



Transformation of industrial river spaces: experiences from European case studies

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Due to the history of industrial development along riversides, the attitude of urban residents towards their waterfronts has been troubled in Europe. Urban river spaces have often been so industrialised that they lost almost all residential or recreational value. For some time now, a change has been taking place and numerous cities have begun to turn towards their riversides. By conversion and renaturation measures, cities attempt to recover the water quality and create public spaces on the riverbanks accessible for their population. Under consideration of urban port waterfronts, this paper presents some results of the research project “Successful transformation of industrialised river spaces in Europe”. The project involved analysis of successful case examples, whereby the focus was on planning, organisation, and implementation processes. Based on the results, policy recommendations have been made to support relevant stakeholders with related future transformation projects.

Keywords

Redevelopment; planning; organisation; implementation; Europe; case studies

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Introduction

Due to the history of industrial development along riversides, the attitude of urban residents towards their waterside locations has been troubled in Europe. Urban river spaces have often been so urbanised and industrialised, that they lost almost all residential or recreational value. For some time now, a change has been taking place, and numerous cities have begun to return towards their rivers. By conversion and renaturation measures they attempt to recover the water quality and create public spaces on the riverbanks accessible for their population (cf. Strauß, 2001).

The upgrading of urbanised and industrialised river spaces is a complex and ambitious task. However, today, many different examples of successful developments can be found throughout Europe. Experience from successful project approaches may support future initiators or developers of comparable projects in implementing their plans.

Therefore, the German Federal Ministry of Transport, Building and Urban Development commissioned Universität Leipzig to carry out the research project “Successful Transformation of Industrialised River Spaces in Europe” from January to December 2010. The project has been supervised by the Federal Institute for Research on Building, Urban Affairs and Spatial Development.

This paper presents extracts from the project handbook, which was published in German (cf. Holländer et al., 2011), and thus gives an overview of the results focusing on the transformation of urban port waterfronts.

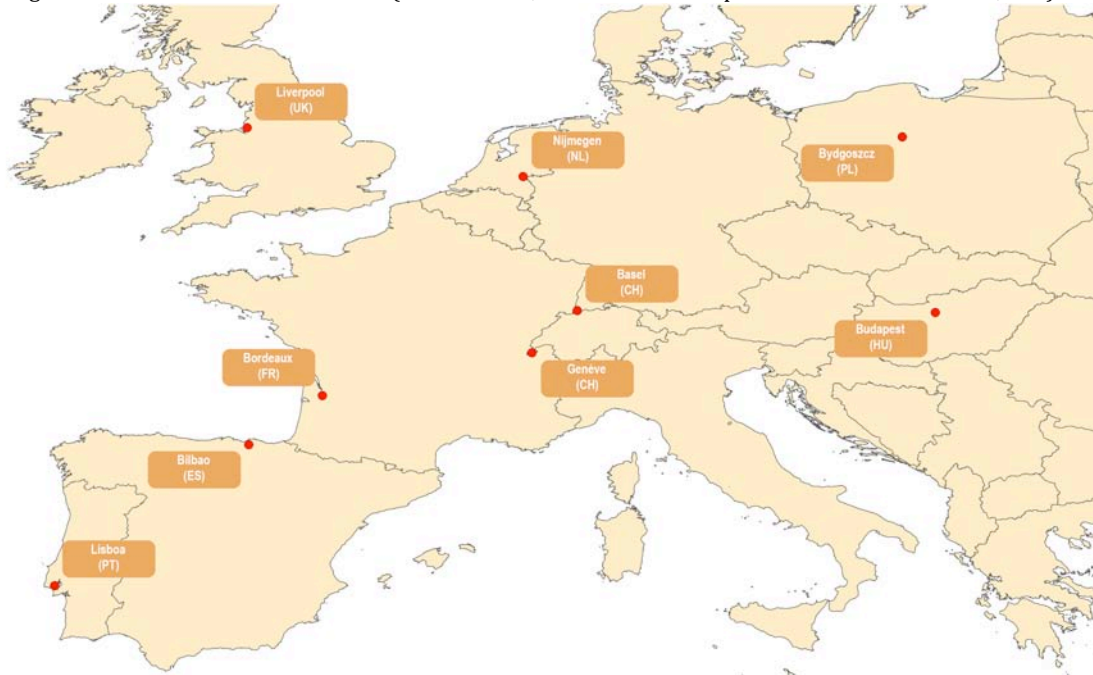
Objectives and approach

The research project “Successful Transformation of Industrialised River Spaces in Europe” has aimed at supporting different planning levels and further relevant stakeholders in enhancing the quality of life in urban river spaces. The central research question of the project was: Which factors are crucial for a successful transformation of industrialised river spaces in Europe? Answering this question with the help of analysing selected case examples required a definition of the essential terms.

The research project defines a case example as “successful”, if it has been implemented or if at least a part of it is finished, while the end of the (sub-)project does not date back longer than to the year 2000. “Transformation” stands for the enhancement of the ecological, aesthetical and recreational quality by renaturation and reactivating measures as well as for upgrading by urban-planning development. “Industrialised” is used for urban river spaces which are largely covered by buildings and/or heavily polluted and which were affected by the economic structural change in the last decades. The case examples can be located at rivers as well as on canals in European foreign countries.

After the specification of the methodology and the definition of the selection criteria, successful examples for the transformation of industrialised river spaces in foreign European countries have been identified. Then twelve case examples have been selected (Figure 1), for which an outline was described with the help of personal and phone interviews.

Figure 1. Location of the case studies (Source: IIRM, ESRI Data and Maps and AND Data Solutions, B.V.)



As the case examples were supposed to represent a wide range of topics within the field of upgrading urbanised and industrialised river spaces, they were thematically structured. The next steps were based on the following five topics, to which the selected case examples from eight countries and nine cities in Europe were assigned in pairs (Table 1).

Table 1. Thematical structure of the case examples (Source: IIRM)

Topic	Project 1		Project 2
Cross-regional cooperation	Mersey, Waterfront Regional Park	◀ ▶	Rhine, Ruimte voor de Rivier
	Mersey, Speke and Garston Coastal Reserve <i>(Liverpool)</i>	◀ ▶	Waal, Ruimte voor de Waal <i>(Nijmegen)</i>
Big event as initial point	Tagus, Parque das Nações <i>(Lisbon)</i>	◀ ▶	Nervión, Abandoibarra <i>(Bilbao)</i>
Service centres	Danube, Graphisoft Park <i>(Budapest)</i>	◀ ▶	Rhine, Campus Plus <i>(Basel)</i>
Parks	Garonne, Quais jardinés <i>(Bordeaux)</i>	◀ ▶	Danube, Lágymányosi Bay <i>(Budapest)</i>
Islands with cultural activities	Brda, Mill Island <i>(Bydgoszcz)</i>	◀ ▶	Rhône, L'Île <i>(Geneva)</i>

The described outlines were used to analyse the planning and implementation processes as well as the financing and participation instruments of the case examples. The analysis aimed at identifying key factors of success and obstacles. Furthermore, the factors were revised with regard to their transferability to comparable projects. Based on the determined factors of success and obstacles, policy recommendations for projects with a similar context were formulated. After a discussion with external experts in the

framework of a workshop, this draft was further developed to future oriented policy recommendations.

Criteria for the evaluation of new projects were identified and summarised as policy recommendations. Within a control-oriented framework (cf. Mayntz, 1987, 190-192), a distinction has been drawn between process- and result-oriented recommendations. The following sections highlight some of the results with regard to urban port waterfronts and present relevant case studies as well as policy recommendations derived from their analysis.

Process-related examples and recommendations

Abandoibarra in Bilbao

Abandoibarra is one of the most representatives of the urban regeneration projects initiated in Bilbao since the 1990s. The overall idea of the development was to reposition Bilbao in the competition with the world's major cities in order to regain the status that has been lost due to deindustrialisation processes. This turned out well, because the Guggenheim Foundation decided to establish its first European branch in the Basque Country's capital. Suddenly Bilbao stood in the focus of world public attention and the regeneration gained momentum.

Abandoibarra is located in the northwest of Bilbao. The former port now provides place for office and residential buildings, a shopping mall, a hotel as well as the library and assembly hall of the Deusto University. The picture is completed by vast green spaces and a broad riverside promenade connecting the Euskalduna Conference Centre and Concert Hall with the Guggenheim Museum. For planning and implementation of Abandoibarra the involved parties founded and vest rights to the non-profit development agency Bilba Ría 2000. That way, they want to keep the urban regeneration project out of political decision-making processes as well as to guarantee that the expected surplus of 21 million € be of benefit for social projects in the neighbourhood.

Using alternatives to regulatory control

In waterfront projects, especially in large-scale projects, a bundling of responsibilities is advisable, and there are various conceivable management and organisation models. Along with urban planning contracts and development measures, the commissioning of development agencies has proven particularly effective. It allows for introducing management processes in urban development as well as bundling responsibilities. The development agency should be commissioned to plan and implement not only temporary and initial projects, but also to ensure the durability of the project development.

Despite engaging third parties in the planning and implementation process, public authorities are to be responsible for the planning process and must ensure the welfare of the general public. Using alternative governance models as opposed to traditional regulatory planning has not only been limited to the transformation of waterfronts, but has also proved itself at other locations. However, the bundling of responsibilities requires a wider assignment of tasks because it brings together general and technical planning. This is due to the complexity of waterfront projects and to the heterogeneity of the responsibilities.

Lágymányosi Bay in Budapest

Constructed at the end of the 19th century, Lágymányosi Bay initially served as a flood retention basin as well as a winter harbour. After World War II, industrial companies settled at the bay. Following the fall of Communism in 1990, the production sites of most of these companies turned into brownfields. About ten years later, a private Hungarian investor and the local government of the Lágymányos district jointly took the initiative to revitalise the bay. Together they founded a development agency called Öböl XI and began to unify the scattered plots. However, in the years following, the district government hasn't been able to perform the capital increases necessary to accomplish land purchase, which is why its share declined from 50% to currently 1%.

In 2007, a Portuguese consortium took over the shares of the Hungarian investor, based on the vision to develop the bay into a multifunctional city within the city of Budapest. Only a few months later in August 2007, the Lágymányosi Park was completed. Near-naturally shaped riverbanks, vast green spaces and beaches, playgrounds, a restaurant and two havens create a unique recreation area that, although privately owned, is opened to the public. In the near future, the park together with several converging green axis are supposed to connect the single elements and to characterise the appearance of the city. Due to the global financial crisis, however, project development has fallen behind and at the time of our case study it was unsure, whether and with what scale and time horizon the revitalisation of Lágymányosi Bay will be continued.

Figure 2. Pedestrian and bicycle path crossing Lágymányosi Park in Budapest (Source: IIRM)



Aligning public and private interests

It should be of the utmost importance to formulate goals which align both public and private objectives. This can be carried out within an approach which allows for the pursuit of one goal, while not excluding the pursuit of another one. Notably, vertical coordination between the regional and communal level is a suitable course of action for such an approach. In case of doubt, the protection of public interest should take precedence during the project development at the waterfront. Meeting private objectives should not be a priority, even if it concerns large private investments, e.g. large-scale projects or the construction of new commercial sites.

General well-being at urban waterfronts is often based on social stabilisation. Districts in abandoned industrial areas at or near the waterfront often show socio-economic disadvantages in both city-wide and regional comparisons. Accordingly, these river spaces are often sources of conflict. Therefore, on the one hand, the objective must be a social stabilisation of these areas, while, on the hand, it has to be ensured that any new use of the

waterfront does not lead to new conflicts with the existing occupants or to significant crowding out effects. In such situations, a new form of tolerance has to be discussed, because the urban waterfront has always been a place where living and working intersect. The complex constellation of smaller logistics centres, ports and commercial operations is not necessarily an obstacle for community development in these areas, but should rather be recognised as a new quality of river-focussed urban life.

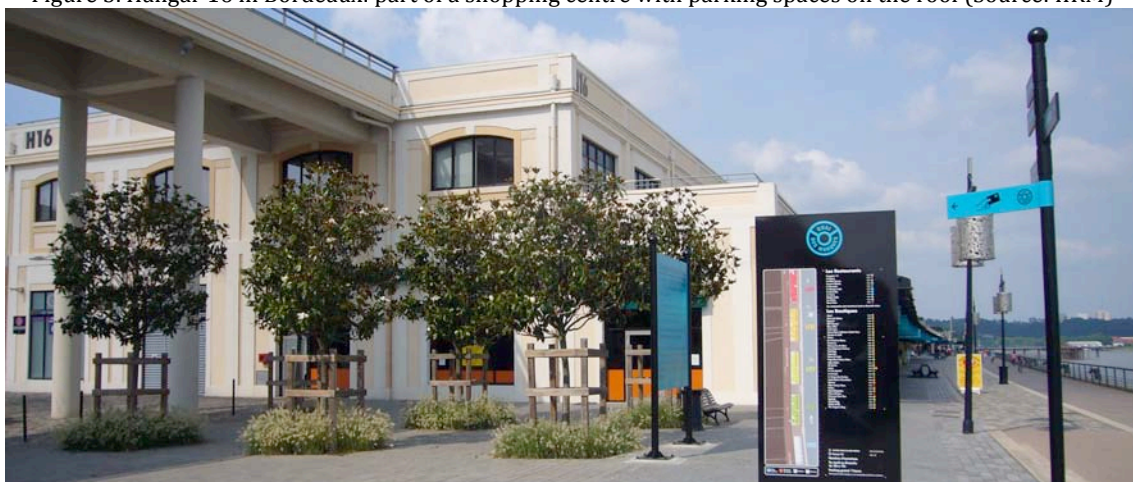
Outcome-related examples and recommendations

Quais jardinés in Bordeaux

The gardened quays (quais jardinés), which were inaugurated in May 2009, are part of the measures initiated by the City of Bordeaux and the Urban Community of Bordeaux for upgrading the waterfront of the Garonne. The aim of the project was to redesign the areas which were abandoned after the diminution of the port in order to create a recreational location and thereby to remove the segregation between the city and its river. The gardened quays consist of different parks and gardens located at the city centre of Bordeaux, which string together over a length of 4.5 km along the Garonne. In former hangars, exhibition and conference facilities as well as shops and gastronomy are located.

An important contribution to the successful implementation of the project was the exceptional organisation. In order to avoid responsibility conflicts, the City of Bordeaux transferred the entirety of competences, which are usually shared, to the Urban Community of Bordeaux. Furthermore, there was a close collaboration of the involved stakeholders. During the planning and implementation processes, the general public as well as special interest representatives were involved on a big scale. Thus, the quays were successfully redesigned to provide an attractive location which has become the largest public space of the city where all possible population groups meet. At the same time the project acts as some kind of locomotive for the city and its agglomeration.

Figure 3. Hangar 16 in Bordeaux: part of a shopping centre with parking spaces on the roof (Source: IIRM)



Opening cities up to their rivers

Industrial areas at the waterfront have often been structurally, functionally and mentally segregated from their surroundings. As a result, it is necessary to create links between existing and new emerging neighbourhoods, so that the city gets new public access to the waterfront, while likewise already developed areas become easily accessible from the waterfront. The population is thereby directed towards the river and can identify with it in a new way. In addition, the riverbanks, where new connections between the city and the

river have been created, should be devoted to public use. In addition, a high-quality design must at the same time be robust against flooding.

Preserving and reinventing historical heritage on the riverfront

Historic harbour architecture contributes to a collective sense of identity also after the transformational process. These witnesses of the past should be preserved even if it leads to additional restoration and maintenance costs. It is especially interesting to tie in with the industrial history of the river spaces with regard to the design, but also to find uses that relate to the river (e.g. shipping, fishing and other port-related industries, trades and services). Securing industrial history also includes the preservation of cargo loading cranes within the realm of newly constructed waterside promenades, historic quay walls, moorings and berths.

Campus Plus in Basel

The redevelopment project “Campus Plus” is kept up by two visions: On the one hand, it seeks to overcome the obstacles of the border triangle Germany, France and Switzerland. So far, the three neighbouring states have transferred unsightly uses like ports and waste incinerations to the river Rhine and this way manifest the national frontiers. In future, a uninterrupted bicycle and footpath connecting Basel, Huningue and Weil/Rhine will bring this municipalities closer together. On the other hand, “Campus Plus” combines Novartis economic targets with the urban development planning of canton Basel-Town and seeks to implement them simultaneously, fast and affordable for both of them.

Previously, none of them succeeded in developing a plan which was good enough for implementation. Novartis plan to convert its headquarter located at the district of St. Johann into a “Campus of Knowledge” failed because of the lack of building land, while the canton was in need of additional funding to continue the urban development in St. Johann. Finally, the breakthrough came in the joint project “Neunutzung Hafen St. Johann - Campus Plus”. Novartis one-time payment of 100 million CHF created the financial basis for the notified opening of the district to the river Rhine. In return Novartis received building land consisting of an area which had turned into brownfields after the location of the port. The main issue of the project “Campus Plus” is the restructuring of the Rhine promenade. By 2014, a public connecting path will emerge, that will simultaneously serve pedestrians, cyclists as well as river swimmers for recreation purposes.

Figure 4. Abandoned Port St. Johann in Basel after the relocation and before the redevelopment (Source: IIRM)



Using the river as a backbone and linking element

The river is the "blue thread" flowing through the city and the region, the backbone and the (potential) "mental map": it connects all riparian places with each other, even those of different character. Existing separating factors in river spaces, such as a lack of possibilities to cross the river, should be overcome.

Making the waterfront accessible for the public at significant locations

Riverside paths should be uninterrupted to the greatest possible extent, even if natural and private interests as well as existing special features (such as port or dock areas) need to be taken into account. In order to bypass obstacles, such as private property or special features, without interrupting the continuity of riverside paths, off-shore boardwalks should be constructed where it is possible. Riverbanks open for the public as well as parks should be established in structurally significant urban locations. Furthermore, these spaces should be developed for intensive and mixed use and they should be available to different population groups. On the one hand, the provision of public spaces at the riverside can strengthen both the identity and the image of a city. On the other hand, the protection of ecologically sensitive places at the riverbank can be achieved by directing people towards designated intensive-use locations.

Conclusion

The analysis of case studies from different European countries has shown that every project is unique, so that a transfer is problematic, because their characteristics differ site-specifically concerning the management, participation and results. Within the research project, the policy recommendations are based on case examples which have been planned and implemented before the introduction of the European Water Framework Directive. Therefore the current reflection of these projects takes place against the background of changed conditions which require a better integration of the water body into the planning process and the results of the transformation process. Keywords for it are the integrative approach, flood protection and multifunctionality of the river side.

Nevertheless it has been beneficial to identify the successful moments of the case studies. Precisely due to the differences between management forms in different countries, the comparisons give important impulses. Therefore, the application of these project results makes it possible to "learn from the examples". It makes sense to use the identified criteria for the development and evaluation of future transformation projects in river spaces.

The complete project report and an illustrative handbook can be downloaded from http://www.bbr.bund.de/BBSR/EN/RP/GeneralDepartmentalResearch/SpatialPlanning/RiverTransformation/01_Start.html

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