Transformation Processes on Waterfronts in Seaport Cities – Causes and Trends between Divergence and Convergence

DIRK SCHUBERT

A few decades ago, ports without ships, empty warehouses, derelict storage sheds, disused docks and deserted neighbourhoods dominated the appearance of inner cities in many seaports. Derelict port zones, waterfront areas and water-related sites are now held in high esteem and a special interest in these places has emerged recently. Discussion on suitable and sustainable strategies to deal with the potential of these areas has opened a controversial debate concerned with practical planning as well as theoretical issues, about aims and priorities. Despite the unique potential, considerable delays between dereliction and renewal were common. The cycle of dilapidation, blight, neglect, planning, implementation and revitalisation, is part of a complex network involving stakeholders and other interests.

The process of transformation of ports and waterfronts can only be understood in the context of worldwide economic restructuring, of changes in dock labour and the urban spatial framework of city and port (Schubert/Harms 1993). The stormy and far-reaching structural change of sea trade and its related port economy brought about the complete reorganisation of working docks. The formerly close functional and spatial relationship of port and city was relaxed from the end of the 1960s onwards. Changing economic circumstances and trends of dissociation of transhipment on the one hand, and profitability and employment on the other, are found in all world ports.

Seaports were, and still are, the culmination of innovations in economy, society and culture. They are places in which the local and the exotic, the foreign and familiar, poverty and riches, tradition and moderni-

sation and phenomena of globalisation had been anticipated (Osterhammel/Petersson 2003: 14).[1] It is always in a local context that globalisation processes take effect, are adopted, mixed and refracted ("glocalisation"[2]). Seaports often served as "command centres", from which exchange and interdependency were advanced internationally and globally by creative milieus of traders, business people, finance and international companies.

No two seaport cities are alike, and no seaport of the world is like another. All have their own face, their special character and individual history. The geographical conditions, technical possibilities, historical development, constellation of stakeholders and transport connections to the hinterland are different. Internally, seaports have different zones for specialised land uses. Ferry ports, fishery, shipbuilding, ship repairs, transhipment of goods, seaport industries, the army and navy, all have specific infrastructure requirements and different relations to the urban context.

Integral parts of the fabric of ports are the "sailortowns": "special", harbour-related districts.

"Zur Blütezeit der Segelschifffahrt waren die Hafenviertel der bedeutendsten europäischen Seestädte zwischen Liverpool und Lissabon, London und Neapel, Amsterdam und Riga, Kopenhagen und Marseille einander so ähnlich wie die Dome und Kathedralen dieser Gemeinwesen oder wie die Kontore ihrer Kaufmannshäuser."[3] (Rudolph 1979: 31)

Being internationally orientated, they form conglomerates of a multitude of functions and services, including shops for clothing, beverages, tobacco and souvenirs, sailors' churches, lodgings, pubs, tattoo studios,

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1   Here, globalisation is understood as a complex and ambivalent historical macro process, its beginnings extending far back to the age of discoveries. The last surge of globalisation since the 1990s can not merely be interpreted as the extension of an existing development, but must be placed in the context of long-term, interrelated processes of regional, national, international and global interdependence of production, transport and communication capacities. In doing so, phases of accelerated and arrested globalisation must be detected and contradictions identified (Osterhammel/ Petersson 2003: 14).

2   Glocalisation describes the combined process of globalisation and local-territorial reconfiguration (Brenner 1997: 12).

3   "At the height of transport by sailing ship the harbour areas of important European port cities, from Liverpool to Lisbon, London to Naples, Amsterdam to Riga, Copenhagen to Marseille, resembled each other like the churches and cathedrals of their communities, or like the offices of their merchants' buildings." (Translation: Dirk Schubert)

dance halls and brothels.[4] Jewish, Chinese and other diasporas had introduced their different ways of living, eating, working and sleeping into the seaports, while inland they were still gawked at as "exotic". Harbour districts were considered "dangerous" and were often reputed to be unsafe and "amoral". At the same time they represented the first "stepping stone" for newcomers, which opened opportunities for processes of informal adoption and development of ethnic economies. In Spanish speaking countries these port districts and hideouts of otherness are called "Barrio Chino", a term that makes reference to internationality – in this instance China ("Chinatown").[5]

Cross-linked to the social networks, the niches and (sub-)cultures of dockworkers and seamen[6] – which had a special, exotic flair and appeal for the local petit bourgeoisie – the significant technical port infrastructure was developed. Technical innovations facilitated new and improved means of transportation over short and long distances (Borscheid 2004: 110). The interface between the requirements of sea and land transport, the docks and the port, had to be planned and organised in a way that enabled them to adapt to the ever-changing challenges of international, and finally global transportation (Löbe 1979). Decisions taken in seaport cities at the beginning of the 19th century – on the organisation of harbour operations, on the type of harbour development or redevelopment and on housing associated with the docks – had large impact, and later were often found to be irreversible.[7]

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4 "[…] sailortown being much the same as another – repetition can hardly be avoided. Each port had its pubs, boarding houses and brothels, with their crimps, whores […]. Sailortowns were the same all over the world" (Hugill 1967: xvii and xxxi). This theory of uniform clusters of land uses neglects the diversity and specifics of the many sailortowns. A comparative long-term study with a focus on social and cultural aspects should be interesting.

5 Such Chinatowns are/were found in many seaport cities: Rotterdam (Katendrecht), Amsterdam, New York, Singapore, Bangkok, Havana, Panama City; they are called "Barrio Chino" in Havana and Barcelona (El Raval) (Christiansen 2003).

6 For the seamen shore leave and visiting the entertainment districts of port cities was an exceptional occurrence compared to their every-day life on the ships and at sea, which fostered a distorted picture and provided "ample material for picturesque descriptions and romanticising makeovers" (Heimerdinger 2005: 77).

7 Here, location and expansion possibilities, water depths for seafaring ships, organisational structures and options for expansion into an open tidal harbour (e.g. Hamburg), or into a dock harbour with locks (London, Antwerp) should be mentioned.

Phases of urban and port development

Some changes in the altered relationships between port and city and long-term technological and socio-economic transformation processes can be detected on the edges of the port. Hoyle (1989) differentiates between five model development phases in the relationship between city and port. Accordingly, urban land uses and port functions are connected across a contact zone in which the port-city-system is subject to the influence and control of primary factors, such as technological changes, environment, economic development, politics and legislation. The following empirical evidence supports the apparentness of this theory.

Stage	Period	Symbol ○ City ● Port	Characteristics
I 1. Cycle	Ancient/medieval to 19th century		Primitive port/city *Preindustrial stage*
II 2. Cycle	19th – early 20th century		Expanding port/city *Stage of industrial growth*
III 3. Cycle	mid - 20th century		Modern industrial port/city *Fordism*
IV 4. Cycle	1960 s – 1980 s		Retread from the waterfront *Postfordistical stage*
V 5. Cycle	1970 s – 1990 s		Redeveloping of waterfront *Flexible accumulation*
VI 6.Cycle	1980 s – 2000+		Renewal of port/city links *Globalization*

Fig. 1: Phases of port-city development according to Hoyle (1989)

Hoyle identifies the *first phase* of port-city development as the "primitive city harbour". Up to the mid-19th century the large seaports were primarily staple markets and trading centres for international high-grade goods. Numerous town plans confirm that moorings and harbours were an integral part of the city, being closely integrated into the urban fabric. This is why harbours were generally located within the town fortifications. Buildings incorporating such uses as accommodation, commercial uses, storage and offices were built immediately on the water's edge to facilitate the direct unloading of goods, or the use of barges, from the ships into the warehouses. Especially the handling of perishable goods called for the construction of warehouses from the 18th century. A close

spatial interdependency of city, handling of goods, storage, trade and port-related services prevailed into the 19th century.

Industrialisation and the expansion of world trade provided the context in which disruptions and a change in scale led to transformations in the port-city relations. In the *second phase*, from the mid-19th century, the expanding city port emerges. The invention of the steam engine, the railway and steam ships revolutionised the handling of goods. With the expansion of steam shipping the timing of departures and arrivals could be calculated. At the turn of the century, sailing ships had mostly disappeared from the ports and were replaced by iron ships. The size of ships increased manifold. To cope with these changes in structure, new and larger docks had to be built, modern transhipment technology installed and the shipping lanes deepened. The handling of goods was mechanised with cranes.

The construction of new docks necessitated the expansion and reorganisation of urban areas. "Dominant trade functions of the port were replaced and extended by functions of transport and conveyance" (Läpple 1994: 463, translation: Dirk Schubert). The port facilities of pre-industrial times no longer met the requirements of modern transhipment. The close connection of port, work and living was gradually dissolved with industrialisation. The changing economic activities of the port implied an adjustment of the allocation of land uses. Quayside warehouses and storehouses replaced the sheds; offices were relocated from the harbour to the centre of town, where a dense network of banks, stock exchange, insurance and shipping companies, etc. developed.

At the same time, a dockworkers' (sub-)culture emerged, remnants of which have continued into the present. The specific type of labour, the diversity and danger of the work, the irregular workload (casual labour), the contact with foreign seamen and the life close to the docks fostered the emergence of a solidary community of dockworkers (Miller 1969: 308). Attempts to locally stabilise the irregular working hours by introducing special guild or trade union regulations further highlighted the particularity of work on the docks and its militant reputation (Phillips/Whiteside 1985: 235).

The inter-war period can be roughly outlined as the *third phase* of modern industrial seaports. The growth of the economy and trade went hand in hand with plans for new port extensions and industrial development. The enhancement of crane technology from steam crane to electric full gantry crane facilitated increasingly large sectors of transhipment to be mechanised. Methods of shipbuilding changed from the rivet method of construction to welding technology, which considerably sped up the construction of vessels. (Seaport) industries were established alongside

existing commercial activities and transformed the harbour landscape with silos, cold storage houses and tank farms.

The trend for ever larger vessels necessitated further dredging of the shipping lanes and required special cargo handling facilities ("ships design the port"). Increasing oil consumption caused by mass motorisation and the switch from coal to oil demanded additional land and transhipment facilities. The dependency on overseas imports of raw materials and fuels led to a jump in the amount of bulk transport by sea. Seaport regions thus became privileged locations for seaport industrialisation. Seaport cities tried to exploit this development by planning and constructing outer ports, like in Bremerhaven for Bremen, Le Havre for Rouen and Warnemünde for Rostock.

Concurrently with the development of modern seaports, harbours and shipping were undergoing a process of musealisation (Hamburg International Harbour Preservation Symposium 1989). The first shipping museums were founded and film producers discovered the business potential of maritime nostalgia. The amusement districts formerly reserved for sailors changed in character.

The *fourth phase* is defined by the retreat of land uses from the traditional harbour areas near the city centre. The decline in importance of many ports was concurrent with the deindustrialisation of areas around the harbour. Many ports have lost their significance not only as places of transhipment and trade, but also as locations for seaport industries. Increasing international competition in shipbuilding and the decline of shipbuilding in Europe had a devastating effect. Production was relocated to Southeast Asia, which led to massive unemployment in almost all European shipbuilding locations and to the dereliction of shipyards in Europe and North America. The oil crisis, the decline in oil-tanker building, followed by an increase in the use of nuclear power, led to structural changes in the significant seaport cities economies. The trend towards the coast had only meant a short-lived location advantage and was displaced by a new stage in the international division of labour, which now favours the relocation of primary industries to countries rich in raw materials, such as Brazil, Morocco, Saudi Arabia, etc.

Most of all, this phase is characterised by changes in transport technologies (Witthöft 2000). The invention of the container by Malcom McLean heralded a new era of maritime traffic and for its ports: in 1966, the first container ship, the "Fairland", docked in Bremen. Containerisation revolutionalised dock labour and brought on the need for new transhipment sites and port facilities. The rationalisation of dock labour became possible with homogenised and standardised loading units; the container turned into a symbol of global trade. Initially dismissed as

"containeritis" and rated as a fad, it brought in its wake the lasting trans-formation of seaport cities. The period of time a ship is berthed is no longer measured in days or weeks, but in hours. Entire fields of occupa-tion are no longer needed in ports, like stevedores, lumpers, winchmen, tallymen. "Schaffte ein guter Hafenarbeiter im Jahr 1948 pro Schicht 5,4 Tonnen Warenumschlag, so bringt es sein heutiger Kollege auf 294 Tonnen"[8] (Karstedt/Worm 1999: 61). The container revolution increased productivity manifold and brought with it dramatic job losses in the op-erative core sector of the port economy.

The *fifth phase* is characterised by the spatio-temporal concurrence of highly modern terminals away from the city, and by derelict and/or suboptimally used inner city harbours and waterfront sites. The water-fronts were often degraded by highways. The cranes of the shipbuilders' yards, which used to be a characteristic feature of the city silhouette and a symbol for dynamic port economies, have been dismantled, the land left derelict and contaminated.

From the 1960s on, seaport cities saw the increase of differentiation processes. Large container ships only call at a few main ports, while smaller harbours are supplied by feeder services. Hinterland, location advantage, sufficient depths for seafaring ships and accelerated tran-shipment ("only a sailing vessel makes money") have gained even greater importance as location factors. Passing locks and entering or ex-iting docks causes delay. In all ports of the world there are evident trends for the isolation/decoupling of transhipment on the one hand, and added value and employment on the other.

The type of work in ports has changed (de-casualisation) and often the port has moved seawards to a location away from the city centre. Containerisation and computerisation accelerated the rationalisation of transhipment and the spatial relocation of functions which used to be bound to the port. Seen in this context, the areas where port and city meet have undergone severe changes in land use, economic activity and in the built environment. The traditional port with its narrow finger-piers, multi-purpose terminals and quayside warehouses could meet the new standards. Quayside storage and warehouses, sheds used for tempo-rary storage protected from the weather, are no longer necessary.

The transhipment of containers to other means of transportation re-quires much larger areas of land. Good railway and road connections like motorway junctions are required for the rapid delivery and removal of containers in overland transport. The water side of container tran-

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8   "A good docker handled 5.4 tons of goods in one shift in 1948, his pre-
    sent-day colleague now manages 294 tons." (Translation: Dirk Schubert)

shipment requires fewer quays because of reduced berthing periods, but they have to be always available and of sufficient depth for seafaring ships (Bonz 2006: 40). The increase in containerisation means declining employment in transhipment, i.e. fewer dockworkers, but ever larger land areas, more costly infrastructure and the ever deeper – ecologically questionable – dredging of rivers and ports.

Meanwhile, we can identify a new cycle – *a sixth generation* – of waterfront transformation and retransformation on a regional scale. Much experience in developing central urban waterfronts has been gained. Generally, transformation began in the oldest parts of the port and the city, slowly moving to more peripheral areas, which were developed later. Often this was done in a step-by-step approach, beginning with the most attractive sites, but not integrating these projects into a sustainable urban or regional development strategy. In order to define this process as a new cycle, it must be looked at in comparison, while complex problems need to be reflected on the macro, meso and micro levels. In the context of increasing competition between seaports and the challenges of globalisation, waterfront developments are being integrated into the city-wide and regional perspective.

Waterfront revitalisation – stages and experiences in Europe, North America and Asia

Hoyle's historical-analytical model can be extended into types of transformation processes in ports and on waterfronts. This permits the classification of phases and cycles of conversion, each in the context of the actual, local, regional and national constraints.

For several decades now, the restructuring of derelict docks and waterfronts in inner cities has been taking place on a world wide scale, from Antwerp to Zeebrügge, from Brisbane to Yokohama. The central waterfronts of these cities have since been changed considerably (Schubert 2002: 32). The reasons and problems of revitalising land formerly occupied by the port and port-related industries are similar in many seaports, but aims, planning cultures, financing and scale are very different in Europe, Asia and North America.

Discussion on suitable and sustainable strategies to deal with the potential of former port areas has led to controversial debates concerned with practical planning as well as theoretical issues, about aims and priorities. Despite the unique potential, considerable delays between dilapidation and renewal were common. The central waterfronts of these cities have since been changed significantly. Redundant and derelict port areas

and waterfronts are one of the greatest challenges for town planners and offer a great opportunity on a medium to long-term basis for new uses like tourism, housing and offices, and for a reintegration into the urban fabric (Breen/Rigby 1996).
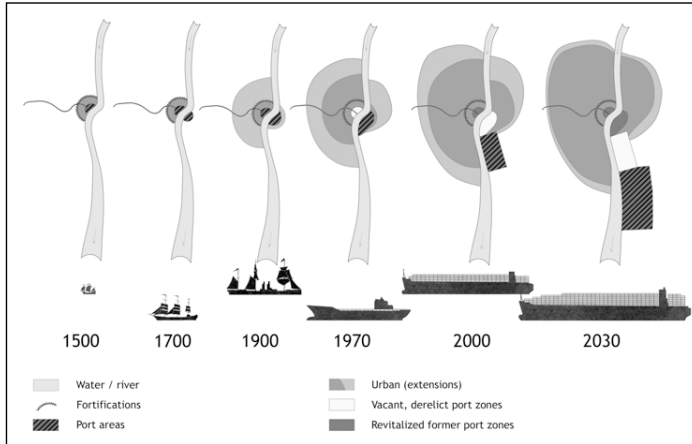

Fig. 2: Cycles of waterfront transformation (Dirk Schubert)

To simply copy a "successful" project and course of action cannot be recommended. Generalisations are difficult to make and easy recipes do not exist. Differences in cause, procedure, results and planning tradition need to be taken into account. It is not just a matter of architectural design, but of a complex set of planning, institutional, political, client-related, economic, ecological, legal and financial questions (Bruttomesso 1983). The process of transformation at the city-port interface follows a general cycle:

- dereliction of old port areas near the city, relocation of modern, containerised trading facilities to areas suitable for expansion, outside the city centre
- disuse, temporary and suboptimal utilisation of areas and buildings in the old ports
- visions and plans for the reallocation of uses of buildings and land in derelict areas, architectural competitions
- implementation of plans, establishment of new land uses (offices, recreation, housing) in these areas
- revitalisation, new land uses, acquisition, enhancement of desirability of these areas.

The dereliction of these ports and waterfronts, often dramatised in Europe, is a "normal" process that will, at best, lead to rapid re-utilisation. In Germany and in Europe, the revitalisation of ports and waterfronts often takes years, if not decades, from the time of disuse to the start of reorganisation. In Asia, the continuous and rapid rebuilding of the waterfront seems to be the norm, often linked to land reclamation projects.

Approaches in North America

The first generation of waterfront revitalisation projects started in the mid-1960s in North American cities like Baltimore, Boston and San Francisco, where problems of derelict and underused port areas first became an issue.[9] As these projects represented a new planning task, a "learning by doing" approach was often adopted. New uses frequently included tourist facilities, hotels and offices. At the time of dramatic changes due to containerisation in the early 1980s, more seaports engaged in projects of waterfront revitalisation. Large-scale projects of vast dimensions became the norm; a mix of offices and leisure facilities along the waterfronts was the prevailing approach. This happened in a period of deregulation, resulting in a "likeness" of many port cities. Like-minded architects, planners and developers dominated the scene and there was much criticism of the new "concrete curtains" along the waterfronts.

Baltimore's Inner Harbor became the most copied American effort of urban renewal and waterfront revitalisation. In Baltimore, the combination of a convention centre, hotel, sports facilities, aquarium and festival marketplace made up the specific ingredients. City marketing was another important issue, which exploited the success of waterfront revitalisation in the competition between cities. The strategy of "returning the shoreline to the people" was quite a successful part of the improvements to the downtown district. The project was based on a "shared risk" approach, splitting the responsibilities between the private and the public sectors. The thriving enhancement and commercialisation of the public space on Harborplace (Harvey 1990: 93) took place concurrently with the further decline of the adjacent city centre.[10]

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9 A bibliography by the author including further references on the projects can be found at: http://www.tu-harburg.de/b/kuehn/themen/wfb.html.

10 The myth of the Baltimore model and the improvements around Harborplace is juxtaposed with a remarkably crisis-ridden urban reality (Ward, no date).

Fig. 3: Baltimore Harborplace (photo: Dirk Schubert)

Boston started with the conversion of two old buildings, Faneuil Hall and Quincy Market. They had originally been located on the waterfront, but are now far from the shoreline due to late 19ᵗʰ century land reclamation projects. The buildings were reopened as a shopping mall in 1976. This was the starting point for relocating port facilities from the centre seawards, and a chance for revitalising the older piers. Condominiums, a hotel, an aquarium and offices were built. An elevated highway cut off the waterfront from the centre. This has been relocated in a tunnel in the meantime, and new public spaces connect the waterfront with the centre and the town hall. It was one of the most expensive infrastructure projects in the USA, which now offers new opportunities for the waterfront. The downtown waterfront was redeveloped and further projects have been started in the neighbouring seaport district. A large convention and exposition centre and a hotel were built along Northern Avenue to create the image of a "New Boston". North of the downtown area, in Charlestown, former shipyards have been converted to housing and a marina.

In Manhattan, *New York*, the former port facilities have been moved to New Jersey. In the early 1980s, a strategy was developed to reuse some of the old finger-piers for leisure to give Manhattan a new face ("fun city"). South Street Seaport was opened in 1985; this was a huge success as it is located next to the downtown centre and Wall Street. In 1982, a survey was conducted on all waterfront areas in Manhattan, and a "New York Waterfront Revitalisation Programme" was created. This

programme is a long-term vision, foreseeing public access to the water-front, wherever possible. Some of the most interesting projects include Gantry Plaza State Park on the East River in Queens, where a railway ferry terminal was converted into a park. The Chelsea Piers Sports and Entertainment Complex (18th Street) is a project converting four old piers into a modern leisure facility. Of course, the rebuilding of the World Trade Center is most important for creating the new waterfront skyline of New York.

A "festival market" approach (nicknamed "Rousification"[11]) was often adopted, offering tourist-orientated shopping. This leisure-orientated type of revitalisation combined hotels, small shops, boutiques, restaurants and bars with public access to the waterfront (Breen/Rigby 1996). As these areas were frequently located next to the city centre, they successfully combined inner city and waterfront revitalisation. It is remarkable how the US American model successfully copies European port cities and idyllic market places, to then transfer these back to Europe and Asia – modified into a commercial US concept.

Approaches in Europe

At the beginning of the 1990s, a new generation of approaches emerged. In European seaport cities like Oslo, Rotterdam and Gothenburg, participatory planning became popular and the local community was involved in planning processes. Often a step-by-step approach involving design competitions and master plans was introduced, to lead the way in restructuring the former port areas. Events such as the Olympics (Barcelona) or culture and leisure facilities like aquariums and museums were frequently used to push redevelopment (Meyer 1999). At the beginning of the new millennium, a new generation of projects emerged. Private-public-partnerships and professional planning management dominated the global competition between waterfront revitalisation projects. These projects were used in new city-marketing strategies based on the unique seaport heritage. At that time (luxury) housing and mixed-use developments became more widespread.

In *London*, the oldest docks closed from the mid-1960s and ship-building declined. Within 20 years, the once largest port in the world failed to meet the new challenges in transport technology. But Margaret

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11 Named after the developer James Rouse who was involved in similar festival markets in Sydney, Boston, New York, Norfolk, Santa Monica and Osaka (Olsen 2003: 240).

Thatcher had a vision: Docklands – an exceptional place. She pursued a policy of free enterprise zones, the first to be established in the London Docklands. These zones were taxfree for ten years, non-unionised and without planning restrictions, free business for free entrepreneurs. The London Docklands was the first project of this type in Great Britain, and Margaret Thatcher herself called it the "flagship project". American examples like Baltimore and Boston provided general inspiration for the London Docklands, but regeneration was on a far larger scale (22 km^2). It was mostly office-led redevelopment, although some luxury housing was also built. Canary Wharf was the flagship of the Thatcherite approach to planning (Edwards 1992). The centre at Canary Wharf was built to challenge the financial hub in the City of London, several miles upstream. The project was implemented in the period of a new enterprise culture based on privatisation, deregulation and marketisation of activities.

Canary Wharf was designed as the tallest building in Europe, and it was the largest European construction site at that time. New construction methods were used and within a short time the building was ready for occupancy. The free enterprise zone and the policy of the London Docklands Development Corporation (LDDC) left London with a fragmented city. New office developments and luxury housing were put up next to old blocks of public housing. New jobs were brought into the area, but not for the local people, leading to segregation and contradictions between old and new (Foster 1999). Since then, the Docklands project has been extended into the Thames Gateway strategy, including a much larger area stretching from London to the Channel. London is probably the most spectacular transformation of a former port in Europe.

The approach in the second phase in Europe was quite different from that in North America. *Bilbao*, a former river port with large shipyards, underwent culture-led redevelopment, using the success of the Guggenheim Museum ("El Guggi") as a starting point for revitalisation. Two million visitors came to see the museum in the first two years after opening. Soon a greater area (Abandoibarra) along the River Nervion near the city centre was earmarked for redevelopment. The grey, dirty industrial town has changed into a post-modern city with a new metro. In the meantime, a shopping centre, housing, new hotels, a concert hall and a convention centre were also built in this area along the waterfront. The port and railway facilities have been relocated to the Bay of Biscay, even though there was no regional planning authority and many different authorities were involved in the process.

In *Amsterdam*, the approach was led by housing. A housing shortage in the inner city made people move to the outskirts, paying taxes there.

In the Eastern Docklands only high-densitiy housing was built with
some infrastructure. High-density housing was necessary because of the
enormous investments gone into preparing the land for building and in-
stalling the infrastructure. The vision was to use water as a kind of green
space ("blue is green"), although water areas could not be used by
everyone, especially children. The redevelopment of the Eastern Dock-
lands is the largest post-war building project in the heart of Amsterdam.
By mixing luxury rented housing with public housing, municipal poli-
cymakers also hoped to end the exodus of higher income groups. The
transformation of the Eastern Docklands into a residential area has now
been implemented and further projects are planned in the Western
Docklands and on the northern bank of the River Ij. The land opposite
the city centre is occupied by shipyards and will be converted for mixed-
use in a step-by-step development in the future. The long-term strategy
of transformation includes temporary use by artists and students.

*Fig. 4: KNSM Island – Eastern Docklands Amsterdam (photo: Dirk
Schubert)*

In *Hamburg***,** the HafenCity reconnects the River Elbe to the city centre, giving it a new direction of growth, down to and along the river. Hafen-City is located next to the Warehouse District, extending to the bridges over the River Elbe. For the first time, a large area will be taken out of the port and put to other than port-related industrial uses. The borders and gates of the customs in the free port had to be relocated elsewhere in HafenCity. The area comprises approximately 155 ha; it has no inhabitants, but some old and some new operational port facilities. It is surrounded by several neglected housing estates, the city market, industrial and port facilities and railway lines. Hamburg has adopted a mixed-use approach for HafenCity. Following a competition for a master plan, specific districts were designed with a focus on offices, housing, shopping, recreation, etc. In a way, HafenCity is a latecomer project where planners tried to avoid the mistakes of other waterfront revitalisation projects. Approximately 5,500 apartments for 10,000 to 12,000 inhabitants are planned (Bodemann 2002: 102). Estimations of the required social infrastructure are based on these figures. The area is within the Elbe flood plain, making built and organisational solutions for the protection of people and buildings indispensable. The master plan guidelines determine the implementation of development, phased in sub-districts. It lays down a principle development sequence from west to east, avoiding uncontrolled construction activities throughout the development area. A zoning plan for the first phase of HafenCity was already drawn up in 2000, and land sales started in 2001. A development agency was established in 2002 and the first buildings completed by 2004. The newly founded GHS (Port Area Development Corporation, later HafenCity GmbH) is responsible for this area and for the implementation of the projects. Most of the land is owned by the city-state of Hamburg.

Approaches in Asia

In Asia, history is systematically eradicated: everything is on the move, permanently. All port cities share the determination to rapidly adjust to the challenges of globalisation and to push the unparalleled reorganisation from former, insignificant colonial places into knowledge- and service-based centres, to subsequently emerge as important hubs in the world wide network of seaports. The continuous and rapid rebuilding of the waterfront seems to be the norm in Asia, often linked to land reclamation projects (Schubert 2006: 268).

In *Singapore***,** there are major plans for the development of Downtown, located on the mouth of Singapore River. Around Marina Bay, a

new centre is envisaged to strengthen the link to the waterfront, comprising offices, shops, cafes, hotels, promenades and nightlife ("Tropical City of Excellence") (Chang/Huang/Savage 2004: 418). The area, approximately 370 ha in size, was reclaimed by landfill. Proposals are for a floor space index of 0.7 and the flexible updating of the plan in response to future demands. The capacity of a Central Business District (CBD) can be extended by approximately 25%. The aim is to develop an exceptional concept that mirrors the uniqueness of Singapore. The concept proposes to reinforce and extend the existing centre, create pedestrian zones and develop the waterfront skyline. The two largest projects of the revised Concept Plan 1991 – both on reclaimed land – are Marina South and Straits View to the south of the river's mouth, and Marina East to its north. Marina South lies to the west of the East Coast Central Highway and exceeds 100 ha in area. Marina East extends over an area of approximately 140 ha to the west, adjacent to the Downtown Core. The primary aim of the Downtown Core Plan is to foster water-related activities, links to the water and its accessibility. Singapore's strive to become a metropolis finds expression in the expansion of the city – a new city is built on man-made land, side-by-side with the "old" Downtown.

Shanghai is conducting a unique experiment in the construction of Pudong. The communist controlled economy is consenting to a capitalist island within the city of Shanghai on which a Chinese Manhattan is built in record time. The reform of the controlled economy is to be evolutionary, initially restricted to economic zones, following examples of development in other tiger states, such as Singapore and Hong Kong. Hence, Pudong is the experimental ground for the Chinese Policy of Opening – according to a Chinese metaphor the dragon's head – that is of strategic importance for the economic development and the future of China. Pudong will be a sparkling new city of superlatives, the Chinese version of synchronicity of capitalism and controlled economy. The neglected eastern bank of the Huangpu River and the triangular Pudong New Area comprise a total area of 570 km^2, approximately 8.2% of the area of Shanghai – roughly equivalent to the area of West Berlin. The name Pudong did not represent a specific administrative unit until recently, when it was chosen for the Special Economic Zone. Most of the area lies within a 15 km radius from the city centre. Pudong is bordered by water on three sides; its coastline is approximately 65 km in length. Planning and implementation of Pudong will be carried out over a 40-year period conducted in three phases (1990-1995, 1996-2000, 2000-2030). Pudong New Area occupied a central part in the ninth Chinese Five-Year Plan, 1990-1995. Central Government in Beijing allocated substantial funds and provided the legal framework. In 1993, the Pudong New Area Ad-

ministration (Committee) was appointed to coordinate construction, infrastructure and social projects with a relatively high degree of administrative autonomy. The tenth Five-Year Plan expired in 2005 when most of the important infrastructure projects should have been completed.

Fig. 5: Shanghai – Bund and Pudong (photo: Dirk Schubert)

In *Japan*, waterfront revitalisation is often combined with land reclamation. The most important examples of this strategy can be found in Osaka, Kobe, Tokyo and Yokohama. In all these cases, the ports moved seawards to provide deep-water access for the largest ships. As not enough land was available for the required new terminals it was created in reclamation measures to generate as many zones for deep-water access as possible. The artificial, new islands were constructed in the sea, with clearly defined zones often comprising a mix of housing (especially for dockers) and new container terminals. They are also sites for airports, power stations and sport stadiums, although port-uses are most relevant. The infrastructure connecting these artificial islands by bridges and tunnels is of course costly. As reclamation strategies are formulated for a long-term perspective much vacant land is available on the new port islands. Older, underused areas, derelict land and empty, old sheds and warehouses close to the city centres were converted into shopping malls or festival markets, often in combination with new hotels, muse-

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ums and aquariums. These projects are somewhat similar to the North American festival market approach and seem to be extremely popular in Japan, as people love shopping in these places: "shopping is fun".

Summary

Of course, the diverse approaches described above *must* be seen in the context of different regional/continental relationships. Of equal importance however are topographical factors, the local urban and port history, the network of stakeholders, governance structures and the diversity of planning cultures. As little comparative research has been done in this field so far, such studies are needed to offer a framework for identifying different structures of decision making processes, different types of urban development and diverse socio-cultural conditions. Inter-disciplinary work is a necessary precondition for this approach, and a more concentrated discussion between theory and practice is urgently required. The results of such research will illustrate revitalisation projects in derelict port areas and on waterfronts as seen from different angles and various discipline-specific approaches. Projects must be examined from the point of view of different stakeholders (planners, architects, port economists, researchers) and put into context of urban development politics. The diversity of contributions reflects the different analytical and planning approaches.

	Location	
	central	**peripheral**
Railway lands	x	
Military conversion		x
Industries	x	
Mining		x
Markets/Slaughterhouses	x	x
Port facilities	X	

Fig. 6: Typology of brownfield sites (Dirk Schubert)

Redundant and derelict port areas and waterfronts are one of the greatest challenges for town planners and offer great opportunities on a medium-to long-term basis for new uses like tourism, housing and offices, and for the reintegration of these areas into the urban fabric (Priebs 1998).

Waterfront transformations are part of brownfield regeneration, which also includes other derelict, contaminated, vacant, abandoned, previously developed, now under-used sites, development interests and stakeholders (Alker/Joy/Roberts/Smith 2000: 51). The typology shows some dimensions of brownfield sites important for transformation and regeneration. In this context port facilities and waterfronts are related to local urban port and cultural history with special opportunities for redevelopment.

A particular literary genre focuses on the (moral) history of the harbour.

"Der Charakter der Hafenstädte wird durch die Bedachtnahme auf die Fremden geprägt. Der Hafen ist der Umschlagplatz für fremdes, der Stadt exotisches Menschenmaterial, hier strömen die sorgenfrei neugierig Reisenden, die einer trostarmen Vergangenheit entfliehenden aus den Binnenländern zusammen, um – von Niemandem gekannt und im Gefühl der Lösung von ihrer alten Welt – in der Unrast vor langer Fahrt, hemmungslos Abschied zu feiern, sich auszuleben [...]. Hier findet der Seemann nach wochenlanger Reise das seinen aufgestauten Mannesbegierden und seiner gefüllten Börse willige Weib, hier ist das Neue, Farbige, Wechselnde, Fremde, das Keines Aufenthaltnehmenden Zuhause entspricht, in dem die Begierde jedes Einzelnen nach abenteuerlichem, neuartigen Erleben gestillt wird […]."[12] (Fischer 1927:13)

There was talk of the "horror and vice of prostitutes' districts in international ports" and the "agitated, unbridled in its desires, frantic life of port cities" was pleasurably described from the bourgeois voyeur's perspective. In this context, harbour areas can be understood as sites of strangers and diasporas (Kokot 2002: 95ff.) in which catch-up modernisation processes meet (ethnic) minorities in "backward" milieus.

Seaports have always occupied an important role in the economic and cultural life of nations. "The history of ports is, in great measure, the history of civilisation", wrote Morgan/Bird (1958: 150). Ports were, and still are, fascinating culmination point of the economy, society and cul-

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12 "The character of port cities is defined by their concern for strangers. The harbour is the handling place for strange human material exotic to the city; here the carefree, curious travellers flock from the hinterland, who flee their disconsolate past. Unrecognised and in the spirit of disengagement from their old world, restless before long journeys, they want to celebrate without inhibition their farewell, to enjoy life […]. This is where the sailor after weeks of travel finds the willing woman for his pent-up desire and filled purse, this is where the new, colourful, changing, alien is found, that is unlike the homes of those who seek shelter here, that satisfies the yearning for adventure and for a new experience […]." (Translation: Dirk Schubert)

ture, even though the port economy is diversifying and their significance tends to be decreasing. City on the waterfront, amphibian city, water's edge, gate to the world, contact to overseas, homesickness and yearning for faraway places are terms associated with ports. Crying and waving girls on the dockside are part of this romantic notion, which is evoked in books, films and songs. The redevelopment of the water's edge and the revitalisation of waterfronts offer a once in a century chance to let port and city, water and land, history, present-day and future merge in a new symbiosis.

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