



W19 – The Sustainable City

**SUSTAINABLE DEVELOPMENT OF THE
EUROPEAN PORT-CITY INTERFACE**

Tom Daamen

t.a.daamen@tudelft.nl



www.enhr2007rotterdam.nl

**Paper ENHR Conference 2007
June 25-28, Rotterdam**

Sustainable Development of the European Port-City Interface

By Tom Daamen MSc.

Department Real Estate & Housing, Faculty of Architecture, Delft University of Technology
E: t.a.daamen@tudelft.nl T: +31(0)152787725 F: +31(0)2783171

Abstract In the past, areas situated around the geographical boundary of ports and their cities have generally been subject to dereliction, which has often been followed by ‘waterfront redevelopment’ efforts. In the major seaport-cities of today, the development of the port is still leading redevelopment opportunities. However, in contrast to what has gone before, the areas now in focus have very different characteristics, and give rise to a new redevelopment typology. Based on port-city development literature and empirical observations in Rotterdam and Hamburg, this paper will introduce this new typology, and argue the need for a new interpretation of the contemporary port-city interface to support its sustainable development. This interpretation demands an interdisciplinary approach to the contemporary port-city interface, involving not only its spatial, but also its economic, socio-cultural and environmental features. The approach focuses on the interests of the actors involved in the development of the port-city interface, and (the need for) relationships and coalitions between them in order to reach sustainable development results.

Keywords: Port-city interface, waterfronts, Rotterdam, Hamburg, sustainable development

Introduction

‘[The] port-city interface is sensitive and controversial, and needs careful, appropriate planning solutions.’ – Brian Stewart Hoyle (1998)

In the past, areas at the geographical boundary of ports and their cities have generally been subject to dereliction and subsequent urban redevelopment. Old port areas are interesting for urban re-use due to their location on the waterfront and their close proximity to the inner city. Moreover, the public attitude towards waterfront zones has changed significantly since the 1960’s, and has created a high civic – and thus commercial – interest in waterfront locations inside the urban realm. Today, the pressure for the development of alternative uses in areas that are obsolete for or underutilized by their original functions is mounting, particularly in parts of the port (still) surrounded by the city. In fact, the great amount of attention for waterfront redevelopment projects around the globe have triggered a ‘logic’ which features an unstoppable and ongoing port decline or migration, automatically resulting in urban development opportunities. In major seaport-cities, however, this modus seems about to be put seriously to the test. What about harbour zones inside cities of which the port is still a growing and valuable asset? What will happen in still functioning port areas adjacent to the inner cities where ancient harbours have already become tourist attractions? Are these port areas, simply, up for urban redevelopment next? And if so, how does this process relate to the development of the port, its city, and the port-city interface? These questions are the motives behind this paper.

The main argument in this paper is that the development of the contemporary major seaport-city interface is different than it was some 20 years ago, and that this has implications for the way it is to be approached and handled by the actors involved. A major seaports' evolution has become subject to a much more elusive set of factors, and its development process is currently being evaluated and re-conceptualized in practice as well as in theory. The logic in the urban re-use of port territory has thus, at least in leading European port-cities, come under question in policy-making and implementation processes. Illustrated by the case of Rotterdam and Hamburg, the argument in this paper will lead to an alternative interpretation of the contemporary port-city interface, emphasizing (the need for) relationships and coalitions between critical actors rather than the ongoing separations and divisions apparent between them. This interpretation is based on the literature about port-city development, and empirical observations of port-city interface development initiatives in Rotterdam and Hamburg.

The structure of this paper is as follows. First, an exploration of the literature on maritime port development will give a clear view on the factors shaping a major seaports' evolution, particularly in continental Europe. Second, the relationship between these ports and their cities will be elaborated upon, and the emergence of the waterfront redevelopment phenomenon will be placed in the ambiguous context of the evolving major seaport-city interface. Third, the theoretical assumptions taken from port-city literature will be reflected upon by descriptions of the cases of Rotterdam and Hamburg, and the development initiatives emerging in their port-city interface. The results of these reflections will reveal the differences between past and present development initiatives in the port-city interface, and the need for a different planning approach in order to reach sustainable results.

1 The Development of Maritime Ports

'Understanding of the present scene [in ports] is impossible without reference to the past...' – James Bird (1963)

Spatial changes in the port-city interface have always been preceded by changes in port development. There is a vast amount of scientific literature (particularly from the field of geography) devoted to describing, analyzing, and explaining the development of maritime ports. This section will give an overview of the different ways port development has been explained since before the 1960's. It reflects how the forces driving the development of maritime ports have changed through time, and how it has become increasingly difficult to maintain a comprehensive and general perspective on the port phenomenon. The theoretical discourse in this section will largely follow the distinctions in port development research made by **Olivier & Slack (2006)**. Their attention for underlying questions of epistemology in these approaches reflects the dynamics in the contemporary development of ports in different parts of the world, and the subsequent inadequacy of general models or concepts.

The Spatial Approach

Although geographers' interest in the development of ports date back to Morgan (1952), it was the research of Bird (1963) on the major seaports of the United Kingdom which led to the conception of his *Anyport* model. Bird conceived the port as a direct relationship between form and function and, in *Anyport*, port space is seen as a chronological and linear succession of historically distinct development phases (Olivier & Slack, 2006).

According to Slack & Wang (2003), Bird's *Anyport* model has endured four decades of theoretical and empirical challenge. According to Bird (1963), his model was to provide a standard with which to compare the development of actual ports. The model consisted of six eras (see figure 1), each involving an addition to or change in the physical lay-out of the port, helping to build up to the complex pattern of a modern major port. Bird explains that each of the eras was called into being by growth of shipping trade or technical advancements in the carriage of goods by sea. Hence, ship designers have long been important pacemakers in shipping transport innovations. However, as Bird argues, they have a much easier task than the port engineer, who has to cope with 'all the difficulties of those complicated physical sites where land and water meet' (Bird, 1963).

Bird's long lasting contribution to theorizing the development of maritime ports particularly features technology as (one of) the leading factors in port growth. In his considerations about the future of ports, Bird argues his expectation that the port will contain much of the existing lay-out adapted to new uses, and new lay-outs and installations suited to new types of

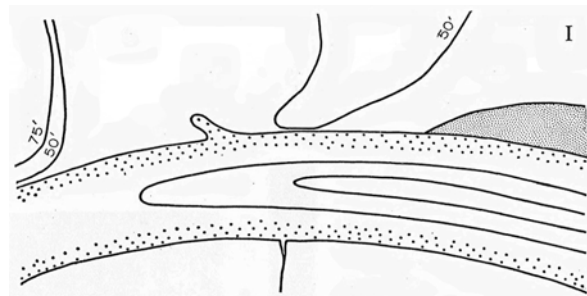


FIG. 2 The Site of *Anyport*
A left bank tributary of an estuary has caused an embayment, largely dry at low tide (coarse stipple in the estuary) and flanked by slightly higher land, before estuarine marshes begin downstream (fine stipple on the right of the diagram). North points, scales, and diagram borders have been omitted on purpose from the illustrations in this chapter of the hypothetical *Anyport*.

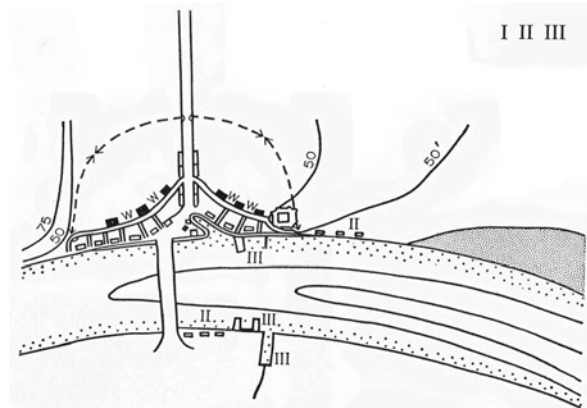


FIG. 3 *Anyport* After Three Eras of Development
I—The Primitive Port.
II—Marginal Quay Extension.
III—Marginal Quay Elaboration.
W—Warehouses; Quayside buildings, warehouses or transit sheds; Semi-circular town wall, with stronghold where the wall meets the estuary downstream.

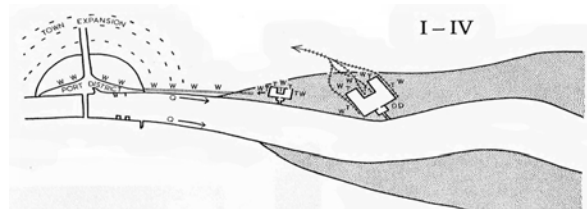


FIG. 4 *Anyport* at the End of Four Eras of Development
I-III as Fig. 3.
IV—Dock Elaboration.
DD—Dry dock associated with later docks; Q, Continuing marginal quay extension, T and W, Transit sheds and warehouses.

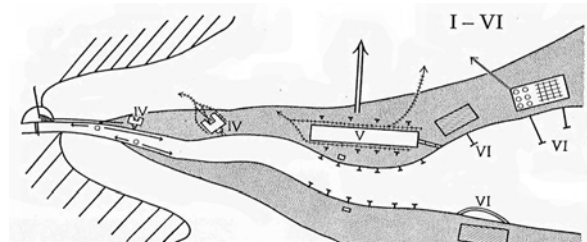


FIG. 5 *Anyport* Complete
I-IV as Fig. 4.
V—Simple Lined Quayside, over 1,500 feet uninterrupted in one line, 26 feet of water L.W.O.S.T. alongside, with, if necessary, an entrance lock 750 feet long.
VI—Specialized Quayside, notable at T-head jetties and at large wharves in the river.
Q—Continuing marginal quay extension.
T—Transit sheds, or, in the river, jetties serving a continuous frontage of industry.

Figure 1 James Bird's *Anyport* model (1963)

ship and new methods of cargo handling, with explicit reference to containers. Next to the potential spatial impact of containerization, Bird (1963) also recognised some other factors outside of his primary historic-morphological perspective that would prove to be (and indeed are) of major significance to maritime port development: dock labour, port administration, and finance. Although the spatial approach in the research of maritime port development has also led to other morphological and topological models, explaining the development of urban port spaces in terms of a port life-cycle (Charlier, 1992) or placing ports as a structural node in transport networks respectively, it seemed that a different approach would eventually have to be adopted in order to deal with new empirical realities. In this regard, Olivier & Slack (2006) talk about a behavioural approach, which surfaced in the mid-1980's in port studies and tried to evaluate port-carrier relationships from the port users' perspective, i.e. the behaviour of those who (want to) make use of port facilities.

Behavioural Approach

The behavioural approach to maritime port development research was accompanied by the mentioned perception of ports being mere components of global intermodal transport networks. The increasing control of these networks by shippers and ocean carriers left ports with a somewhat passive role, making it scientifically and practically relevant to understand the behaviour of port users – particularly their port selection decision-making. According to Olivier & Slack (2006), the true epistemological break in the behavioural approach to maritime port development lies in the fact that process was emphasized over form; decisions made by port users are not as rational and straightforward as they theoretically seemed to be. This point is argued by Slack's earlier work, in which he points out that the weakness in 'traditional hinterland studies' lay in their over focus on issues of cost and ports' inherent attributes in assessing port performance, overlooking shippers' *perception* of them (Slack, 1985). As was being increasingly proven by behavioural studies, advancements in intermodalism and logistics made ports become 'pawns in a game', inserting themselves in a global intermodal network, following terms that are increasingly defined by a consolidated ocean-carrier community, which is motivated by global rather than local imperatives (Slack, 1993; Olivier & Slack, 2006). Referring to earlier arguments made by Willingale (1984), Slack (1993) confirms that in the now world-wide transportation game, port authorities find themselves less and less 'in control of their own destinies'. Logistics have not only subsumed the port within a global system logic but also, increasingly, within transcending corporate agendas (Olivier & Slack, 2006).

As scholars doing research into the development of ports continued to describe it in more complete though more abstract terms than was common in mere spatial studies, their tendency towards general models was not so different from Bird's *Anyport* and the like. As a healthy scientific reaction to the urge towards structure – and in conjunction with Bird's reference to the importance of the port administration factor – a renewed attention towards agency emerged in maritime port development research. A combination of more empirical studies, a central concern for ports in their capacity to steer their own future, and the institutional reforms of the 1990's in infrastructure provision, triggered the consideration of governance as an important scientific concept in the further explanation of maritime port development.

Governance approach

As empirical research continued, port structures that were outgrowing their host cities gave rise to the idea of ‘megaports’ and the formation of ‘regional port complexes’, who would often stretch over multiple jurisdictions and whose development would require a much higher level of regional coordination. Based particularly on the successful development of Asian ports (particularly the Hong Kong – Pearl River Delta system), research into institutional contexts and governance structures resulted in the attention for stakeholder relations. Studies show that private terminal operators would now own facilities in competing ports within an East Asian regional system, that policy environments in such a system can have spatial (de)concentration effects beyond market forces alone, and that government policies stimulating spatial alignment result in an atypical spatial jumping pattern by private players (Wang, 1998; Wang & Slack, 2000; Slack & Wang, 2003; Wang & Olivier, 2003). As a result, ports would now be conceived as a ‘node for contacts and contracts’ (Notteboom & Winkelmanns, 2002), giving rise to a complex web of stakeholder relationships and strategic alliances in and between competing ports based on ownership structures (Song, 2002). Thus, the spatial fragmentation and reconfiguration of particularly container ports – bringing into further question the notion of port development as a continuum proposed by *Anyport* – are seen to be shaped by decisions made by private actors who have inherited new roles due to institutional change (Olivier & Slack, 2006). In Europe, these trends are joined with the ongoing ‘corporatisation’ of port authorities and the subsequent retreat of direct government involvement in port management. However, as argued by Verhoeven (2006), management reform schemes must be accompanied by an adequate legal framework on a European Union (EU) level, creating certainty about the institutional position of a port authority and securing both public and commercial interests. It can be expected that, as the discussions on an EU port services’ Directive continues, competing European ports and their users will also show strategic behaviour in anticipation to and the formation of new, Union-wide regulations.

Fundamental factors

In this section, changes in the factors determining the development of maritime ports since the 1960’s have been described by following the way in which scholars have tried to make scientific sense of those changing factors. However, the key explanatory concepts of today (e.g. nodes and networks, the power of multinational firms and other transnational agents, and the role of regulation and institutional arrangements and environments) are primarily the scientific reflection of changes in the development maritime ports due to the improvements in transport technologies, the massive enlargement of infrastructure, and the falling of transport costs (not least thanks to cheap oil) in the second half of the 20th century (Hall et al., 2006). Hence, the constant reassessment of these ‘fundamental’ factors is crucial for not losing touch with reality. Hall et al. (2006) explain that in conjunction with contemporary facts of localized congestion, globally oriented systems of production, distribution, and consumption, combined with an increasingly competitive, deregulated market environment, we can easily imagine that the costs of maintaining the existing distribution structure (of which ports are an integrated part) will increase, and that the existing comparative advantages of many (transport and economic) activities will be compromised. Surging demand and peak

oil prices are now forces actively shaping energy prices (Deffeyes, 2005). Together with the unsustainable character of the transportation system, a modal shift towards more energy-efficient modes such as rail and maritime shipping, and, perhaps, a new global reorganisation round of production and distribution can be expected. If so, scholars will be going back to the fundamental factors in explaining the development of maritime ports (and indeed many other developments), notwithstanding the importance of political intervention, market power, and core corporate interests (Hall et al., 2006). In general, all these factors play a role in the development of maritime ports, their associated cities, and the port-city interface between them.

2 The Port-City Relationship

‘Until well after the Second World War ports created cities, and big ports created big cities. Since then, however, the relationship has become more complex.’ – Norcliffe et al. (1996)

The development of the major port-city interface can be regarded as an evolving relationship between a port and its urban surrounding. Like the development of the maritime port, a mere spatial point of view has proven too narrow to explain what has been going on in port-city interfaces since their conception. Thus, in order to get a more complete, though still quite general idea of the way port-city relationships have been developing, it has to be approached from different angles. As can be expected, the focus on this more specific part of port-cities has obliged scholars to point out the relationships, and thus the port-cities, for which the conclusions of their research apply to. Distinctions are tied to the fact that, in the second half of the last century, the development of ports and their cities became increasingly differentiated and often took place more independently in the face of regional competition and globalisation. Indeed, many historically significant ports have faded while others flourished, with differing effects for their (urban) surrounding. The port-city relationship seems to have become particular to different parts of the world, and its development more specific to them.

Port-city concepts and perspectives

The concept of the port-city interface was introduced by Hayuth in 1982. He noticed that next to technological changes and the related modernisation of port operations, an increasing public concern over shoreline areas had emerged. These developments had accelerated the trend of ports abandoning the central areas of cities for sites downstream, which not only led to a loosening of the spatial and functional relationship between cities and ports, but also to a weakening of the traditional land-use characteristics of the urban waterfront. Hayuth (1982) approached the port city-interface from a spatial and functional point of view, and thus thought of it primarily as a geographical ‘line of demarcation’ between port-owned land and urban zones, or, more time-oriented, as an ‘area of transition’ between port land-uses and urban land-uses. Before Hayuth (1982), scholars were already interested in describing the changes in the port-city relationship socially (Vigarié, 1979), and explaining the subsequent space-use changes from a socialist point of view (Harvey, 1973), based primarily on studies of European and North

American port-cities respectively. However, it were Hayuth (1982) and Hoyle (1989) who saw waterfront renewal as prime examples of a wider break in social attitudes towards ports.

Hayuth (1982) observed that ports, due to the changing public opinions, had to increasingly compete for waterfront space. He concluded that not only the demand for waterfront space by other users (industrial, commercial, residential, and recreational) was growing, but also that the approval of port projects by various authorities had become a long and tedious process. This and more led Hoyle (1989) to conceptualize the port-city interface in alternative ways, such as an interactive economic system (especially in terms of employment structures), as an ecological system, as an area of integration in transport terms, and, even more progressive, as a particular area of conflict in policy formulation and implementation. Later on, based on the earlier work of Norcliffe (1981), Hall et al. (1982), Hayuth (1982), McCalla (1983), and Hoyle (1989), Hoyle & Pinder (1992) conclude that the port-city concept is rightly open to many dimensions (e.g. spatial and temporal, social and economic, functional and technological), and acknowledged that politics had also become an increasingly important factor in port-city relations. What's more, for practical purposes, Hoyle & Pinder (1992) refer to planning perspectives, which have to incorporate concerns like the degree to which a port and a city affect one another in land-use terms, in an urban transport context, and in relation to employment opportunities – issues often giving rise to a good deal of controversial debate on the local and regional level.

Evolution of port-city linkages

As scientific research on the development of maritime ports entered the behavioural phase from the mid-1980's onwards, scholars studying port-city interfaces seemed to have different interests. They (still) focused mostly on the spatial development of Western port-cities, particularly on the space-use implications of the changing port-city relationship. While Bird (1963) already anticipated the adaptation of older port areas for new uses, he probably did not expect those new uses to be almost exclusively urban. The exorbitant worldwide attention for this process led to a widespread, though far too


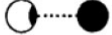




STAGE	SYMBOL ○ City ● Port	PERIOD	CHARACTERISTICS
I Primitive port/city		Ancient/medieval to 19th century	Close spatial and functional association between city and port.
II Expanding port/city		19th - early 20th century	Rapid commercial/industrial growth forces port to develop beyond city confines, with linear quays and break-bulk industries.
III Modern industrial port/city		mid - 20th century	Industrial growth (especially oil refining) and introduction of containers/ro-ro require separation/space.
IV Retreat from the waterfront		1960 s - 1980 s	Changes in maritime technology induce growth of separate maritime industrial development areas.
V Redevelopment of waterfront		1970 s - 1990 s	Large-scale modern port consumes large areas of land/water space; urban renewal of original core.
VI Renewal of port/city links		1980 s - 2000+	Globalization and intermodalism transform port roles; port-city associations renewed; urban redevelopment enhances port-city integration.

Figure 2 Different stages in the traditional port-city interface (Hoyle, 1998: 47)

general conviction that the port-to-urban-use transformation in the evolving port-city interface was an inevitable and ongoing process (Charlier, 1992). Its 'logic' can be illustrated by the outline of the evolution of the port-city interface given by Hoyle (1998, see figure 2). The stages I-V in Hoyle's overview reflected the way the port-city interface was widely perceived until well into the 1990's. The port-city interface became an urban redevelopment opportunity on the water's edge, providing areas which the city could reclaim and turn into a commodity after the port had often willingly turned its back. The combination of the ports' neglect and their cities' growing attention for obsolete port sites triggered the emergence of the often commercially successful waterfront redevelopment phenomenon in the 1970's. In the following decades, the phenomenon would become a world renowned 'model', propelling the push of the city into former port territory, and subsequently shifting the spatial and functional 'line of demarcation' further downstream. However, Hoyle (1998) also reveals a break from the port-city separation process since the 1980's, as major ports and their cities evolved into the 21st century. It is a break that reveals a reaction to the way port-city development has been understood in the past, and gives rise to an alternative way of thinking about the evolution of major seaport-city relations, and the spatial development of their interface.

Transitions and the Port-City Interface

In the 1990's, many scholars chose the global stage on which major ports were acting as their further level of analysis. Others focused on the local level of waterfronts, resulting in planning approaches and studies of architecture and urban design in areas where the port had left forever. Nevertheless, particularly in geography, some broader concepts have been proposed in which the global-to-local levels of inquiry involved in port, city, and waterfront revitalisation could be connected. Following the work of the already mentioned Harvey (1973; 1990), the development of port-city interfaces could also be perceived as a changing relationship within a larger framework of industrial change and capitalist transition. The economic 'Fordist to post-Fordist' shift, or the more socio-cultural 'modern to postmodern' transition of the Western world, made sense of the movement of ports out of cities, and helped understand the reoccupation of derelict urban waterfronts. Although such approaches were prevalent in urban studies, Olivier & Slack (2006) mention that they had only a marginal impact on port investigations due to an acknowledged weakness in empirical evidence and a wider affinity of port researchers with scale rather than scope. Nevertheless, positioning the development of the port-city interface in the middle of a much wider societal transition does create some important insights, and starting points for an alternative interpretation of current developments.

Post-Fordist theorists generally argue that a historical break took place in the early 1970's on grounds of major structural shifts in time (just-in-time), space (global segmentation and regionalisation of production), function (demand-driven) and organisational forms ('lean' management, small and medium sized enterprises, and vertical disintegration) of capitalist production systems (e.g. Harvey, 1990). The reaction of ports to this new scene accelerated the migration of their operations to outside city limits. Ports had to become 'lean and mean' in order to survive the increased competition with others in terms of cost and speed, and had to answer to the rise of flexible markets by adopting more containerisation and other forms of technological innovation (Norcliffe et al., 1996). Thus, in the efforts to adjust to the global spatial restructuring characteristic

of a post-Fordist era, ports left behind their urban roots (Olivier & Slack, 2006). This gave rise to the emergence of ‘non-port’ places or ‘non-place’ ports (see figure 3), and the abandoned waterfronts as one of its most visible results.

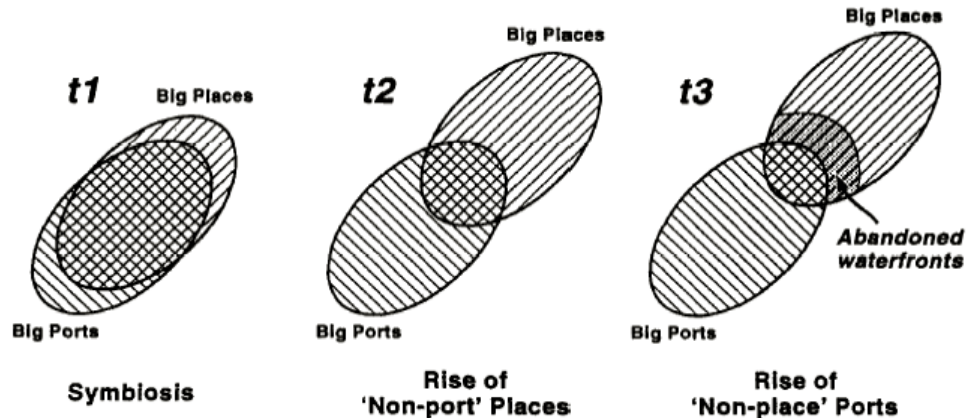


Figure 3 Big places and big ports, evolution and separation over time (Norcliffe et al, 1996)

Emphasizing consumption over production, post-Fordism was theoretically complemented by the concept of postmodernism, which helped to explain the commoditisation of traditional spaces of production, particularly those combining centrality with waterfront qualities. The expanding service sector, the related growth of well-paid scientific, managerial, technical and professional jobs, and the subsequent rise in the disposable income of an increasing amount of people, all increased the demand for housing, office, retail, and leisure functions in central and distinct places in the city. The postmodern emphasis on variety and individualism particularly favoured places like waterfronts, offering opportunities for creating not only a mixture of intimate, niche-like environments, but also for finding time and space-specific styles based on the long and important histories of their locations (Norcliffe et al., 1996). From this perspective, each mutation on the waterfront can be associated with a new round of capital accumulation based on exploiting new investment opportunities (Desfor et al., 1988, 1989; Merrens, 1988; Goldrick and Merrens, 1990). Hence, Norcliffe et al. (1996) conclude that the modern to postmodern transition has reversed the direction of influence between the city and the areas formerly occupied by its port. Indeed, waterfronts now mirror the socio-cultural trends of the city and its wider society, rather than the city reflecting the economic vitality of the port. The relations between port and city, as Norcliffe et al. (1996) mainly argue, have been fundamentally restructured.

Renewal of Port-City Links

In their article on the emergence of postmodernism on the urban waterfront, Norcliffe et al. (1996) also distinguish three headings under which the more complicated and subtle port-city relationship in the 1990's can be summarized. First, there are still relationships based on handling cargoes. However, by and large, these relationships have decreased due to falling employment rates after the introduction of cost- and labour reducing dock-side equipment, and the weakening interaction of the port with consignments in the local region because of its expanding hinterland. Second, there are relationships based on the

financing of trade. These have proven to be more important to port-cities, as the city's tradition, status, reputation, and accumulated know-how of (former) physical trade is extended to servicing contemporary trade in their own as well as other ports. Finally, the relocated ports have built up their own clusters of import-processing industries, reminiscent of those previously based in town. These clusters are also a suite of other businesses attracted there for 'non-port' reasons (Norcliffe, 1982; De Langen, 2002), which are now providing more jobs in the city region than dock-dependent activities. Hence, the presence of the port – be it with still growing activities or otherwise – still has many economic values in terms of direct and indirect employment, as well as in terms of facilitating an attractive business environment for both port and non-port related activities. However, the Fordist to post-Fordist transition of the port did generally have a significant social effect on port-cities caused by a sharp decrease in blue-collar employment opportunities. Today, port-cities therefore still often portray a relatively high level of unemployment among its citizens, and a relatively small middle-income population, resulting in sharp social and physical contrasts between different port-city districts. Nevertheless, as Hoyle (1998) argues and reflects in figure 2, the redevelopment of the urban waterfront has triggered a new association of the port with the city; at least in cultural terms – particularly with the re-use of historic symbols and objects of port-industrial heritage, but possibly also spatially, socially, and economically, notwithstanding the more general environmental issues involved in port-city development. In fact, as Merckx et al. (2004) state in their paper on the tension between city and port, an evolution in the interface between these two entities can be witnessed. They propose a shift away from Hoyle's model (see figure 2), towards a continuous and evolutionary spatial model, and an extension of the underlying dynamics of the model by linking development initiatives in the port-city interface to the role it can play in the relationship between critical actors, and in the public acceptance of seaport activities.

3 The Evolving European Port-City Interface

The first two sections of this paper gave an overview of the literature on port development and the 'state of the art' in scientific port-city interface interpretations. If anything, the above sections clarify the fact that there are many interpretations of the contemporary port-city interface, and that they largely depend on the interest and point-of-view of the actor involved. For planning purposes, however, it is important to take note of this ambiguity, and acknowledge the controversy involved in spatial development initiatives in the contemporary port-city interface. In this section, new development initiatives in the port-cities of Rotterdam and Hamburg will be explored. After the even unfinished waterfront redevelopment efforts of Rotterdam's *Kop van Zuid* and Hamburg's *HafenCity* close to their respective city centres, the current development assignments in these port-cities are of an unprecedented size and scope. The focus in the following explorations will be on the way these initiatives were managed and by whom, and will reveal their differences and similarities.

The Rotterdam 'CityPorts' Initiative

'In the next decennia, the Rotterdam CityPorts area is going to change strongly. The port will remain present in all its dynamics, but the city will increasingly interweave with its fabric. The ships, the cranes, the continuing industry and the fabulous views will become the background of a very special living and working environment. City and port are entering a new alliance.'

– Rotterdam Cityports Development Corporation (RCDC, 2005)

On January 1st 2004, the newly founded Rotterdam CityPorts Development Corporation (RCDC) Ltd. started the active investigation of all the remaining port areas within the Rotterdam diamond (the areas surrounded by the main highway) for development opportunities. The Rotterdam waterfront projects from the 1990's – internationally known as the *Kop van Zuid* (Head of South) projects, had proven that neglecting obsolete port areas could become very costly. Hence, the Rotterdam municipal government adopted a pro-active attitude in the attempt to prevent more brownfields to emerge along waterfronts within the Rotterdam diamond. It was this attitude that led to a motion by three members of the Rotterdam city council – which was accepted in November of 2002 – to found the RCDC. The port areas the RCDC would have to focus upon were renamed as 'CityPorts'. This CityPorts area, in which logistic seaport functions are still very prominent, is designated to transform from port to urban use in the next 25 to 50 years.

The founding of the RCDC went hand in hand with the corporatisation of the Rotterdam Municipal Harbor Company. The new Port of Rotterdam Ltd. and the Rotterdam municipal government participate in the RCDC equally, both owning 50% of the RCDC's stock. In spite of the municipal experience with other waterfront development projects, the initiative for the RCDC foundation was formally motivated by the plans for the *Maasvlakte II* – a North Sea land reclamation plan expected to accommodate 2,500 acres of port activities (see figure 4). With the plans for *Maasvlakte II* becoming more and more concrete, the future relocation of stevedoring companies from the CityPorts area to new sites with deeper waters became a logical expectation. In line with this expectation, the need for an independent Development Company was

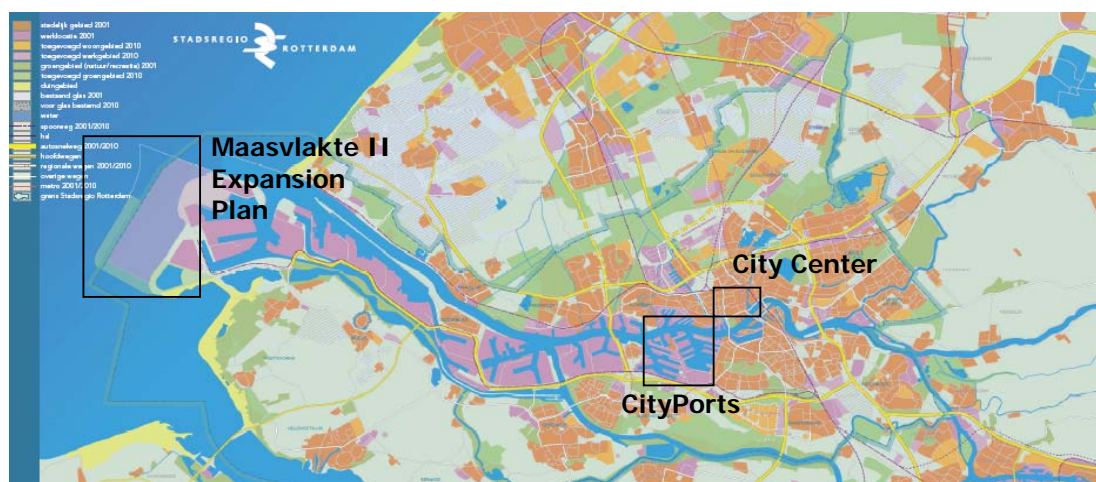


Figure 4 Rotterdam CityPorts in the Rotterdam Region

argued by the enormous size of the CityPorts area, the dependency of development opportunities on a delicate relocation process, and the strong demand for land by the city due to the lack of space for urban expansion. The idea of a separate and more independent Development Corporation was primarily inspired by examples elsewhere, such as the Hamburg HafenCity GmbH.

The CityPorts area, consisting of the *Vierhaven* and *Merwehaven* on the North bank of the river Maas, and the very large *Waalhaven* and *Eemhaven* on the South encompasses around 2,300 acres of port-controlled land (see figure 5). The area alone harbours more than 850 port or port-related companies, providing work for around 20.000 employees. Moreover, the area takes care of 40% of the total amount of container transshipment work in the Port of Rotterdam (RCDC, 2005); a branch of transshipment that shows significant growth towards the future. In fact, it is said that the CityPorts area could compete with any medium-sized seaport in Western Europe by itself. In 2006, the areas of the already obsolete *Maashaven* and *Rijnhaven* would be added to the study area.



Figure 5 The Rotterdam CityPorts Area in 2007

In February 2005, the RCDC published the concept of their Development Strategy. This strategic document was an intermediate result of several activities that were deployed by the RCDC in the course of 2004. Several conversations, workshops and symposia with the Rotterdam business community, municipal representatives, planning students and experts, pressure groups, other (non-) governmental organizations, and civilians were organized. Different technical, social, environmental, economic, and

architectural analyses were realized by the RCDC or commissioned to third parties. This way, the RCDC generated knowledge about the area and about the chances the area could offer the port-city of Rotterdam. Insights were shared with international experts on several occasions, of which two international workshops with representatives of port-cities all across Europe: Amsterdam, Antwerp, Barcelona, Dublin, Genoa, Glasgow, Copenhagen, and Hamburg. The RCDC stated that all the knowledge attained was incorporated in the Development Strategy.



Figure 6 The Rotterdam CityPorts 'Projects 2015' Plan

For the RCDC, its Development Strategy was, first and foremost, a document of communication: 'There is a clear win-win possibility [...] However, a condition for achieving that win-win situation is the prevention of a possible city-port competition' (RCDC, 2005). Consequently, the RCDC announced that the Development Strategy would be

followed by a consultation round with of over 50 stakeholders related to the CityPorts area. In contrast to what one might expect from a strategic document, the emphasis was on the area's contemporary state, and the importance of its current (mostly economic) strengths for the port and the city. **Figure 6** depicts the 'Projects 2015' plan that visualized some of the RCDC's ambitions, which in planning terms were hardly concrete. After the consultation round was completed in October 2005, the strategy and plans would not be changed or made more specific. In fact, the RCDC announced that some specific locations in the CityPorts area would become 'business cases' in the following year, and that it would (continue to) study some economic, programmatic, and infrastructural issues (RCDC 2005). During 2005, some national and international design competitions were organized, giving architectural and urban designers the chance to explore a 'what if' scenario for some specific locations within the CityPorts area. In December of last year, a third international symposium was organized with the IACP – The IACP Days, to reflect on the difficulties the RCDC had encountered with international experts and students in the fields involved with port and urban development.

In the first months of 2006, the RCDC announced that the Port of Rotterdam will retake the lead in the further development of the *Waalhaven* area south of the river Maas. The official explanation for this decision was that there 'is a strong growth in the demand for locations in the maritime and logistics sectors, due to positive economic developments. This is why it was agreed upon that the emphasis should be on the further development of the [already port-related urban functions in the –TD] *Waalhaven* area'. The RCDC, in contrast, would from now on focus their efforts only on the north shores of the river Maas and the area formally used by the famous *Rotterdam Droogdok Maatschappij* (RDM) on the north tip of the Maas' south banks. Consequently, it became clear that the joint effort of the port and city of Rotterdam to integrally develop the CityPorts area was abandoned. Even though the Dutch National Ministry of Housing, Spatial Planning and Environment announced that it would support this integral development, it is still unclear how this will take shape in planning and organizational terms.

Hamburg's 'Leap across the Elbe' Initiative

After the launch of the 'Hamburg – The Growing City' concept in the summer of 2002, the Senate of the Free and Hanseatic City of Hamburg commissioned a launch event. It was meant not only to inform stakeholders, but also engage them in the Senates new campaign. The mission statement and program of 'Hamburg - The Growing City', was to strengthen the position of Hamburg as one of the leading national and international centres for economic growth and quality of life. In June 2003, 450 stakeholders attended the kick-off event with business, trade, culture, politics, social and religious institutions, and was extensively covered in the media. In that same month in 2003, the Ministry of Urban Development and Environment, and the Chamber of Commerce also organized an International Design Workshop in the framework of the Hamburg Architecture Summer. Within The Growing City framework, the Hamburg Senate had committed itself to a 'new strategy of growth for the Hamburg quality of housing, quality at the work place, and quality of life'. The International Design Workshop called 'Leap across the Elbe', would bring together all kinds of experts, students and residents to think about possible futures for the 'Elbinsel' – an island of marsh-land surrounded by the northern and

southern flow of the river Elbe. Between the waterfront development initiatives of the famous ‘HafenCity’ adjacent to the city centre, and ‘Channel Harburg’ project in the most southern parts of Hamburg, the Senate concluded that it would only be logical to see how these could be spatially connected; this initiative would literally make the port-city of Hamburg ‘leap across the Elbe’, and would open the possibility to upgrade the area in the heart of the city-state adjacent to its large seaport.



Figure 7 Hamburg's Leap across the Elbe area (2003, 2005)

In the Design Workshop brief, the city-state's head of urban planning explains why the Elbe islands Kleiner Grasbrook, Veddel, and Wilhelmsburg (see figure 7) have recently moved into the focus of Hamburg's urban development policy. The initiative was prompted by the bids for the International Garden Exhibition (IGA 2013), for the Olympic Games 2012 (which was eventually granted to the city of London), and the ideas developed at the Future Conference Wilhelmsburg. Especially the development of Wilhelmsburg – a neglected part of the city with a working-class resident profile – could provide the connecting link to the metropolis severed by the river Elbe, and thus strengthen the quality of life as well as the entire attractiveness of Hamburg.

In October 2005, a report on the Leap across the Elbe initiative linked its development to yet another international event: the 2013 Building Exposition. This event will be combined with the already planned International Garden Exhibition, to be held in that same year. The process towards these events again involved many discussions, forums, and symposia in order to find development directions for the whole Leap-area that would be supported by local residents. However, although the Hamburg Chamber of commerce collaborated with the Ministry of Urban Development on the design brief in 2003, it would present its own plan for the same study area in November 2004 in the report 'Living and Working in the Heart of Hamburg – The Development Perspectives of the Elbe Island'. The area encompasses almost 1700 acres of port and industrial functions that are still generally successful. In the plans presented by the Chamber together with the South-Hamburg Business Association, most of the locations with economically healthy functions remain untouched. In contrast, the plan of the Ministry of Urban Development presented in 2005 reflects a different vision in which particularly existing port areas have changed into 'urban colours' (see figures 8 and 9).

Finally, also in 2005, the Port of Hamburg – now a more independent, publicly owned port company similar to Rotterdam – presented their own development plans in



Figures 8 and 9 Competing visions for the Leap across the Elbe area – Hamburg Ministry of Urban Development and Environment (October 2005, left) and Hamburg Chamber of Commerce (November 2004, right)

close collaboration with the Hamburg Ministry of Economics and Labor (see figure 10). In the plans, the Leap across the Elbe initiative is acknowledged as an important part of Hamburg's overall 'Growing City' development plans. In fact, the Port of Hamburg presents a much more nuanced view on the plans in the port territories of the Kleiner Grasbrook, Veddel and on the fringes between the port and Wilhelmsburg: 'All planning processes will have to take into consideration that the important buffer functions of eastern shore land uses be retained to protect Wilhelmsburg's residential areas from noise and dust from the port. The general clarification needed for transitional areas of city and port over how a lasting coexistence between housing, workplaces and leisure can be achieved, is being effected' (FHCH, 2005). In addition, the Port of Hamburg supports the possibility of restructuring Veddel and providing space for urban development in the Kleiner Grasbrook area. In order to relocate the now operational ro/ro-terminals, or find a way to save space, the Hamburg Port Authority expressed that Hamburg should 'renew its application to host the Olympic Games', as stadiums and the like could still be planned for Kleiner Grasbrook. In short, the Port of Hamburg seems to be prepared for land-sacrifices if high-profile events like the Olympics are involved, generating mutual benefits.

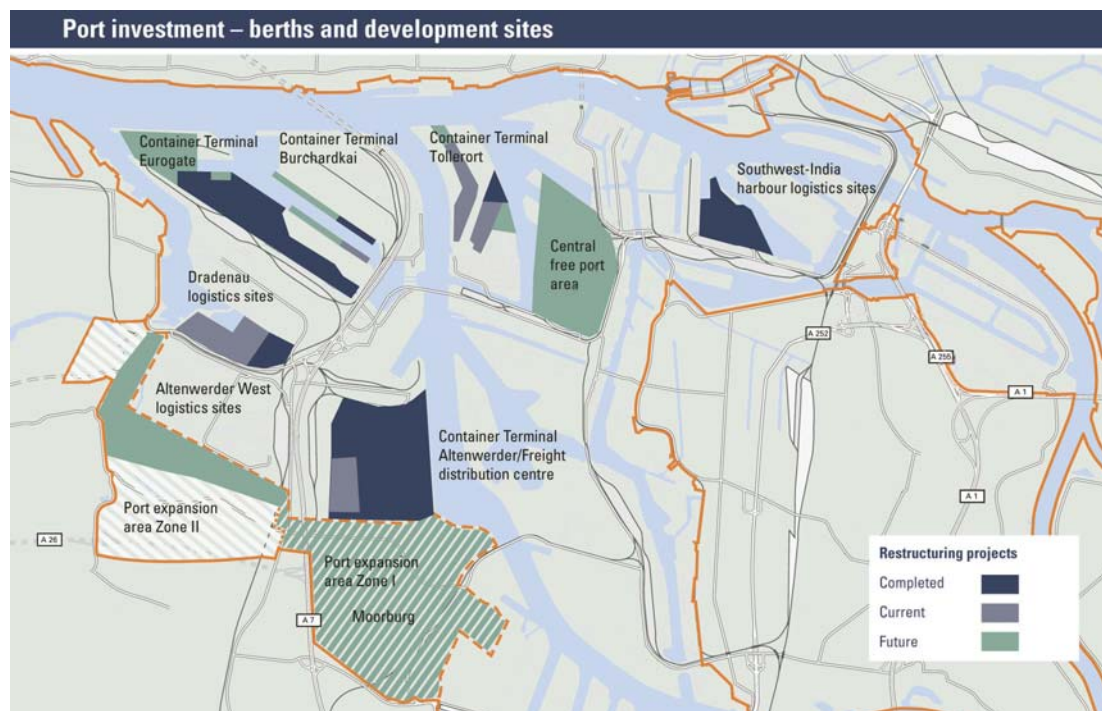


Figure 10 Hamburg Port Authority investment plans (Hamburg Port Authority and Ministry of Economics and Labour, 2005)

Conclusion

‘The zones situated at the interface between the city and the port are changing and are the subject of strategies through which cities and ports often ignore each other and sometimes come to blows. However, they are tending progressively to become areas of dialogue and co-operation. [...] Establishing partnerships and real consultation processes to defend joint interests is undoubtedly the real challenge that port-cities must face up to today.’
– International Association Cities & Ports (IACP, 1997)

This paper focused on spatial development initiatives in the contemporary seaport-city interface, and more specifically on port-city development questions now emerging in two of Europe’s largest seaport-cities: Rotterdam and Hamburg. Where similar development efforts in the past focused largely upon the redevelopment of waterfronts near or in the city centre, the current emphasis in these cities is on areas in the interface with their evolving seaport away from their historic cores. It can be concluded that these controversial development initiatives involve sophisticated communication and planning. As can be derived out of the activities of the Rotterdam CityPorts Development Corporation, and (particularly) the Hamburg Ministry of Urban Development and Environment, the possible differences between port and several city stakeholders is a main focus. Studies into the content of the local problems encompassed by redevelopment plans are being made and reflected upon by all kinds of gatherings on the local as well as the international level. The goals are to attain general public support for the overall plans and find out what the realization of those plans could look like on the local level. Both in Rotterdam and Hamburg, the plans address vast quantities of land, accommodating very valuable and fragile components of the cities’ economic and socio-cultural structures. A difference is that in Hamburg, the Leap across the Elbe initiative seems to be part of the greater ‘Growing City’ policy from the beginning. In contrast, it was not until February 2006 that the CityPorts initiative became part of an overall port-city policy called ‘Rotterdam - Gateway to Europe’. Moreover, it seems that the Port of Rotterdam no longer supports the comprehensive and integrated development plans for the CityPorts area, particularly not after the delays in the *Maasvlakte II* expansion process. In Hamburg, the involvement of the business community has changed in relation to the Leap-initiative during the course of 2004, and are the result of important differences of opinion about the effects of the initiative on the existing port and industrial functions in the area.

In conclusion, the theoretical explanations on the development of ports and port-city relations take very concrete shapes in the cases presented. In spatial terms, we see a scale increase in the study areas in Rotterdam and Hamburg, reflecting the significant scale increases port operations have made since the 1960’s. On the other hand, we see a logical relation between the spatial scale of the initiative and the amount of stakeholders involved. The areas encompass a range of business, housing and other port-city functions that will be affected by the development efforts, and thus a range of actors who want to see their interests incorporated in the plans. Hence, these cases also reflect the ambiguous nature of the port-city relationship in terms of the interests and goals of actors affected by

and taking the lead in the development initiatives. The people working to make these development initiatives materialize are mindful of this ambiguity, since their efforts are primarily aimed to find a common ground for the development between the actors involved. The transparency in the strategies deployed in Rotterdam and Hamburg is thus a common and very positive factor, but the very mediating and careful way of working in the Dutch port-city lacks the result of a clear plan with a broad political support – something that followed only until over a year later. The Leap across the Elbe initiative does not seem to lack any political or port commitment, but the publicly presented competing visions of the Hamburg business community do not appear to be very constructive for the process. In short, both port-cities seem to have lost the support for a vision or plan that meets the demands of all the critical stakeholders, which means that a new round of negotiations and discussions is probably at hand. The plans presented in both cases reflect a certain amount of abstraction or ‘openness’ in how specific locations will be physically filled in when the time comes. Locations are roughly designated for economic, leisure or housing functions, but no blue prints or programs have been presented. Hence, planning practices in both cities take account of the port-city dynamic and the impossibility to plan large-scale interventions in the existing port-city ‘top-down’. However, as we have seen in the Rotterdam case, a bottom-up strategy is very fragile. Especially in continental Europe, a combining approach like in Hamburg seems most effective, with the remark that it is crucial to keep track of the changing interests of critical stakeholders.

With the development of the port, new opportunities might arise for its city as the demand for port-space close to the urban centre diminishes, and the pressure for alternative urban uses rises. Next to other interpretations, the ‘waterfront redevelopment’ has become a tool for giving port-cities a new economic and cultural impulse, and the exposure they need to take on an ever more global urban competition – a requirement and struggle already quite common to ports in their own right. City and port are thus engaged in a similar battle to attract people and businesses who might want to make use of what they have to offer. Ironically, in evolving port-cities, it are often their waterfronts where this battle materializes, creating competing space-use demands and a zone of conflict for urban and port authorities. From a planning point-of-view, it is worth exploring the spatial development of the port-city interface with the focus on actors with competing interests en resources. In the end, true co-existence can only be achieved by co-operation in and co-production of a sustainable port-city territory.

References

Literature

- Morgan, F.W., (1954), *Ports and Harbours*, London, Hutchinson
Olivier, D. & B. Slack (2006), *Rethinking the Port*, *Environment and Planning A*, volume 38, pages 1409-1427
Bird, J.H. (1963), *The Major Seaports of the United Kingdom*, London, Hutchinson
Slack, B. & J. Wang, *The Challenge of Peripheral Ports: an Asian Perspective*, *GeoJournal*, volume 56, pages 159-166

- Charlier, J. (1992), The Regeneration of Old Port Areas for New Port Uses, in Seaport Systems and Spatial Change, Eds Hoyle, B.S. & D. Hilling, Chichester, Sussex, John Wiley Publishing
- Slack, B. (1985), Containerization, Inter-Port Competition, and Port Selection, Maritime Policy and Management, volume 12, pages 289-300
- Notteboom, T.E. & W. Winkelmanns, Stakeholder Relations Management in Ports: Dealing with the Interplay of Forces among Stakeholders in a Changing Competitive Environment, Proceedings of the IAME Panama 2002 Conference
- Song, D-W. (2002), Regional Container Port Competition and Co-operation: the Case of Hong Kong and South China, Journal of Transport Geography, volume 10, pages 99-110
- Hayuth, Y. (1982), The Port-Urban Interface: an Area in Transition, Area, volume 14, pages 219-224
- Hoyle, B.S. (1989), The Port-City Interface: Trends, Problems and Examples, Geoforum, volume 20, pages 429-435
- Hoyle, B.S. & D.A. Pinder (Eds, 1992), European Port Cities in Transition, London, Belhaven
- Norcliffe et al. (1996), The Emergence of Postmodernism on the Urban Waterfront, Journal of Transport Geography, volume 4, 123-134
- Merckx et al. (2004), Spatial Models of Waterfront Redevelopment: The Tension between City and Ports Revisited, Proceedings of the IAME 2004 Conference

Empirical documents

- Free and Hanseatic City of Hamburg – (former) Ministry of Building and Infrastructure & the Hamburg Chamber of Commerce (2003), *Leap across the Elbe* (Sprung über die Elbe). Hamburg: FHCH – Min. B&I
- Free and Hanseatic City of Hamburg (FHCH) – Ministry of Economics and Labour & Hamburg Port Authority (2005), *Focus on Dynamic Growth Markets – Prospects and Development Potential for the Port of Hamburg*. Hamburg: FHCH
- Free and Hanseatic City of Hamburg (FHCH) – Ministry of Urban Development and Environment (2005), *Leap across the Elbe* (Sprung über die Elbe). Hamburg: FHCH – Min. UD&E
- Hamburg Chamber of Commerce & the South Hamburg Business Association (2004), *Living and Working in the Heart of Hamburg – The Development Perspective of the Elbe Island*. Hamburg: Hamburg Chamber of Commerce
- Municipality of Rotterdam (2006), *Rotterdam: Gateway to Europe – De koers naar 2030* (The course towards 2030). Rotterdam: dS+V/OBR
- Rotterdam CityPorts Development Corporation (RCDC 2006), *Stadshavens Info* (Newsletter), No. 5 and 6. Rotterdam: RCDC
- (2005), *Stadshaven Rotterdam Ontwikkelingsstrategie* (Concept Development Strategy). Rotterdam: RCDC
- (2005), *Stadshavens Rotterdam Consultatiedocument Ontwikkelingsstrategie* (Development Strategy Consultation Document). Rotterdam: RCDC
- Rotterdam Municipal Council Report 541 (May 8, 2003).