALLINN (ESTONIA)

In Tallinn, sea water is used to provide air-conditioning at the "Seaplane Harbour Museum", a branch of Estonia's Maritime Museum. The hangars dating from 1916-1917 were originally designed to house seaplanes, and the cold was not an issue. All that has of course now changed and the new maritime museum, which opened in May 2012, attracted nearly 325,000 visitors in its first year. Despite outdoor temperatures as low as -20°C, the heat pumps keeps those inside the hangars to a minimum of 17°C, especially in the large 6300 m² exhibition hall. And because the temperature of the water pumped from a depth of 2.50m rarely falls below -1°C in the bay of Tallinn, the system remains operational all year round.



Copyright: Meremuuseum – Lennusadam, SeaplaneHarbour



SUMMARY

H.2. APPLY BIOCLIMATIC ARCHITECTURAL PRINCIPLES

Many cities around the world now apply bioclimatic design principles to reduce their energy use and mitigate their impact on the climate. This approach involves rethinking the shape of buildings and the way they are integrated into the surrounding environment, while making optimum use of specific local features and potentialities (climate, materials, environment, etc.). Port cities certainly have considerable potential in this respect.

• DUNKIRK (FRANCE)

The Grand Large project in Dunkirk marks the second phase of the Neptune project launched in 1991, the principal aim of which was to reorient the city back towards the docks. Grand Large concerns a 42 hectare site with a rich port history, home to yards that were abandoned in the wake of the shipyard crisis in 1987. For the city, which had reached the limits of its expansion, these abandoned shipyards came to be seen as an opportunity to develop a new sustainable district, based on a master plan by Nicolas Michelin.

The Grand Large project draws heavily on the principles of bioclimatic architecture and applies HQE (high environmental quality) measures.

These include: using rainwater to irrigate public and collective green spaces; gas heating for individual homes, with solar water heaters; green roofs on individual homes; installing solar panels; creating protected loggias on the south-west facades to form a buffer zone between the inside and outside; constructing buildings with gables, a design that allows assisted natural ventilation and lends identity to collective dockside buildings, etc.



Copyright: Ville de Dunkerque



Copyright: Ville de Dunkerque



Copyright: Ville de Dunkerque



SUMMARY

H.3. POOL RESOURCES ON THE BASIS OF INDUSTRIAL ECOLOGY PRINCIPLES

The fight against climate change requires innovative solutions to improve the energy performance of ports and cities. Industrial ecology, a development approach based on cooperation between social and economic stakeholders with pooled resources, is inspired by the principles of sustainable development. It aims to combat pollution and minimise the use of resources and energy. It is an approach particularly suited to port territories, where these new synergies can be exploited between local businesses and the city.

• ROTTERDAM (NETHERLANDS)

In 2013, the port of Rotterdam embarked on the construction of the first of several kilometres of pipeline, designed to collect the high-temperature industrial steam produced in the industrial-port areas. Some 26 km of pipeline should provide heating for 50,000 homes and a hospital. The project is part of a wider sustainable growth strategy adopted by the port of Rotterdam, which is intended to bring together port and industrial requirements with the needs of the city.



Copyright: Guy KONNING, AIVP World Conference 2012, Nantes - Saint-Nazaire

• KALUNDBORG (DENMARK)

Over thirty years after taking its first steps in 1961, the Symbiosis project remains a model of industrial ecology to this day. There are now 23 projects in the industrial-port complex of Kalundborg, based on the principle of a circular economy with industrial waste (water, slurry, smoke, etc.) processed and recycled for power generation or as a raw material for other industries.



Port de Kalundborg - Copyright: AIVP World Conference 2012, Nantes - Saint-Nazaire



• BORDEAUX (FRANCE)

With its "PÉÉPOS" project (Port of Positive Energy and Economy), the port of Bordeaux is committed to a new economic model built on green energy and industrial synergies. The project is notably aimed at anticipating the impact of regulations on nitrogen oxide and sulphur emissions in ports, optimising energy use and identifying new industrial energy sources. It comprises several stages: a diagnostic assessment of energy and industrial factors at Bordeaux's industrial-port zones; identification of power generation zones; definition of economic models, etc.





Space

I. HOW TO CONSERVE BIODIVERSITY?

I.1. IMPLEMENT BIODIVERSITY CONSERVATION PLANS IN PORT AREAS

I.2. MODIFY INFRASTRUCTURE OR BUILD NEW FACILITIES TO PROTECT ECOSYSTEMS FROM THE NEGATIVE EFFECTS OF PORT/INDUSTRIAL ACTIVITIES

I.1. IMPLEMENT BIODIVERSITY CONSERVATION PLANS IN PORT AREAS

Over time, the development of urban, port or agricultural sites cause major changes to their original natural environments, resulting in significant artificialisation. In order to reconcile the expansion of port activities to as-yet unused spaces with the need to take account of their impact on biodiversity, a deliberate long-term strategy must be adopted in advance. In addition to their traditional role as developers, port authorities also have a part to play in this process, with wider responsibility as manager of the sites and spaces they occupy.

• DUNKIRK (FRANCE)

In 2011, the Port of Dunkirk published a Natural Heritage Master Plan, which followed on from the survey of local biodiversity it had established previously. This guidance document is now considered to be a benchmark model for the treatment of natural environments in redevelopment projects for a vast port area (17 km of coastline and 7000 hectares of land). The plan is built around biodiversity hubs,



Copyright: Grand Port Maritime de Dunkerque

consisting either of zones of special importance to be conserved, or deteriorated environments to be restored. Eco-corridors, future so-called "green and blue belts", will be used to create a network, not just between these different zones but also with the wider region. In the long term, the port is committed to conserving and managing some 1290 ha of space dedicated to biodiversity, representing 43% of the space still available for development and a budget of 9.7 million euros over 30 years.

The support measures planned include the production of an eco-report, to provide a short, medium and long-term assessment indicating whether the reduction of natural spaces reused for development is being offset by the amount of space devoted to protected or restored environments.



I.2. MODIFY INFRASTRUCTURE OR BUILD NEW FACILITIES TO PROTECT ECOSYSTEMS FROM THE NEGATIVE EFFECTS OF PORT/INDUSTRIAL ACTIVITIES

Port infrastructures and activities can cause irreversible damage to sea beds and contribute to the disappearance of fauna and flora living there. By taking account of this environmental footprint and considering ecological engineering and eco-design measures for port infrastructures, this biodiversity can be restored and preserved.

• MARSEILLES (FRANCE)

The Grand Port Maritime de Marseille (GPMM), commonly known as the Port of Marseille Fos, in partnership with the "Pôle mer Paca" (the Provence-Alps-Côte d'Azur Region's maritime department), has designed the GIREL programme to "manage infrastructures for the ecological rehabilitation of the coast". With a pre-tax budget of 4.5 million euros, the five-year programme (2011-2015) brings together research bodies (CEFREM/University of Perpignan, IFREMER, ECOMERS/University of Nice) and industrial partners: Suez Environnement, EGIS Eau, SAFEGE. Phase 1 is being financed mainly by public funding, with 80% of the cost being covered by the Agence de l'Eau Rhône Méditerranée Corse, 10% by GPMM, and 10% by private partners.

The study extends to all areas of the port of Marseilles, and has a dual objective: analysing how these



natural spaces and port installations could potentially contribute to improving marine environments; and examining the feasibility of direct intervention in the environment to promote these improvements.

The first phase concerns the introduction of algae affixed to embankments using resin, the introduction of wild larvae, immersing artificial reefs and creating micro-cavities to shelter fish in certain existing port infrastructures along 7 km of the port's artificial coastline. A two-year follow-up phase is then planned to assess the impact of these experiments.

Source: Grand Port Maritime de Marseille - Copyright: Egis Eau

Altogether 300 algae have been introduced to the exterior surfaces of the port's embankments. If they spread across the embankments, they will create food resources and enable other species to develop. The trial may then be developed at other ports.

> Source, Copyright: Grand Port Maritime de Marseille



• HUELVA (SPAIN)

The port of Huelva, which covers some 1700 hectares, is located in the estuary of the Odiel and Tinto rivers. The estuary is a zone of international ecological importance, and various sectors of the 12,000 hectares of marshland are classed as national parkland, biosphere reserve or Natura 2000 zones. In 2006, the Port of Huelva embarked on a programme to restore dunes, marshes and beaches along 4 kilometres of the Odiel's left bank. These environments had been seriously deteriorated and contaminated by the port's activity and also by intensive industrial activity.



Copyright: Autoridad Portuaria de Huelva

Three years later, the use of ecological engineering (replanting Spartina maritima) had helped to reduce the presence of invasive species and allowed the growth of vegetation and biodiversity (macroinvertebrates, fish and birds).



Copyright: Autoridad Portuaria de Huelva



The programme also includes restoration of 1 km of banks on the same side of the Odiel and the creation of a pedestrian promenade. Educational signs have been installed along the promenade, with information about the local environment and the ecological restoration programme.



Copyright: Autoridad Portuaria de Huelva

Thanks to these efforts, in addition to its ecological benefits, the programme has also served to improve the port's image among citizens.

SUMMARY



ECONOMIC DEVELOPMENT STRATEGIES

The economic potential of city/port territories goes well beyond cruise business alone. It is now based around the development of new traditional or highly innovative activities, driven by the specific features of city/port interfaces. Alongside fishing, boating, etc., the creation of a more comprehensive range of tourist attractions and services is a driving factor in the area's economic development, attracting both local visitors and tourists from further afield.

In addition to providing an opportune location for creating cultural clusters, port-city territories are also well suited to the creation of economic clusters built around maritime businesses - such as offshore wind power, recreational sailing, etc. - which currently occupy a dominant place in many port cities.

In order to succeed, however, these projects require strategies to make them possible and profitable over the long period needed to realise them.

J. HOW TO ATTRACT RESIDENTS, VISITORS AND BUSINESSES?

K. HOW TO FINANCE DEVELOPMENT PROJECTS AND MAKE THEM PROFITABLE?



J. HOW TO ATTRACT RESIDENTS, VISITORS AND BUSINESSES?

J.1. ESTABLISH MARITIME CLUSTERS TO MAXIMISE CITY/PORT COMPETITIVENESS

- J.2. ESTABLISH CULTURAL CLUSTERS
- J.3. TURN LEISURE SAILING AND YACHTING INTO A FINANCIAL AND TOURISM ASSET FOR THE CITY AND THE PORT
- J.4. ADAPT VOCATIONAL TRAINING PROGRAMMES TO INCLUDE THE SPECIFIC SKILLS REQUIRED BY CITY/PORT ACTIVITIES



J.1. ESTABLISH MARITIME CLUSTERS TO MAXIMISE CITY/PORT COMPETITIVENESS

The creation of maritime clusters requires the various fields of activity present at the proposed redevelopment site to be identified, along with public and private stakeholders. This process will aim to define the shared economic and social interests of all stakeholders, who will then strive to combine their efforts in the areas of research and development, communication, international prospecting, etc. To this end, they may rely on a specific organisation (informal working group, users' association, stakeholder group, etc.). By working together as part of a collective win-win approach, institutions, local communities, ports and businesses can attract new partners to the site.

• BREMERHAVEN (GERMANY)

The ports of Bremen/Bremerhaven are among the world's largest container ports. However, Bremerhaven is also a fishing port, occupying 450 hectares of land and 150 hectares of water. It remains Europe's leading centre for seafood processing and production with around 390 businesses, 4000 jobs and a similar number of people employed in dependent industries (figures from 2007).

The crises which affected the fishing industry in the 1970s and 80s led to a drastic reduction in the fishing fleet. With support from the EU, the state of Bremen embarked on a global programme to modernise and restructure the fishing port. A cluster was established around the local fishing industry. The project has led to the renovation of certain buildings for the development of fishing and maritime-themed cultural and tourist activities, along with a start-up centre for biotechnologies and research institutes such as the Centre for German Polar and Maritime Research.

The port now houses the Schaufenster Fischereihafen, a business and tourism centre running a range of fishing-related activities. The old fish packing hall now provides premises for 15 trade and catering businesses.

The despatch hall of the former railway station for fish transport has become the Forum Fischereihafen, a multimedia centre providing information about fish and the sea.

The facilities are complemented by multifunctional lecture rooms and halls, which also provide the venue for the Theater im Fischereihafen.

A second cluster has also been created, devoted to renewable energies. In "Luneort" in the south of the area, a centre dedicated to renewable energies - and in particular offshore wind - has been built. The development of offshore wind power is a key strategic priority for Bremerhaven. A 25 hectare offshore terminal for handling, pre-assembly and storage of wind turbines is also planned for 2014/2015. The facilities are completed by a wind energy research centre and "Falck Nutec", a training centre focusing on offshore wind-related safety issues. Together, these infrastructures constitute the new economic cluster that has formed around this single industry.

The fishing port area - Copyright: City of Bremerhaven





Bio-Nord, Biotechnologies Center Bremerhaven Copyright: City of Bremerhaven



2002 - Offshore wind, south of Bremerhaven Copyright: BIS Bremerhaven



2012 - Offshore wind, south of Bremerhaven – Copyright: BIS Bremerhaven



J.2. ESTABLISH CULTURAL CLUSTERS

The creation of cultural clusters serves to promote economic development and represents an essential means of raising an area's attractiveness, including in a crisis context. Expanding and combining cultural projects and facilities can inspire a dynamic new movement for the territory concerned, revitalising old port areas and attracting visitors and residents. It also affords an opportunity to improve the quality of life for the city/port interface, and for the city as a whole.

• REYKJAVIK (ICELAND)

Founded in 1913, the port of Reykjavik quickly established itself as Iceland's largest seaport and the country's main gateway to the outside world. It was one of the country's biggest fishing ports until 1962, when the commercial port of Sundahöfn was built to the east of Reykjavik. The old port then entered a period of transition, during which links with the city were cut off owing to the strict access restrictions imposed on citizens. After 1990, the issue of the relationship between the port and the city became the subject of wider debate, with growing claims for better access to the port and more areas open to the public.

In 1997, the port authorities and the municipality of Reykjavik signed an agreement, under which the city of Reykjavik would purchase a part of the East port, along with a part of Hafnarhús (port house) and the surrounding buildings. The municipality decided to set up Reykjavik's art museum in the Hafnarhús, and to refurbish the nearby public library. There was heated debate about the suggestion of building the future "Harpa" concert and conference centre in the East port, with many people holding the view that concert halls, museums and other such facilities have no place in a port. The development did eventually go ahead, with the aforementioned buildings completed by a maritime museum that opened in 2003 on the site of a former fish freezing plant in the West port.

Designed by Copenhagen architectural firm Henning Larsen, in cooperation with the Icelandic firm Batteríið and the artist Olafur Eliasson, the Harpa was inaugurated in May 2011. Within two years, it had played host to two million visitors and a large number of cultural events, classical music and rock concerts, as well as conferences of all kinds. There were fifteen international conferences scheduled at the venue in 2013. The former warehouses of the East Port now house restaurants, shops and artists' workshops, along with tourism operators.

Cooperation between the port and urban authorities and the development of cultural facilities has helped to forge new links between life in the city and the port, thereby helping to make the area more attractive to tourists.



© Associated Icelandic Ports



Harpa – a new monument at the entrance to the port © Associated Icelandic Ports



J.3. TURN LEISURE SAILING AND YACHTING INTO A FINANCIAL AND TOURISM ASSET FOR THE CITY AND THE PORT

The international draw of many port cities can be measured in terms of the increase in cruise business and sea-based tourist activities. The economic and cultural impact of these activities is significant, and generates added value for cities and ports alike. Besides boating, there is an opportunity to structure an entire sector around sailing, creating direct jobs in the port area with positive repercussions for small businesses operating in the sailing industry, as well as those in the hotel, catering and retail trades, both locally and regionally.

• BARCELONA (SPAIN)

Barcelona's Port Vell and the boating activities found there make for one of the most lively and popular parts of the city. The Barcelona Clúster Náutico, officially launched at the AIVP Days in 2012, positions the Spanish city as a leading centre for international sailing. Bringing together all stakeholders - port, city, businesses and public sector organisations – the partnership has also created an attractive framework for investors. With marinas, repair and refitting of mega yachts, specialist training in boat handling, regattas and top level competitions, there is now a global offer in a single location, generating scale economies and promoting innovation, while also contributing to job creation and social cohesion.



Marina 92 - Copyright Port of Barcelona



Marina Port Vell Copyright: Port of Barcelona

Economy

• LORIENT (FRANCE)

Over the last fifteen years or so, Lorient has seen far-reaching changes to its maritime activity after the French navy abandoned many spaces and the submarine base in 1995. A decision was made to convert the 24 hectare site, located in the heart of the port city, as part of a strategy focused on promoting sailing, tourism and the local heritage to drive economic development.

A market research study was carried out in 2001, looking at the potential for developing the sailing industry at the site of the former submarine base. The strategy adopted was based on three key points: offshore racing, support for sailing businesses and refitting. It resulted in the creation of a business village devoted to maritime activities, an offshore racing area with dedicated infrastructures, and a tourist centre with the "Cité de la Voile Eric Tabarly" along with a submarine museum.

This sailing cluster-based development strategy has seen Lorient establish itself as a recognised European location for offshore racing, fostering a new local industry with 1300 jobs for the Lorient area and 80 businesses. The strategy has also allowed the people of Lorient to reclaim this historically important former military site and regenerate it into a new district, better integrated into the city.



Copyright: AUDELOR (AIVP Days, Barcelona, 2012)






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J.4. ADAPT VOCATIONAL TRAINING PROGRAMMES TO INCLUDE THE SPECIFIC SKILLS REQUIRED BY CITY/PORT ACTIVITIES

By working actively with stakeholders in research and education, ports and port industries can play a part in the development of specific training programmes. Their content is regularly updated to reflect the needs of a constantly changing port economy. These programmes may be short or long-term, to satisfy the requirements of technical and service-based industries.

• GENOA (ITALY)

The port city of Genoa has identified the maritime economy as a strategic sector for smart, sustainable growth. This strategic objective has resulted in the creation of two specialised training institutes: one, the Italian Shipping Academy (Genoa) offers training in "sustainable mobility for maritime transport and fishing"; the other, the venerable "Nautico San Giorgio" Institute founded in 1827 and now named the "Istituto tecnico Statale dei Trasporti e Logistica", provides 1440 students with training in the latest technologies used in shipbuilding, boating and naval mechanics.

The Economics Department of Genoa University also offers a Masters course in "Maritime and port management and economics".

These vocational training programmes constitute one of the pillars of local development. They play an important role in a knowledge-based economy that offers growth and job opportunities, while improving the quality of life for the population and the territory.

The Province of Genoa, the Region and the port authorities also work closely together with teaching staff to identify educational content for pupils in secondary schools. By introducing pupils to the world of ports and the sea, it is hoped that they will be encouraged to go on and develop their interest in



these courses further. The Port of Genoa has adopted a highly proactive, multi-faceted communication strategy aimed at young people.

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K. HOW TO FINANCE DEVELOPMENT PROJECTS AND MAKE THEM PROFITABLE?

- K.1. FINANCE DEVELOPMENT PROJECTS THROUGH CROSS-FINANCING BETWEEN CITY AND PORT
- K.2. TURN THE HOLDING OF EVENTS INTO A SOURCE OF FUNDS TO INVEST IN DEVELOPMENT PROJECTS

K.1. FINANCE DEVELOPMENT PROJECTS THROUGH CROSS-FINANCING BETWEEN CITY AND PORT

The extent of the funding required for what are often long-term operations, coupled with the need to attract and convince private investors, must act as an incentive to innovate when devising financing models. These may be based on the creation of specific funding structures designed to initiate and fund the first installations and create the necessary leveraging effect.

• BILBAO (SPAIN)

"Bilbao Ria 2000" was created in November 1992 with the aim of regenerating deteriorated zones or declining industrial and port areas of Bilbao. These included the now emblematic Abandoibarra district, home to the Guggenheim Museum. The project brings together the main public stakeholders concerned. Although a 100% publicly-owned structure, it has the form of a limited company as this corporate status was deemed to offer the necessary flexibility and responsiveness. It has a dual purpose: planning facilities and implementing operations.

Since 1993, the policy run by "Bilbao Ria 2000" has had a growing impact. Starting out with limited financial resources, "Bilbao Ria 2000" was initially given a cool reception by private investors. However, it then obtained a number of plots of land from the Port and the Railway Company, in exchange for the development of new infrastructures: the external port on the one hand, and a new railway line in the south of the built-up area on the other. Acquiring this land enabled "Bilbao Ria 2000" to embark successfully on its first operation: the resale of plots for housing development in the Ametzola area. The operation generated "Bilbao Ria 2000's" first revenue, which was immediately reinvested in subsequent projects, especially in the Abandoibarra district.



Copyright: AIVP



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Thereafter, the growth of the real estate market, along with the Guggenheim and rising property prices, as well as institutional financing and joint European funding for certain large-scale projects, all helped establish Ria Bilbao's credibility, while the resulting leveraging effect won over private investors. A second organisation, "Bilbao Metropoli 30", played an important role in this respect. Created by the government in May 1991, it brings together the municipalities of the metropolitan area, the Basque government, the port and around a hundred private sector partners. It has become a key urban marketing player, working to promote Bilbao's international profile ever since.

• GUAYAQUIL (ECUADOR)

In Guayaquil, given the deterioration of the area once occupied by port activities, it quickly became clear that some kind of dedicated operational structure was required to plan, develop, build, administer, fund and maintain the future "Malecón Simón Bolívar". In response, the Fundación Malecón 2000 was set up in 1997. Legally, the Foundation is a private, non-profit entity that brings together Guayaquil's most diverse and representative institutions. Under a 99-year emphyteutic lease, the city of Guayaquil granted the Foundation a concession for all of the Malecón's land, a total of over 17 hectares along the river.

period 1997-2002.

Malecón Simon Bolivar, waterfront promenade Copyright: Aivp



and installations from the outset, and in particular quality street furniture. Some 90% of the funds received by the Foundation must be earmarked specifically for the realisation of projects, under a very strict system of supervision.

Museum of Contemporary Art Copyright: AIVP



Two complementary funding methods were set up. On the one hand – a fairly classic solution – concessions were granted for the commercial operation of certain private facilities (retail outlets, restaurants, IMAX cinema, etc.). On the other hand, a law was passed on 15 October 1997, establishing that 25% of donations or grants made by natural or legal persons to projects developed by the Foundation could be deducted from tax liabilities for the

The latter financial mechanism provided access

considerable private funds to spend on the project

immediately, whereas the municipality's initial input at the time had been limited to just US\$ 25,000. The number of private donors reached the remarkable figure of over 47,000 in 2001, a clear sign of the initiative's popularity with the wider public. This injection of funds meant that the public spaces, which made up 80% of the overall surface area concerned, could be equipped with high quality materials

K.2. TURN THE HOLDING OF EVENTS INTO A SOURCE OF FUNDS TO INVEST IN DEVELOPMENT PROJECTS

The organisation of events, whether cultural, sporting or recreational, can contribute to local economic development. Much research has been carried out in an effort to identify, characterise and measure the extent of the economic impact generated by these different events. The findings have highlighted the positive effect for the territories concerned. An event-based policy can offer port cities a means of generating public revenue streams locally and funding their development projects. It also serves to enhance their local and global image.

• THE TALL SHIPS RACES

Alongside such global events as the Olympic Games or Universal Exhibitions, which are traditionally seen as a catalyst for regeneration and redevelopment (Barcelona, Lisbon, etc.), the Tall Ships Races are among the world's largest public attendance sports events. They are held every summer in European waters by Sail Training International, bringing together between 60 and 100 vessels from around twenty nations. These events attract both local residents and hundreds of thousands of enthusiastic spectators (sometimes over a million) to the docks of port cities.

Over recent decades, municipal and port authorities have been almost unanimous in their verdicts on these events: a Tall Ships Races stage generates growth and new regeneration opportunities for waterfront areas.



Copyright: Knut Western Sail Training International

The influx of visitors, tourists, spectators and professionals has a significant positive impact on the local economy, while creating revenue for local businesses. An impact study carried out for Newcastle Gateshead, which hosted a stage in 2005, found that the event had generated £50 million for the region.

A Tall Ships Race often acts as a catalyst for regeneration of the dock areas that host it: 500 m

of quays in Riga in 2003, the Wellington Dock in Liverpool in 2008, etc. In Greenock (which staged legs in 1999 and 2011), the project to transform the Albert Dock's vast "Sugar Sheds" into a cultural centre was given a major boost by the 2011 event. For Szczecin, hosting the Tall Ships Races in 2007 formed a distinct component of a long-term strategy to regenerate the entire city, including the abandoned industrial areas, and enhance its tourist image. There are many more such examples.



GOVERNANCE AND PROJECT MANAGEMENT

Housing development strategies or plans to fill in dock basins can pose an irreversible threat to the future of existing port activities. One way to avoid such pitfalls involves clearly identifying the port's current footprint and the ways in which it is likely to be altered under various port development scenarios. The findings can then be used to examine compatibilities - and incompatibilities - between port expansion or redevelopment projects on the one hand, and urban development projects on the other.

This example alone illustrates the need to consider the range of options available for urban and port (re)development, and to ensure adequate means of dialogue and consultation are in place.

In addition to this, however, the challenge is to secure the engagement of civil society, ensuring that the population properly understands and supports projects as they progress.

- L. WHAT IS THE ROLE OF STAKEHOLDERS, PORT AND LOCAL AUTHORITIES?
- M. HOW TO STEER CITY/PORT PROJECTS?

L. WHAT IS THE ROLE OF STAKEHOLDERS, PORT AND LOCAL AUTHORITIES?

- L.1. FORMALISE FRAMEWORK AGREEMENTS REGARDING DEVELOPMENT PROJECTS THAT AFFECT THE CITY AND THE PORT
- L.2. TURN THE PORT INTO AN ACTIVE PLAYER IN CITY LIFE
- L.3. MAKE PORT ACTIVITIES KNOWN TO THE CITIZENS



L.1 FORMALISE FRAMEWORK AGREEMENTS REGARDING DEVELOPMENT PROJECTS THAT AFFECT THE CITY AND THE PORT

In cases where the city and port have adopted projects that are likely to come into conflict, but where local realities mean that current plans are already set in motion, consultation bodies and forums are necessary but not in themselves sufficient. The creation of a joint structure, formally laying the foundations for harmonious and sustainable development, can provide guarantees and ensure success for the territory.

• DURBAN (SOUTH AFRICA)

The need for a common approach to planning was formally recognised in 2003 with the signing of a Memorandum Of Understanding between the City and the Port, leading to the joint "Transnet eThekwini Municipality Planning Initiative" (TEMPI) in 2006. This initiative aims to combine the objectives of the Master Plan for the port of Durban developed by Transnet, the state body responsible for South Africa's ports, and the Durban municipality's development plans.

The ultimate aim of the TEMPI programme is to create a decision-making framework based on a shared vision and mutual understanding of future development needs for the port and the city.

After decades marked more by conflict that cooperation, the TEMPI programme has helped to foster stronger relations. While there are still areas of disagreement, the parties nonetheless have a better understanding of the overall context, enabling them to work towards a mutually acceptable settlement.

The programme has matured with time and, eight years after its inception, is now recognised as one of the Strategic Investment Projects (SIPs) that form part of the South African government's national infrastructure plan.



Durban, aerial view Copyright: Transnet

The 2050 Vision for the Durban-Gauteng Freight Corridor, published by Transnet and the eThekwini Municipality in September 2010, is part of this approach. The "Back of Port Local Area Plan" drawn up for the City by Graham Muller Associates in May 2012, and its proposals for rationalising the use of urban spaces located immediately adjacent to the port, similarly reflect a commitment to ensuring that the city and port use the available land in as harmonious a way as possible.

L.2. TURN THE PORT INTO AN ACTIVE PLAYER IN CITY LIFE

Lack of knowledge about the port's activities and contribution to city life, especially in economic terms, is often a source of misunderstanding, indifference or even hostility on the part of citizens. In addressing this, the authorities have a crucial role to play which may entail:

- regular participation by the port authority in the city's cultural and/or social activities (exhibition, charity, etc.);
- organising regular events (music, cinema, sports, sailing, "port days", etc.) in city/port interface areas. The impact of such events can be maximised by holding them at sites with direct views of the working port or where port activities have been preserved.

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• VALPARAISO (CHILE)

After 80 years without maritime works, the lack of available coastal land for port activities and the substantial rise in goods transit mean that one of Chile's main ports is now in urgent need of redevelopment. The port of Valparaíso has therefore embarked on a series of short and medium-term infrastructure projects, requiring a high degree of interaction with the city.

The solutions identified include regenerating a tourist and commercial waterfront area (Puerto Baron), and designing sustainable new infrastructures for port and logistics activities. To strengthen this synergy with the city and its population, the port of Valparaiso is looking to encourage greater contact between local residents and the port, by organising a variety of social, cultural, recreational and sporting activities in port areas. These activities do however need to be environmentally friendly, while preventing illegal behaviour and ensuring personal safety. In Valparaiso, fifteen years of experience and a host of cultural, sporting, recreational and other initiatives have shown that it is possible to open part of the port temporarily (10 days per year), with events attracting up to 15,000 visitors in some cases. The port and its concession holders are investing up to US\$ 500,000 annually.





Copyright: EMPRESA PORTUARIA VALPARAISO (AIVP Days, Helsinki, June 2013)





Copyright: EMPRESA PORTUARIA VALPARAISO (AIVP Days, Helsinki, June 2013)



Governance

L.3. MAKE PORT ACTIVITIES KNOWN TO THE CITIZENS

In addition to the various ways in which the Port can be involved in the life of the City, as outlined above, there are a number of practices that can promote better knowledge of the port:

- the organisation of events and "port days/weeks". There are many examples of this type of event (Antwerp, Brussels, Valparaiso, Le Havre, etc.). When organised repeatedly, they can become a forum for regular interaction between the port and population;
- organising guided tours, by boat to provide a different perspective, closer to the ships and the port facilities, and/or by bus with tours starting from points close to other tourist locations in the city. The creation of pedestrian promenades or cycle paths with access to natural or artificial viewpoints: building viewing platforms, access to roof terraces on certain warehouses, etc.
- creating "port centers": more ambitious than mere port museums, the port center concept is based on an interactive approach that enables visitors to learn about the day to day life of the modern port, while educating a wider audience and introducing young people to a whole range of potential future careers.

AIVP is an active supporter of this social integration-oriented approach, through the "Port Centre Network" initiative launched in 2011. The network now brings together the existing Port Centres in Antwerp, Genoa, Le Havre, Livorno, Rotterdam, Ashdod, Melbourne, Vancouver, etc.

http://www.portcenternetwork.org



Space

Environment

M. HOW TO STEER CITY/PORT PROJECTS?

M.1. FACILITATE DIALOGUE BETWEEN THE CITY AND THE PORT THROUGH JOINT COMMUNICATION STRUCTURES

M.2. LET THE COMMUNITY BECOME INVOLVED IN DESIGNING NEW PROJECTS

M.3. ADOPT A LONG-TERM APPROACH TO PROJECTS AND ACHIEVE CITIZEN SUPPORT THROUGH PROACTIVE COMMUNICATION STRATEGIES

M.1. FACILITATE DIALOGUE BETWEEN THE CITY AND THE PORT THROUGH JOINT COMMUNICATION STRUCTURES

The creation of structures enabling port and urban authorities to set out their requirements and redevelopment strategies represents an opportunity to compare urban and port projects side by side, and to identify any functional incompatibilities or technical impossibilities at an early stage. Dialogue may be opened up to include the wider community affected by projects (private partners, population, etc.), helping to anticipate potential conflicts and move projects forward.

• PARIS (FRANCE)

The "Local Port Communication Committee" was set up as a forum for consultation between the sponsors of redevelopment or regeneration projects, and all other stakeholders, including local residents. Over the course of 2011 and 2012, a total of eight meetings were held in the ports of the lle de France region. They brought together local residents or residents' associations, representatives of local communities, industrial stakeholders and "Ports de Paris", providing them with information about the activities and audits carried out at industrial sites and allowing them to discuss potential changes and improvements. A calendar of meetings is scheduled annually, depending on current developments at ports or platforms located in sensitive areas.



Copyright: Haropa Ports de Paris



M.2. LET THE COMMUNITY BECOME INVOLVED IN DESIGNING NEW PROJECTS

Ignorance of port territories or the needs and constraints associated with port activities can result in the population having a poor understanding of projects to redevelop port/city interface areas. Faced with what is often seen as an opaque process and the risk of misunderstanding or even outright rejection, it can be useful to adopt approaches aimed at better explaining the port and its relationship with the city. In addition, citizens can be consulted and informed at regular intervals as the project progresses. These measures will ensure proper dialogue while also bringing citizens on board with projects.

• TORONTO (CANADA)

"Port Lands": a redevelopment project is currently being led jointly by Waterfront Toronto, the City of Toronto and the Toronto and Region Conservation Authority, to redevelop 356 hectares of a former industrial and port site. Consultation meetings with the local community are organised as the various stages of the project progress. Advisory committees comprising local residents, economic and other stakeholders are also set up to provide feedback for the teams in charge at key points of the projects. A dedicated website has been created to act as an information gateway, with a report on the progress of the overall project, along with a library of useful documents relating to projects up for consultation, and minutes of meetings. http://www.waterfrontoronto.ca/



A dedicated newsletter, Update from Waterfront Toronto, provides news on the various projects, consultation meetings or documents made available for consultation. The newsletter is a monthly publication, but the same channel is also used to publish articles and specific notices, for example announcing meetings and inviting the public to attend. It is also often used to issue invitations to more festive events, such as the inauguration of a particular project.



get involved

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share your views

The portal website naturally allows visitors to explore the different sites concerned, but it also offers information about the various opportunities created by projects, especially in terms of jobs. This strategy has been taken up and expanded upon by a blog called "On the waterfront", and by the use of social media including Facebook, Tweeter, YouTube, Flickr, etc.



• LYON (FRANCE)

In 2010, the non-profit association "Robin des Villes" launched its "Des rives et des rêves" (Riverbanks & Dreams) programme, aimed at redefining the relationship between riverside industrial sites and towns. Lyon's Edouard Herriot Port is the first to benefit from this approach. With support from the Compagnie Nationale du Rhône and Voies Navigables de France among others, the programme involved tours and an open day, during which residents can explore the port. There were also workshops designed to give port dwellers a chance to express their needs and desires. Students, the city's future professionals, were then asked to design projects.



The programme resulted in a publication, setting out the approach adopted and including messages from various people. An exhibition was then organised in November 2011 at the site of the Edouard Herriot Port.

Copyright: Robin des Villes

In 2012-2013, the discussion focused on the Port Saint-Louis du Rhône, and its coexistence with the city, industry and natural spaces.



Copyright: Robin des Villes

M.3. ADOPT A LONG-TERM APPROACH TO PROJECTS AND ACHIEVE CITIZEN SUPPORT THROUGH PROACTIVE COMMUNICATION STRATEGIES

Whether or not they are predictable or controllable, the imponderables encountered during any large-scale development project are numerous. They turn projects into drawn-out affairs, with the population forced to wait for the results to become visible.

A strategy of regular, tangible communication can bring the project to life and help dispel the impression of inertia.

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• LE PORT (REUNION ISLAND – FRANCE)

The city of Le Port has an ambitious project to link up the old port with the heart of the city. It has embarked on a plan to develop an urban thoroughfare running through the city in a straight line, and allowing the different districts to converge on the port at Pointe des Galets to join the sea. Regular communication initiatives have been organised to provide updates and information on the "Mail de l'Océan" project, the aim being to ensure it retains the engagement and support of the local population.

From the outset, the communication strategy has been centred on the principle of *visibility*. Over the years, major campaigns have been deployed. These have mainly taken the following forms:

tangible, permanent displays:

- a giant, illuminated model (depicting the future face of the city and port, on permanent free display)
- physical on-site demonstration of the route to be taken by the future Mail de l'Océan, with the installation of symbolic signs (with a first campaign in 2010, and a second in 2013)
- one-off events:
 - open days for school and university groups including presentations of the "La ville est port" project centred on the model.
 - children's drawing competitions, with the entries used to make postcards.
 - large on-site display boards.



Copyright: Ville du Port



Copyright: Ville du Port



• AUCKLAND (NEW ZEALAND)

For the authorities responsible for Waterfront Auckland, it was not enough merely to create new buildings and organise events to attract the population to this formerly private site. A global strategy was needed in order to create a common identity shared by the entire community and to encourage the population to take ownership of the site.

In addition to a dedicated website and newsletter, an ongoing annual programme of social, cultural and business events was put together with the different waterfront areas. Since 2011, for example, the Wynyard Quarter has hosted activities under programmes such as "Workshops on the Wharf" aimed at a child audience, or the "Silo Cinema and Night Markets": over the summer period, over 50 events are held in the public spaces developed around the former concrete silos that have been retained (Silo Park), including open-air screenings and exhibitions.



Silo Park - Copyright: Waterfront Auckland



Silo Cinema - Copyright: Waterfront Auckland

SUMMARY



INDEX of the port cities mentioned

A CORUNA (SPAIN)	р. 86
AMSTERDAM (NETHERLANDS)	р. 18, 24
ANTWERP (BELGIUM)	p. 56, 84
AUCKLAND (NEW ZEALAND)	р. 76, 127
BARCELONA (SPAIN)	р. 39, 107
BILBAO (SPAIN)	р. 112
BORDEAUX (FRANCE)	p. 94
BREMERHAVEN (GERMANY)	p. 85, 103
BRISBANE (AUSTRALIA)	p. 51
BRUSSELS (BELGIUM)	p. 30, 59
CAPE TOWN (SOUTH AFRICA)	р. 69
CHERBOURG (FRANCE)	P. 89
COPENHAGEN (DENMARK)	р. 22
DELFZIJL (NETHERLANDS)	р. 83
DUNKIRK (FRANCE)	p. 91, 96
DURBAN (SOUTH AFRICA)	р. 117
FREMANTLE (AUSTRALIA)	p. 82
GENOA (ITALY)	р. 110
GUAYAQUIL (ECUADOR)	р. 113
HAIFA (ISRAEL)	р. 34
HAMBURG (GERMANY)	p. 31, 77
HELSINKI (FINLAND)	p. 68, 85
HONG KONG (CHINA)	р. 55
HUELVA (SPAIN)	p. 98
KALUNDBORG (DENMARK)	р. 93
KOPER (SLOVENIA)	p. 87
LE HAVRE (FRANCE)	р. 28, 37

SUMMARY

LE PORT (REUNION ISLAND – FRANCE)	р. 33, 126
LISBON (PORTUGAL)	p. 61
LONG BEACH (UNITED STATES)	р. 13
LORIENT (FRANCE)	р. 108
LOS ANGELES (UNITED STATES)	p. 67
LYON (FRANCE)	р. 125
MALAGA (SPAIN)	p. 62
MARSEILLES (FRANCE)	p. 19, 45, 89, 97
MELBOURNE (AUSTRALIA)	p. 15, 32, 53
MIAMI (UNITED STATES)	р. 46
NAANTALI (FINLAND)	p. 85
NANTES (FRANCE)	р. 54
NEW YORK (UNITED STATES)	р. 75
NINGBO (CHINA)	p. 58
OSLO (NORWAY)	р. 65
PARIS (FRANCE)	p. 16, 48, 122
REYKJAVIK (ICELAND)	р. 105
ROTTERDAM (NETHERLANDS)	p. 21, 86, 93
SAINT-NAZAIRE (FRANCE)	p. 57
SAN FRANCISCO (UNITED STATES)	P. 90
SEVILLE (SPAIN)	р. 26
STOCKHOLM (SWEDEN)	р. 85
STRASBOURG (FRANCE)	р. 70
TALLINN (ESTONIA)	p. 85, 90
TANGIERS (MOROCCO)	р. 50
TORONTO (CANADA)	р. 123
TURKU (FINLAND)	p. 85
VALENCIA (SPAIN)	р. 80
VALPARAISO (CHILE)	р. 44, 118
VEJLE (DENMARK)	р. 23





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13 challenges facing us all46 guidances to address these challenges76 examples of good practices58 port cities





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