

ENSURE – European Sustainable Urbanisation through port city Regeneration

Targeted Analysis

Annex 3: Case Study Synopsis Report

Annex

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This document is a case study synopsis report.

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The final version of the report will be published as soon as approved.

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Abbreviations

ADEUP	Agence d'Urbanisme et de Développement Économique Brest-Bretagne
DK	Denmark
EC	European Commission
ESPON	European Territorial Observatory Network
ESPON EGTC	ESPON European Grouping of Territorial Cooperation
EU	European Union
FR	France
IE	Ireland
IT	Italy

1 Introduction

This case study synopsis report has been prepared as a key input to the ESPON project ENSURE – European Sustainable Urbanisation through port city Regeneration.

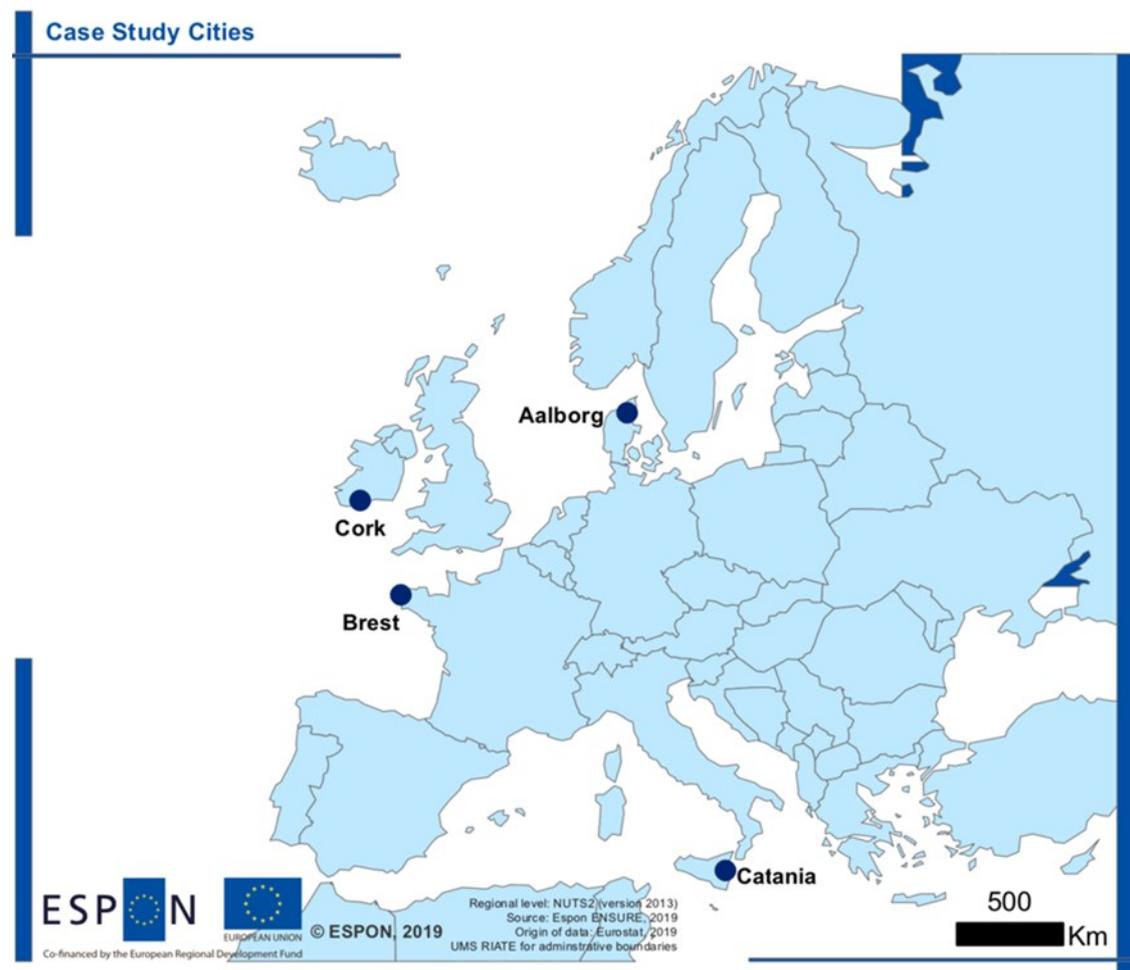
The purpose of this synopsis report is to provide an overview of similarities and differences in the experiences of the four case cities and hence to get a basis from which to develop inputs from the case studies to a framework of good practise. The focus will be on the main drivers and challenges of the regeneration process in the four case cities on the background of the specific geographical, urban, social and economic contexts. The aim is to contribute to an identification and an overall assessment of best practises for similar European port-cities.

2 The four case cities and their contexts

The case cities are located in four different European countries:

- Aalborg, Denmark
- Brest, Provence, France
- Catania, Sicily, Italy
- Cork, Ireland

Map 2.1: The locations of the case study cities in Europe



They are small-medium cities that are reflective of Europe's territorial diversity but share the same challenges and opportunities of implementing a vision to their port city regeneration. The cities are regional capital cities and/or regional economic hubs, located in provinces more or less remote from the national capitals.

They are all old cities, between 400 and 2,800 years old. Brest, which was born as a military base in 1631, is the youngest, and Catania from the 8th century BC is the eldest. Cork was founded around 600 AD, and Aalborg dates back to the Viking age in the 11th century.

2.1 Socio-economic contexts

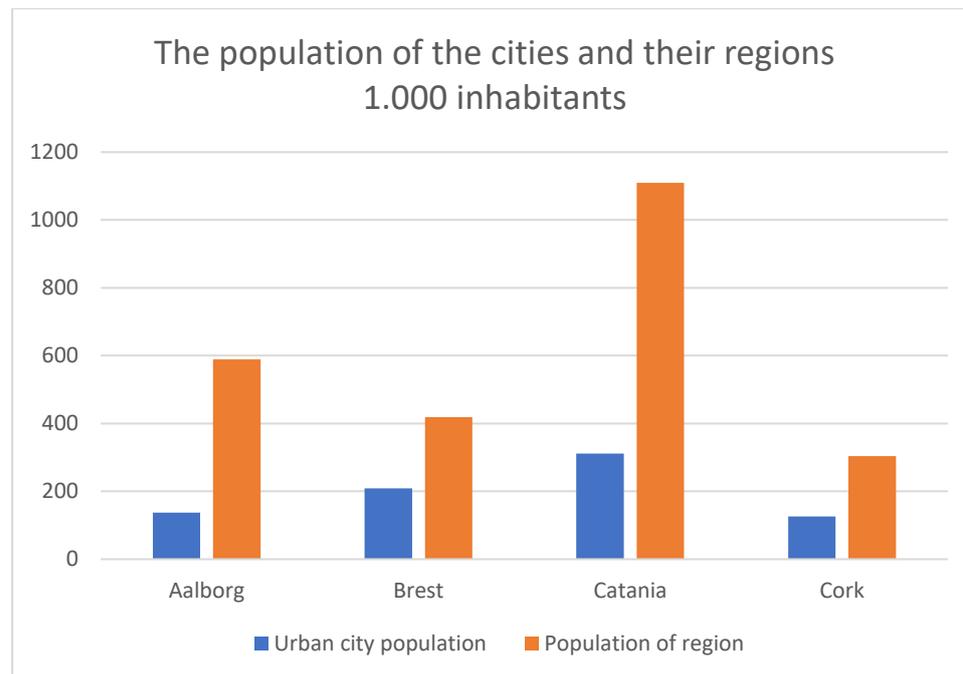
The four cities are small and medium-sized port cities. They have urban populations between 125,000 and 312,000, and the populations of their functional regions are between 400,000 and 1,100,000 (see table 2.1). The urban population is here defined as the population in the contiguous city area without suburbs outside the city itself. The population of the municipalities around the cities is often a misleading size as municipalities as such have different average sizes from country to country, dependentg on the administrative and institutional setup.

Table 2.1: The urban and regional populations of the four case cities

City	Urban city population	Population of functional region
Aalborg	137,053 (2018)	589,148 (Region, 2018)
Brest	208,930 (B. Metropole 2016)	419,000 (Pays de B., 2019)
Catania	311,712 (2017)	1,109,888 (Metrop.city, 2017)
Cork	125,657 (2016)	310,000 (Metropolitan city)

Source: Authors' elaboration, ESPON ENSURE (2020)

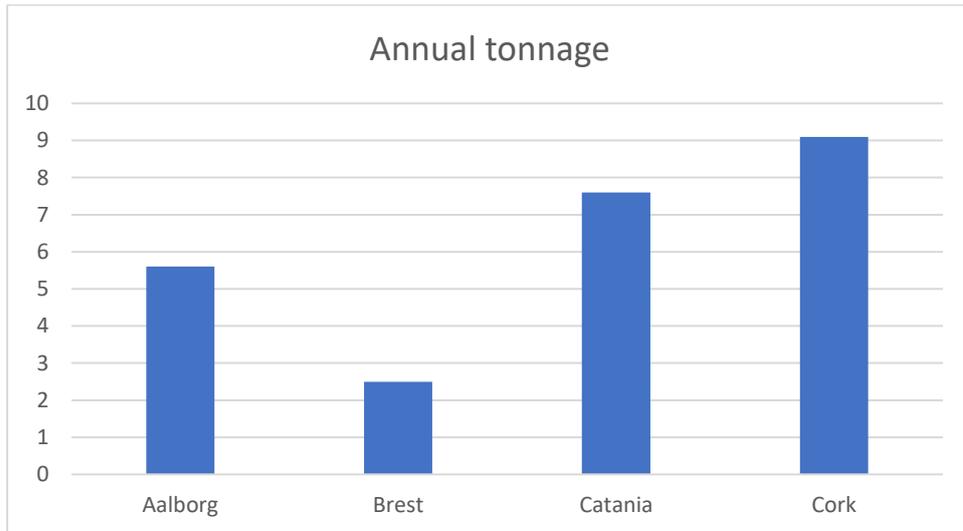
Figure 2.1: The urban and regional populations of the four case cities.



Source: Table 2.1

The ports of the four cities have very different capacities and turnovers. The annual port tonnage varies from year to year, but by comparing the last year with data available, the following picture emerges. Brest, which is to a large extent a military port has the smallest annual turnover, and the others vary between Aalborg (5.6 mio. tonnes) to Cork with the largest throughput of 9.1 mio. tonnes.

Figure 2.2: Annual tonnages of the four case cities

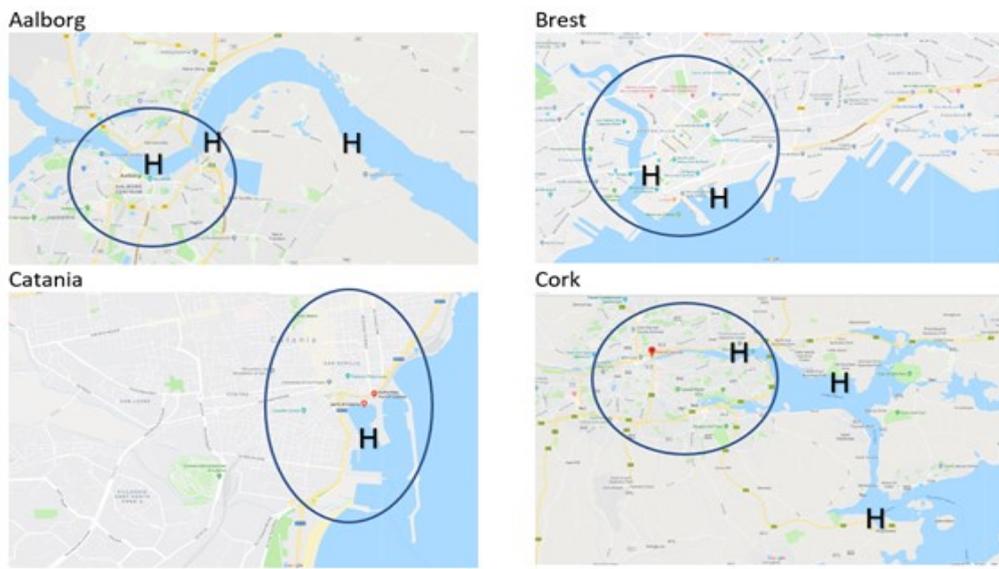


Sources: Statistics of Denmark; ADEUPa Observatoire Économique; and http://www.assoporti.it/media/2762/catania_2014-2015.pdf and <https://www.cso.ie/en/releasesandpublications/er/spt/statisticsofporttraffic2017/>

2.2 City and port relationship

The location of the ports and the physical and geographical relationships between them and the cities differ very much from case to case, which is illustrated below.

Map 2.2: The approximate locations of cities and ports in Aalborg, Brest, Catania, and Cork



Note: The approximate location of cities and harbours are indicated with circles and a 'H'.

Source: Google Maps

In Aalborg the old port is located in the city on both sides of the Limfjord. The port activities are limited today, but immediately east of the city are the oil harbour and the cement harbour along

the southern shore. 10 km. east of the city is the new modern Aalborg East port developing since the 1970s. This is the port where the future growth in port activities is expected.

In Brest, the military port is in the city along the Penfeld river that crosses the city, while the commercial port is along the coast south of the city centre of Brest.

In Catania, the port is located south east of the city ranging from the beaches to the south up to the city centre.

In Cork, the old port is located close to the city north and south of the River Lee. There is still a large operational area at Tivoli Docks but a new modern port is developing in Ringaskiddy, 14 km. south east of Cork.

The regeneration visions, goals and plans are of a different nature among the four port cities, which may partly be explained by the different port structures. In Aalborg and Cork, where new ports outside the city are developing, the long-term goal is to develop these as professional harbours and to "urbanise" the city waterfront with residential, commercial and service sector activities, parks, and recreational amenities. There is in general a desire to preserve elements of the maritime and industrial past with a cleaner and aesthetically more attractive appearance. In the ports of Brest and Catania, there may be a potential for the development of conflicts between the traditional port activities, industrial activities, and new urban functions in the port area. However in Brest, the fact that the navy closed down some of its activities gives room for a valuable regeneration in areas close to the city centre, which means an opening up of the previously closed port area.

In addition to the different city – port relations concerning locations of port activities, the land ownership along the waterfront is another important factor for the planning and development of the regeneration process. In general, the picture is mixed with many different private and public owners. This is the case in Brest and Cork, but in Brest there has been a gradual decentralisation in the sense that the ownership has been transferred from the state and the navy to the region and the Brest métropole. Part of the port is further privately owned. In Cork, the ownership is mixed, including some very large, private owners and also some significant public ownership.

In Aalborg, the port company, which is owned by the city, was the owner of most of the waterfront in the city before the start of regeneration. As there are legal limitations on the types of activities that may be conducted on land owned by the port, the areas were either sold to the city or directly to private developers. Other areas were owned by industrial enterprises along the fjord. In Catania the public port authority and the national railway company are the main owners of the land along the waterfront.

Finally, an important factor for the regeneration process has been the demand for port areas and facilities in the urban waterfront areas. In very few cases, existing port activities have been stopped and removed with the aim of transforming the waterfront into more urban uses. The

speed of the regeneration process has therefore to some extent been decided by the pace of development and the phasing out of the previous port activities. This is seen in Aalborg and Brest, where important, previous port activities have closed down and enabled a new development. In Cork, the regeneration is shaped by individual landowners, and the full potential of docklands can only be realised once the port fully relocates its activities.

The various port city location and ownership patterns and the development of the port activities together provide very different starting points for the regeneration planning process. This is looked further into in the next section where the respective planning systems are briefly described.

3 Planning and regulatory regimes

The regeneration of the waterfronts has had different conditions in the four case cities, with different planning systems and institutional setups.

3.1 Planning systems of the four case cities

Aalborg, Denmark

In Aalborg, there are two planning levels, the city/municipality and the state. The regions had previously a certain coordinating and controlling role, but this has been eliminated in 2007, when the administrative structure was changed. In practise the city of Aalborg has the full responsibility for the physical planning of the waterfront including the planning of infrastructure and public transport, as long as it abides to current legislation and national regulations. There is a national framework that includes rules for the planning process, the general categorisation of areas and environmental standards etc. But within this framework, the municipalities decide the future uses and set the frames for concrete building measures. Aalborg City, like other municipalities, prepares an overall municipal plan, strategic plans for selected areas or themes, and local area plans that are binding for the land owners in the respective areas.

By the end of the 1990s, the city had realized the need for a regeneration of the waterfront, and a Fjord Catalogue with visions and goals was prepared in a process involving the general public to outline the direction and the visions for the waterfront.

Brest, France

In Brest, there are 3-4 planning levels. In addition to the city and Brest métropole that are very closely related, the wider Pays de Brest area is subject to territorial planning which integrates Brest métropole's planning processes. As the owner of the port of Brest, the region also contributes to planning of port development activities but not to urban planning or regeneration. Finally, the state sets the national framework for the urban planning, thus also affecting planning for waterfront regeneration. The resulting regeneration process is conducted with Brest métropole as driving the process within a framework of multi-stakeholder local planning policies and documents, national planning obligations at the level of the metropolitan area (Brest métropole) and broader region (Pays de Brest), as well as national legislation enabling the use of planning tools for architectural and urban heritage protection, and environmental protection tools provided at EU and national levels.

Catania, Italy

In Catania, the Port authority and the municipality are sharing the responsibility for the planning of the waterfront. The municipal territory of Catania is planned by the General Town Plan, which is the instrument that regulates the municipal territory of Catania under the national urban planning law and the regional urban planning law. The concrete planning is done in a process

of negotiations and the results depend on the achievement of a final agreement. Such a plan for the waterfront regeneration has not yet been achieved in Catania.

Cork, Ireland

In Cork, the city has been the primary driver of regeneration planning, but numerous agencies from various scales of government are involved, and the city is dependent on the central state and its agencies to deliver the necessary infrastructure. Cork City Council created the Docklands Directorate in 2001 to coordinate the process of urban regeneration, and to drive the strategy development. Through working with both internal and external stakeholders, the Docklands Directorate aimed to ensure that the docklands' regeneration was a priority for all relevant stakeholders. The planning vision and policy approach outlined in the Cork Docklands Development Strategy was formalised through two separate statutory local area plans for the North and South docks, in 2005 and 2008 respectively.

The more recent City Development Plan 2015 provides an important framework for current regeneration, and this will be reviewed once the Draft Regional Spatial and Economic Strategy becomes finalised and all plans at regional, city and local level go through a process of realignment.

3.2 Involvement of external stakeholders

Other stakeholders than the cities, the regions and the national authorities are involved in the planning in the four cities to a varying degree.

Aalborg, Denmark

In Aalborg, citizens and other external stakeholders, like neighbouring enterprises and institutions, and landowners are involved in the planning process through a statutory process including a transparent process with public consultations and hearings. In many cases, the city goes further in the involvement of stakeholders than required by law. When it comes to the local area planning, private landowners, property developers and others with a concrete interest in the future use of an area are often actively taking part in the planning, e.g. by preparing a proposed local area plan, which may then be negotiated with the city, and which may also require adjustments to the overall municipal plan for the area in question.

Brest, France

In Brest, the citizens are occasionally involved in the planning process to express opinions on projects, in particular in relation to more recent large urban projects. This can also take place via neighbourhood councils, which are required by law in municipalities with over 80,000 inhabitants. The involvement of citizens has been less important in the early phases of the regeneration, whereas institutional actors, private property developers, and urban planning experts and architects, were more actively involved. For the larger projects, there is a

Declaration of Public Interest procedure which involves public consultation including local citizens, but according to citizens' representatives there are some challenges due to the lack of participatory culture in development processes in the city.

Catania, Italy

In Catania, there has been no direct involvement of the citizens or other external stakeholders in the transformation process. Local actors have performed participation actions, but this has not affected the planning or the development along the waterfront.

Cork, Ireland

Public consultation is an important element of the Irish planning system and there is a statutory obligation to provide time within the planning process for responses to proposed development. In the case of Cork docklands, the local area plan for the south docks had significant consultation facilitated through strong structures. Cork has a strong community development infrastructure that has been historically resourced through the city council as well as other agencies including the Health Services Executive, but there is now an attempt to engage with other organisations including the Public Participation Network. A key issue is how to get citizen engagement beyond consultation in order to get broader buy-in to a medium-term vision and plan for Cork. The involvement of landowners and property developers is relatively limited in Cork. They may engage with the local authority to get a sense of coming plans, and they may make use of an appeal process if they want to challenge with the planning decision.

3.3 Visions and plans for the waterfront regeneration

Aalborg, Denmark

In Aalborg the initial, rather detailed visions and goals were formulated in the Limfjord Catalogue in 1999. The Limfjord Catalogue in particular pointed at the need for a more visible and accessible fjord, and the creation of an attractive waterfront with both green areas and recreational amenities, housing, services and cultural activities. A main aim was further to create better connections between the city and port areas after the closure of industrial activities. Also the preservation of selected old harbour and industrial buildings was given high priority. The visions and plans were maintained and further developed in connection with the preparation of several local area plans and the general municipal plan. After the financial crisis, a general strategy for youth housing was pursued, and there was a priority for the role of the waterfront as a strong input and contribution to a new growth strategy. In Aalborg, the planning has been done by the city with due regard to the environmental and planning legislation, but without significant restrictions from regional and national plans.

Brest, France

In Brest, a more general vision was formulated in a Reference plan in 1994 for the commercial port. The military port was not included in the initial plans because of a different ownership. In the commercial port area, the aim was to regenerate brownfields and help develop maritime activities. The aim was further to restore the cultural attachment of Brest citizens to the sea and to the city's industrial heritage, creating synergies between the economic development of the commercial port and the city centre. More concretely, the goal was to reinforce the link between the city and its port and seafront to attract visitors to the area and enable access to the water. The commercial port area was thought of as a place for social, cultural and leisure activities. The urban development vision for the commercial port ran parallel to the economic ambition carried both by the Brest métropole and the Chamber of Commerce to modernise port activities in line with maritime trends. Regeneration took place in two distinct areas (the commercial port and ex-military areas) and only recently has Brest métropole started to develop a common vision for urban development that addresses the port city relationship including both areas. The city of Brest, the Brest metropole, and the military port have been the main public agencies involved in the regeneration planning with the metropole as the main actor.

Catania, Italy

In Catania, the regeneration plan requires an agreement between the port authorities and Catania city in order to ensure coherence with the urban plan. Some planning has been done, but until now no comprehensive plan for the regeneration has been approved. A few regeneration projects in the harbour, however, have been assessed and approved on the basis of current ideas and preferences.

Cork, Ireland

In Cork, the vision for regeneration has been built over two decades through a range of plans and policies. The overarching vision since initial discussion in the late 1990s has been to facilitate the expansion of Cork port and city, create a new city quarter, and provide a unique and beautiful place with natural amenities. However, the details have changed and been disrupted due to both internal (new plans/policies) and external (financial crash) factors. The first substantial vision for docklands regeneration was published in 2002 as the *Cork Docklands Development Strategy*. Building on the Cork Area Strategic Plan for metropolitan Cork, the strategy aimed to position the redevelopment of the city's substantial docklands area as a key priority for urban and economic development. The strategy aimed to set out "a vision for a new urban quarter in Cork that will revitalize the city through high quality, contemporary design and a vibrant mix of uses". The strategy built on an established model and aesthetic of waterfront redevelopment to replace the industrial docks with a new mixed-use landscape of residential, commercial, consumption and leisure space. The overarching aim was to use the redevelopment of the area, which is twice the size of the existing city centre, to develop the knowledge economy, attract residents back to the city centre and create a more sustainable

and liveable urban environment. in Cork, various local, regional and national government structures are involved in the regeneration planning and implementation. The division of roles implies some complications and barriers, e.g. when infrastructure investments that is needed for the regeneration depend on decisions and budgets from the national government.

4 Experience from the implementation

The experience gained from regeneration actions varies considerably from case to case. The number of actions or regeneration projects along the waterfront is highest in Aalborg and Brest, while no concrete and planned steps have been taken in Catania, where a few changes have taken place along the waterfront without any formulated, common vision or plan. In Cork, impressive visions and plans were formulated, but the financial crisis delayed the process considerably. There has been a strong upturn since 2013 and construction is now complete in the north docks and is speeding up in the transition area between the south docks and city centre, but not yet started in Tivoli.

4.1 Implementation models

Along with the different planning systems and planning framework for the waterfront regeneration, different models have been used for the implementation. In the following, four main categories of implementation models are defined, and the importance and implications of the choice of models are analysed.

4.1.1 The local authority as sole developer

The first model is the traditional model, where the city is the owner, planner, developer, and investor, with or without assistance from external experts, private consultants, advisors, and/or construction companies.

Typical examples of this model are seen in the early regeneration process in Aalborg, where the city initially took over the responsibility for developing “Between the bridges in Aalborg” and in green and leisure areas along the fjord, including the “Jomfru Ane Park” in the Central Harbourfront in Aalborg and other parks and urban spaces along the fjord. A special case was in the House of Music area, where the city wanted to sell the building sites without losing control over the green areas and urban spaces between the buildings. In order to secure the quality and a certain character of the urban spaces, only the building sites, limited to the footings of the planned buildings, were therefore sold.

In Brest, the main part of the larger regeneration projects belong to this category with the local authorities as the sole developer. Both in the commercial port with the Grand Large building, Le Fourneau street art center, a concert hall, and office buildings were all initially funded by public authorities and institutions for further development or occupation by private actors. A main reason for the limited role of private investors is indicated as the perceived risk and a lacking interest by private actors. In other cases, private investors were attracted for parts of a project, typical for the construction of housing, offices and shops. The same was the case in the Castle’s Port marina and in the Capucins area with residential buildings, a cable car, and a multimedia library. The development and implementation of practically all projects were

delegated by Brest métropole to semi-public, satellite organisations, thereby isolating and protecting the city finances to ensure sustainability. However, these projects are still under the full responsibility of the public authorities and funded by the Brest métropole and by other public authorities at all levels with co-funding with state- or regional budgets and EU funds.

In Catania, the main regeneration project, "Le Ciminiere" was funded by the local authorities and is categorised as a case where the local authorities have had the roles both as planners, developers and investors.

In Cork, there are no examples of regeneration projects that have been implemented by the local authorities as sole developer and investor.

4.1.2 Private developer driven development

This is the model, where a private developer, which may be a company or a person, alone or with private partners, owns the land, prepares a development plan, and invests in the area. The role of the local authorities is to assess, negotiate, and approve the plans, subject to the national planning system.

Typical examples of this model can be found in Aalborg and its twin city of Nørresundby, where the Lindholm area was owned by a cement company, and where the Central Harbourfront in Nørresundby as well as the Eastern Harbour and the Spritten area in Aalborg were also owned by local companies, but taken over by private developers. In the Lindholm area, there were conflicting views as to the roles concerning the decontamination and the planning which led to a prolonged process.

There are currently no cases in this category of regeneration projects in Brest and in Catania. In both cases, the private investors and real estate developers have been reluctant to invest in the waterfront regeneration, whether this is due to insufficient incentives or limitation in the access to the publicly owned land on the waterfront. In Brest, the pre-emption right of Brest métropole on any land for sale has been an effective brake on this type of investment.

In Cork, a large proportion of projects under construction have been implemented as private developer driven developments such as the Elysian and One Albert Quay developments. This explains the delay that occurred during the financial crisis with poor market prospects, when developers had limited capacity to access funding and finance.

4.1.3 City plans, private actors develop and invest

In this model, the city or the local authorities are planning an area, where the land is publicly owned, after which it is sold to a private developer and investor for further detailed planning and implementation, typically along with continued negotiations with the authorities during the construction period.

Typical examples are the House of Music in Aalborg, where the city and a local group of promoters for the project were actively involved in the planning process until they had to give

up finding the necessary funding. A major national charity foundation that had participated in the planning process, then took full responsibility for the implementation of the House of Music project with some financial contributions from the city and from other sponsors. The city sold other plots of the area for youth housing and for a new university building, but the surrounding areas were still owned and maintained by the city,

The model was applied to some extent in Brest, where private investors were attracted to take over individual land plots in the commercial area, typically for construction of housing, offices and shops. Each of the land plots were then developed between a satellite organization of Brest métropole and the individual investor. In the end, some of the final projects developed differently from the plans, because the organisation had to achieve overall financial sustainability of operations. As a result, certain types of projects, therefore emerged although they were not planned in the original vision and did not always seem to integrate well, in particular with regard to port activities.

No such cases are seen in Catania and Cork.

4.1.4 Development in partnership

A variant of the above model is the partnership development model, which implies the close partnership between the responsible authority and one (or more) private partners. A concrete case where this is applied is the planned new Stigsborg neighbourhood in Aalborg, where the land is owned by the city, who prepared an overall plan for the development before inviting private partners as investors to take part in a joint venture development company and thereby sharing the ownership and the detailed planning as well as the revenue from selling the building lots to investors (including sales to the private partners themselves).

A similar model has been applied recently in Cork, where the state transport company entered a partnership with a private property development company to facilitate a new development close to Kent railway station.

4.2 The choice of models

As it appears from the description of the above implementation models, the land ownership and the funding sources are important aspects of the implementation process. If the land is owned by the local authorities that are promoting the regeneration, and if the same local authorities have sufficient funds, they may undertake the regeneration projects as the sole developer, which allows them to better control the result. This is seen in Brest, where the public authorities have owned the land, and where they have succeeded in obtaining the necessary internal and external public funding for the planned regeneration projects. The same has been the case for some of the areas along the waterfront in Aalborg, in particular where the plans were of a non-commercial nature, like the Jomfru Ane Park, the Western Beach Park and the fjord parks.

These public projects have given the whole area a higher value and thereby safety for the investors in the neighbouring areas.

Without owning the land, the authorities may have to wait for a private developer to start the development. They may prepare the plans and make restrictions, but if the owner does not see a commercial interest in building according to these plans, there is usually not much more the authorities can do except cooperating with the private owners and try to make the project more attractive. On the other hand, if the planning gives room for projects that are very profitable for the investor, it may be possible to make further restrictions or conditions for permission of projects in the area. This has been the case in Aalborg, where project adjustments and co-funding of infrastructure have been arranged after a close cooperation with private investors during the vision- and planning phases.

The landowner, however, may also have other more interesting investment options and may decide to wait for better times. In such a case, it may require more to promote investments in an area. This has been seen in the Cork docklands where large areas are owned by a few large, private owners who have started construction only when it was clearly in their interest to do so, i.e. with an uplift in the property market.

Similarly, if the necessary funds are not available, the local planning authorities, even if they own the area, are dependent on private investors, charity foundations, or other sources to obtain the planned buildings or facilities, and external funding usually also means sharing key decisions. The private developer driven model has thus the advantage for the local authorities of saving resources, but on the other hand, they will have less control as they cannot force an owner to invest. Alternatively, the authorities may prepare a plan, and if it is sufficiently profitable for an investor, they may be able to attract one. In such a case, a private investor may take over alone, as it was seen in the case of the House of Music in Aalborg, or they may be invited into a partnership with the municipality, as it is seen in the Stigsborg Harbourfront in Aalborg, where the city contributes with the land, and two private actors contribute with their experience and capital.

The main characteristics and the advantages and disadvantages of the four models are illustrated in the table below.

Table 2. Advantages and disadvantages of the four models

Implementation and funding models	Characteristic	Examples in	Pros (+) and Cons (-)
1. Local authority as sole developer	Traditional model, in particular for non-commercial areas	Aalborg, Brest and Catania	+Under public control - Requires public funding - Limited competition
2. Private developer driven	Typical for viable projects in areas developed by the owner	Aalborg and Cork	+Less public funding required - Less public control - Risk of slow development
3. City owns and plans, private actors develop/invest	A model based on negotiations to ensure	Brest and Aalborg	+Under public control +Less public funding required +Clear demand/supply roles

	viability and required quality		
4. Development in public private partnerships	A model based on competition allowing quality and/or profits for both parts	Aalborg and Cork	+Under public control +Shared costs & profits - Public funding needed - Mixed & unclear roles

4.3 Economic and financial viability of projects

Whether a project is implemented by the local authorities, by private investors, or in a partnership, it is important to make sure that there is a sufficient demand for the new facilities and buildings that are planned along the waterfront, and that the necessary investments are viable. The local authorities may be ready to invest, if a project is economically viable, i.e. if the benefits of the project is expected to exceed the costs, or if for other reasons, it is deemed desirable from a planning or political point of view.

However, a commercial or financial viability is usually the important driver for private developers, and they are therefore typically going for areas where they see a sufficient future demand as compared to the necessary investments. This is illustrated by the development in the Cork docklands, where the demand, before the property crash, was expected to continue growing, which, however, changed overnight in 2008. After 2015, the expectations gradually became positive again and resulted in a high activity level since then. However, the outcome has been the construction of highly profitable elements (hotels, offices) and it has been harder to achieve a functional mix, including housing, which is reportedly less profitable in Cork at the moment.

Whether the focus is on the economic or the financial viability of a regeneration project, it is important to have a correct estimate of both investments, the costs of operation, and the demand. Without this and without an operational strategy and a sufficient demand, there is a risk of an unacceptable, low economic as well as financial rate of return. On top of that, the consequence can be a low political rate of return, when the investments are leading to decreasing popularity and public support. This was for instance seen in Brest, where the regeneration of parts of the commercial port was therefore slowed down to support the regeneration of the military site at the other end of the city. An underestimate of investment costs is just as serious. This was seen in the House of Music in Aalborg, where the estimated investment costs more than doubled from the initial estimates. This project was then given up by the city, but a major charity foundation then took over the funding and implementation.

It is of course difficult to foresee the future population growth and the demand for housing, and the housing market will inevitably be out of balance for shorter or longer periods. The important role for planners and investors is then on one hand to avoid continued overinvestments and on the other to ensure the sufficient supply of housing, when demand is increasing.

The need for an assessment of the cities' future needs and demands, however, goes further than that. It is easy to plan for a city with a lively street environment with small shops and cafés, but if the future residents of the area are too few or prefer to go to other parts of the city, or if the private shopowners prefer to locate closer to the city centre, the desired street environment will not be obtained. This was the case in the area "Between the Bridges" in Aalborg, where the planned small shops and life in the street was never realized.

As another example of an unforeseen demand, the regeneration of the commercial port area in Brest took place to some extent at the expense of some neighbourhoods of the city centre. There was a demand for the new offices from liberal professionals, but the activities were simply relocated, which was not foreseen in the 1994 Reference Plan.

An active involvement of citizens early in the planning process is crucial for the success of the regeneration. This helps to steer the plans in a direction where there is a need or demand. It makes therefore sense, both from a financial, economic, and a political point of view, to involve citizens at an early stage. Permanent or temporary pilot projects and cultural events may also help assessing the preferences and demand of the potential users and may at the same time help to start opening new areas up for the public. In Aalborg a series of events over the last 20 years such as the Tall Ships Races and other big sports events have had great influence on the identity of the city among the citizens and they have opened up for a wider use of the waterfront areas. Temporary pilot projects have particularly been used in Aalborg, whereas in Brest, the pilots have been launched as permanent ones. It goes without saying that the users of temporary pilot project must be aware of the temporary nature of the project, which means that premises or other facilities will not be available on a permanent basis.

4.4 A firm, but flexible approach

Another factor that has been important for the implementation processes is the existence of clear visions and plans with a firm local government policy that sticks to the decided goals and visions. However, at the same time, a high degree of flexibility and readiness to make the necessary adjustments in the plans is often desirable and necessary to make a part of the regeneration financially viable. The challenge is then to adjust the plans without compromising the overall goals and visions. This is in particular a relevant issue, when the plans are negotiated with private investors, but also when the regeneration takes place by the local authorities as a sole developer. There is always a desire to reduce costs and improve the financial viability of a project, but when the budgets are cut, this will often affect the quality and the value of the project for the future users, whereby the economic viability may be threatened.

In Catania, where no clear visions or plans have been formulated, the flexibility depends on the negotiations between the involved public agencies. To some extent, this is also the case in Cork, where regeneration plans are in place, but where non-complying project may be approved

by the state on the basis of other criteria. In Aalborg, there are usually negotiations between the planners and the investors with the aim of satisfying the requirements of the visions, plans and the economic viability on one hand and of the investors for profits and financial viability on the other. This is of course a difficult balance and the results can always be debated afterwards.

5 Outcomes and impacts

The outcomes of the regeneration process are here defined as the observed and expected immediate, direct results, and the impacts as an assessment of the longer term, indirect results of the regeneration projects.

5.1 Outcomes of the regeneration processes

The outcomes in terms of the immediate, direct results of the regeneration process and its projects, whether they have been aimed at or not, have been assessed in each of the case study reports.

In Aalborg, practically all the defined, rather concrete goals that were mentioned in the Fjord Catalogue from 1999 and the following municipal and local area plans have been achieved, and it has been claimed by some that parts of the new waterfront are even better than planned and expected. Only on one point the achievements are considered insufficient on the background of the defined goals. This concerns the planned preservation of characteristic and valuable maritime and industrial buildings. In many cases, old industrial buildings at the waterfront actually have been preserved, but in others it became clear in the process that the preservation would be impossible or more expensive than foreseen, and it would stand in the way of a desired area plan. In many cases the actual outcome differed from the initial plans as a result of a flexible implementation process, but the main overall goals have been met.

Also in Brest, the more general, overall goals and intended outcomes have been achieved, such as the regeneration of brownfields, the creation of new urban functions along the waterfront, and maintaining selected marine port activities. On the other hand, an area dedicated to maritime related SME's developed into various service sector functions, and it has not always been possible to maintain the good relationships between the urban and industrial activities that tend to overlap and create land use conflicts and safety risks. In addition, planned green areas in the commercial port have not been established, and a free view between the city and the sea and port has not been preserved in all locations where it was intended, due to the erection of buildings that were higher than originally planned. Local planners and stakeholders also regret the lack of vision for public transport in the commercial port area, leading to a strong presence of cars.

Without any plans or goals for the regeneration in Catania, the developments that have taken place along the waterfront may still be considered an outcome of the unplanned regeneration process. This includes an Expo and a cultural centre, an underground railway line in place of the previous narrow gauge line, the restoration and new functions in the former Customs Office, and a new handling area for transshipment. A number of other planned projects along the waterfront have not been implemented yet.

Figure 5.1: Two regeneration projects in Catania: the new FCE underground Station Giovanni XXIII and "Le Ciminiere" expo centre, despite no regeneration plans



Photo: Daniele Ronsivalle, 2018

Virtually no regeneration projects were implemented along the waterfront in Cork during the period of the financial crisis and subsequent austerity, 2008 – 2015, but the development has now speeded up, and the regeneration has rapidly taken off. Major projects have been initiated on the North Docks, including a mixed-use scheme at Horgan's Quay in Cork City, the Penrose Dock office building, and a new strategic housing development at Horgan's Quay. The completion of regeneration across a large swathe of the north docks is now anticipated within 12-18 months. The South Docks is still in part an operational industrial area, but the transition zone between the city and the South Docks is being filled with office buildings. "One Albert Quay" opened in 2016, and "Navigation Square" is being developed. The development in the Tivoli area is awaiting the continued relocation of the port of Cork and the release of land for urban uses.

Figure 5.2: One Albert Quay development is highly significant in kick-starting a new phase of development interest in docklands in Cork



Source: One Albert Square (2019)

5.2 Economic, social, and other impacts

The impacts of the relocation of port services and of the regeneration efforts in the four case cities are more difficult to describe and quantify because of their nature as longer term indirect results.

There are only few cases where port services have been relocated in order to make room for the regeneration of the waterfront, and the impact of such relocations can thus be disregarded. In Brest, some port activities might have remained along the waterfront rather than settled elsewhere in the absence of the regeneration process. No long term impact, however is attributed to this.

The potential demographic, socio-economic, and other impacts are identified, analysed, and assessed on the background of a "Theory of Change" approach, where a logical relationship between initiatives and activities to the resulting outcomes and expected impacts is set up in order to compare the long-term goals with the outcomes and impacts. In particular, demographic and socio-economic, cultural and identity changes are expected as a result of the regeneration and the resulting outcomes.

As part of the analysis it is also assessed whether outcomes and impacts are truly incremental, or whether they may have occurred regardless of the regeneration process. The increased housing and office capacities along the waterfront give room for an increased population and for more jobs. But if the alternative would be increased capacities in other parts of the cities, the net effect will only be the possible broader supply and higher attractiveness of the new locations.

In Aalborg, the regeneration of the waterfront has led to an increased amount of attractive housing, a more varied housing supply, attractive premises for offices and education, and an increased supply of culture from new institutions along the fjord. The city has thus become more attractive for students and for existing and new citizens, such as the 50+ age groups that have sold their single family houses and are searching for attractive accommodation in the city. The city has also become more attractive for businesses and for tourists, which is assumed to have a positive impact on the population growth, incomes, and the development of job numbers in Aalborg. There is a positive development on all these parameters, but until now, the size of such potential impacts cannot be statistically verified. Also the age distribution has changed over recent years with an increasing share of youth, which has undoubtedly been affected by the youth housing policy of the city and by the attractive housing for youth along the Limfjord. Another long term impact that is connected to the above mentioned is the contribution of the regeneration projects to the new identity of Aalborg as a modern city with a knowledge based economy and signaling a proud background as an industrial port city. In addition, positive impacts of the regeneration are also expected in terms of a regional growth effect and a much greener environment along the fjord.

In Brest, there are also expectations to an increase in job numbers in the city as a result of the waterfront regeneration projects. It is likely that the urban regeneration process has increased the attractiveness of Brest for tourists and inhabitants. The flagship projects in the Capucins area have attracted attention nationwide and raised interest among the local population. The city's maritime identity has been strengthened with better access to the port and sea, and more economic activities related to the blue economy.

Figure 5.3: Conceptual design of the future Capucins Neighbourhood, a mixed use neighbourhood with eco-housing, offices and the Capucins Workshop in Brest.



Source: Brest Metropole Aménagement

In Catania, individual projects that have been implemented in the absence of a regeneration plan have had different outcomes and impacts. The Ciminiere project has had positive outcomes in terms of an improved area for recreation and catering. But as a result of the failure to complete the regeneration, the area is still a peripheral place, which is considered a negative impact. The new metro line was also a positive outcome, and it has provided very positive impacts in terms of a significant increase in the use of public transportation.

In Cork, a number of commercial projects are now underway in the north and the south docks, while there is still an undersupply of residential accommodation. This is driven by current market conditions. Obtaining a functional and demographic mix in the short term is a major challenge for regeneration in Cork docklands. In the long term, the present level of construction activity, if this is based on business demand, and if it is not just used for relocated businesses in other areas of the city, may lead to a substantially increased economic and demographic growth in the city in line with the ambitions of central government policy for the southern region, and Cork in particular.

6 Challenges, risks and drivers for change

The main drivers and challenges differ a lot between the four case study cities, but there are similarities. In the following, the main specific drivers and challenges are discussed and compared with the aim of providing a picture of common experiences and main differences.

6.1 Population and demography

In general, a high population growth is a catalyst for urban development projects and hence for waterfront regeneration. At the same time, a successful regeneration process that adds to the attractiveness of a city may create further population growth. This "chicken or egg" situation is relevant for all case study cities, but the concrete situations vary.

In Aalborg an increasing population growth in the city has been observed during the regeneration of the waterfront. The main factors are probably the general urbanization and a growing number of students, but the attraction of Aalborg due to a greater variation in the housing supply has probably helped to exploit the potential population growth, and as mentioned, it is not possible to say, if the population growth is cause or effect. New housing has been built along the waterfront, and more is under construction and planned, and in particular the housing for youth is considered very attractive. The risk of a temporary oversupply of housing in the city in general is currently discussed. This raises questions on the time planning of the regeneration, but new housing projects are still initiated. The same may be the case for youth accommodation that has generally been given a high priority in the urban development in Aalborg during the regeneration process over the last ten years. This has changed the age structure of the population and helped the university in its efforts to attract new students.

Attractive housing has also been provided in Brest, where an eco-neighbourhood with smart city features and mixed uses was built in the Capucins neighbourhood in an area left behind by the navy. This seems to be a factor of attraction of new residents, and housing has sold well. In spite of that, the population of Brest city and Brest métropole has decreased or stagnated over recent years.

The population of Catania has been quite stable over the last ten years, but the number of residents along the waterfront has decreased as a result of some of the projects that have been implemented. Some of these have mainly attracted nightlife activities, tourists and the homeless, but not new residents.

Finally in Cork, the population has increased over recent years, but the regeneration has focused almost exclusively on commercial buildings, although there is an increasing demand for affordable housing. This may be the result of an even stronger demand for commercial facilities combined with a weak local planning and regulation. Over the last number of years,

investments in apartment buildings in city centre locations have been considered by developers to be financially unviable. This may be caused by the current conditions in the housing market, and a lack of social infrastructure such as childcare and health services may also be an underlying reason for this. However, a recent move by one developer at Horgan's Quay may signal a change in conditions for residential construction particularly in the context of a new fast-track approach to residential development (the Strategic Housing Development scheme). This pathway enables developers of schemes with more than 100 units to by-pass the regular planning system and apply directly to the national Planning Appeals Board for permission.

It is seen that the situations are very different in the four case cities. The regeneration has at least to some extent increased the attractiveness of Aalborg and Brest. The population has been stable or decreasing in Brest and it is increasing in Aalborg, which may be partly due to the regeneration. On the other hand, the attractiveness of Cork and Catania don't seem to be affected by the regeneration, and the population has been stable or slightly growing here.

The inability to draw any clear conclusion is, among other things, caused by the delay in the possible impacts of the regeneration. An improved attractiveness also depends on other factors, such as the urban development in other parts of the city and improved job opportunities. In addition, increased attractiveness of a city does not necessarily result in an immediately increasing population growth.

6.2 Environmental protection, risks and challenges

The main environmental challenges in the regeneration processes have been related to the need for decontamination of old industrial areas at the waterfront that are about to be converted into urban uses. The uncertain costs of decontamination of industrial land and the question of how to share such costs have provided further challenges in some cases and delayed the development of areas in spite of the clear rules that are already in place for this. This seems to be a general experience although to varying degrees.

Increasingly the risk of flooding as an impact of climate change is also becoming a general challenge in connection with waterfront regeneration. Preparations and protection works have been done in both Aalborg and Brest, and there is subsequently significant activity underway in Cork to develop a "levels strategy" to deal with potential future flooding in south docks.

On top of that, Catania must also consider earthquakes, sea quakes and volcanic risks that have changed the shape of the waterfront over and over again for centuries

6.3 The planning processes, models and tools

Planning documents have been prepared for the regeneration in Aalborg, Brest and Cork, and the flexibility of the plans and a broad consensus among stakeholders in Aalborg and Brest

have further improved the basis for a positive implementation. The regeneration of the waterfront in Catania, however, suffers from the lack of common visions and of an approved plan. Both the port authority and the city are involved, and it has not been possible to achieve an agreement between the two parties, which is required for a final comprehensive urban plan, including a plan for the regeneration.

The planning processes and the involved authorities and stakeholders differ considerably from case to case. In Aalborg the city council develops the municipal plan as well as local area plans without much interference by other authorities, as long as the general legislation and regulations are considered. In Cork, a multilevel framework of public authorities are involved, with the local authority playing a key role in providing the planning framework, but higher level regional and national planning provides the principles within which docklands regeneration needs to be framed including the framework for infrastructure and large-scale funding.

In Brest the many different authorities that need to achieve a common vision and plan have been a challenge in some cases, when there were conflicting visions concerning the view from the upper city over the sea and the port, and concerning the planned integration of economic and urban functions. This led to some conflicts of interest concerning the preservation of architectural heritage and the view from the upper city and resulted in generic and flexible plans, that opened for opportunistic developments.

6.4 The role of public policy and governance

The roles of public agencies and the governance supporting the regeneration process have varied tremendously from case to case. In Cork and Catania, the local authorities have had a relatively limited role, and in the case of Catania, the local authorities haven't even formulated a final plan for the regeneration.

In Brest the local authorities have a strong and dominating role. Brest métropole is the common denominator among the involved public actors in Brest, and together with semi-public satellite organisations, the regeneration plans are implemented. The implementation has been facilitated by the transfer of the ownership of land to the region, and by a high degree of public cohesion and cooperation with stakeholders. Brest métropole and the region have invested in infrastructure, new premises and accommodation, and the private sector has taken a more reluctant and reacting role of responding to the supplies from Brest métropole.

Like in the case of Brest, the local authorities have taken a very active role in Aalborg, where the city has invested in road infrastructure, premises and social housing as well as in amenities and recreational facilities in the beach area, the green parks and in urban spaces along the Limfjord.

Figure 6.1: A view from the city centre of Aalborg over part of the open urban space between the city and the Limfjord, paid for by the city.



Photo: Henning Thomsen, 2019

The city has had a very active role in planning and negotiating with landowners and developers, and private actors have in many cases suggested new developments and prepared detailed plans. The city has then adapted these plans to the municipal plans, negotiated with the private partners, adjusted plans, and prepared the final local area plans. The cooperation with private actors has gradually developed, and in a recent case, the city has entered into a “partnership development company” with a share of 49 % in the partnership with a developer and construction company and an institutional investor. The partnership is responsible for the development of a major, new neighbourhood, Stigsborg Harbourfront. Through such a close cooperation model, the city intends to get more influence on the details of the development and at the same time to participate in potential financial benefits. On the other hand, there may be a risk that the city is also tempted to accept a lower quality of development for the sake of economic benefits. In cases where the local authorities take an active role in the implementation, a main challenge is to keep the balance between on one hand to be sufficiently flexible to be able to reduce costs and to improve the financial viability of a project when this is desired, for instance to be able to attract private investors, and on the other to stick to the overall goals and visions for the regeneration and to ensure the economic viability of the project.

It appears that both the roles of the public authorities, and the way, in which the authorities have governed the process have varied a lot between the cities.

In Aalborg, the political committee for “the urban and landscape department”, who is politically responsible in all cases, recommends their plans to the city council, who will then usually adopt the plans. There has been a strong focus on the waterfront, and the politicians have been very engaged in the regeneration plans and processes. In some high profile cases, or in cases where large budgets are involved, the city mayor has been very actively involved and steered the process.

In Brest, where many different administrative levels and public agencies have been involved, there seems to have been a close cooperation with the Brest métropole having the key role.

In Catania, the establishment of a technical round table with the municipality, the Port Authority and the Heritage Regional Office has had the power to speed up approvals and decisions, but the potential remained unused, because of the lack of a plan.

In Cork, an opportunity exists for more coordination among public sector landowners involved in the waterfront development. The newly created Land Development Agency will likely play an important role here.

6.5 The involvement of citizens

In three of the four cases citizens are involved in the planning process. In Aalborg and Cork this is statutory, and in Brest, large projects are normally subject to a Declaration of Public Interest procedure, which involves public consultation. In Aalborg, several plans have been changed as a result of suggestions from the public, and in Brest the experience from the involvement of citizens has also been positive, although private and public stakeholders claim that the value can be limited due to a lack of participatory culture. There is a strong and strengthening community development infrastructure in Cork.

In general, the experience from the involvement of citizens is that this provides a better background for the planning and helps ensuring that the plans are in line with the needs and preferences of the citizens.

In Catania, many locals have shared their opinions through various actions. This has not, however, affected the plans or the state of affairs. There has not been any tradition for involvement of citizens in the transformation process. But over recent years, Catania Municipality took steps to involve interested groups of citizens in the urban planning.

6.6 Funding opportunities and initiatives

The investment challenges depend very much on the ownership of the land and on the chosen implementation models.

In case of the implementation model, where the land is owned by the local authorities who are also doing all the necessary investments, the funding is a question of allocating own budgets and attracting funds from higher administrative levels as in the case of Brest, or from semi-public and charity foundations as in Aalborg. In Brest a special planning tax on the landowners also contributed to the funding.

Under other implementation models, where the main investments are undertaken by private investors, the necessary funding will only be available when the investment is considered financially viable by the private part. This of course depends on the market situation, but also to a high degree on the conditions (concerning the permitted volumes and the required quality

of the building etc.) on which the building permit is given. These models with involvement of private investors are the dominating models in Cork and Aalborg.

In these cases, the local authorities may balance between leaving a surplus profit with the private investor or having a vacant area for an unknown period of time. The city will try to find a balanced point in negotiations with the private part, where the investor just exactly finds the investment attractive. This process may be facilitated when the city or other supporting stakeholders can help identifying potential long term renters of building space. This was done, for instance, in the cultural institutions and the City Campus of the university that were built in the waterfront area in Aalborg.

In the special case of the implementation model with a partnership between private investors and public authorities owning the land, the latter may either gain its part of the profits from the projects or contribute with the value of land to the development. It may thus be seen as a tool to gain more control over the development while at the same time participating in the potential financial benefits.

6.7 Impacts of incentives and catalysts

In both Aalborg and Brest, an early success of a visible and welcomed flagship project has been an important catalyst for the continued waterfront development. These projects were Nordkraft and the House of Music in Aalborg, and le Fourneau and Grand Large in Brest.

In Brest and to some extent in Aalborg the mentioned pilot projects and events on the waterfront have also been seen as important catalysts of regeneration.

7 Conclusion and lessons learned

7.1 Main conclusions

Despite major differences between the four study case cities and their respective contexts, the following conclusions may be drawn:

The regeneration of the waterfronts in the four cities follow the retreat of former industrial and port activities, mainly as a result of market trends in the respective sectors and in the transport patterns, but also because of a need by companies to relocate to more appropriate ports. In Brest the main port activities were related to the navy, which has been in a process of withdrawing part of its activities and thus opening up for the need and space for regeneration.

The visions and the plans of the four cities are very different. In Catania, there is no approved plan for the development of the waterfront as there has been in Aalborg, Brest and Cork. Both in Catania and in Brest there is a strong interest in continued maritime operations in the port with the potential tensions and conflicts that may follow. In Cork and Aalborg, new ports are developing outside the city, and it is possible to plan for a waterfront independently from any traditional maritime activities.

The main overall drivers of regeneration in the four cities may be described as a mixture of public and private interest in the utilization of deindustrialized brownfield areas for new urban purposes with a desire to improve the liveability, the profile and the aesthetic appearance of the city by integrating port and city to attract citizens and tourists. At the same time there has been a general intention to preserve maritime elements in the regenerated waterfronts, in Catania and Brest by continuing port activities, but in Aalborg and Cork mainly by maintaining elements of maritime and industrial leftovers and heritage.

The implementation and funding models that have been used varies a lot among the case cities and among types of regeneration projects. In Brest and in Catania, where most of the regeneration projects have been non-commercial, a purely public investment model is applied in most cases. This makes the availability of public budgets at all administrative levels a limiting factor, but in Brest the city has been able to attract both state and EU funding. The opposite is the case in Cork, where private investors have been the primary source of development funding. In this case the general market conditions following the financial crisis and collapse of the construction sector in Ireland, low financial returns, and dispersed landownership have been barriers for the development and delayed the regeneration process.

In Aalborg both models have been applied along with some innovative mixes of private and public implementation and funding models. The infrastructures, the parks and open urban areas, and recreational amenities have been paid for by the city, in some cases with support from private and public foundations. Cultural institutions have mainly been implemented by private foundations with support from the city and from private companies. Private investors have funded the major part of the investments in housing, commercial, and university buildings.

Private investors are increasingly also, on the basis of negotiations with the city, involved in the implementation of non-commercial parts of the projects.

The degree of citizen involvement varies a lot from Catania, where this is almost non-existing to Aalborg where citizens and other stakeholders are actively involved in the urban planning process through statutory public consultations in regeneration projects as well as in other urban development projects. Also in Cork, the public consultations is an important statutory element of the planning system. In Brest, mainly the private sector and institutional actors have been involved, but for larger projects, the Declaration of Public Interest prescribes a procedure which involves public consultation.

The outcomes, which are here defined as the immediate, direct results of the regeneration processes, in terms of implemented projects, whether they were planned in advance or not. With a few exceptions, the outcomes are generally in line with the defined strategies and visions in Aalborg and Brest. The projects are mainly mixed use areas, including buildings for residential, cultural, educational and business purposes as well as recreational amenities. In Cork, where the private sector dominates the regeneration process, implementation started late and has been incremental with a strong focus on commercial buildings rather than residential housing. A few individual projects have been implemented in Catania, but without being part of a unified vision of regeneration.

There are major uncertainties related to the assessment of the impacts of regeneration and of individual regeneration projects. The impacts are defined as the long term, indirect results of regeneration, and the impacts will often have to be measured at the macro, city level, as outcomes and impacts in the project area may be counterbalanced by opposite developments elsewhere in the city. In many cases, the regeneration is only one among other urban development projects and may only constitute a small part. It is then difficult to distinguish between impacts of the various parallel projects. It makes therefore more sense to assess the expected impacts in the framework of a Theory of Change approach. With the help of this approach, the logical relationships between the regeneration initiatives and activities to the resulting and expected outcomes and impacts are identified and assessed.

Positive impacts in terms of an increased population growth and more jobs are expected in both Aalborg, Brest, and in Cork, where positive expectations depend on better balancing the functional and demographic mix. The impact on population growth is dependent on the improved attractiveness of the cities and their broader supply of residential housing. The impact on the number of jobs is more uncertain, but in the case of Aalborg, the attraction of university students through attractive youth accommodation along the waterfront is believed to have a positive impact on the growing sector of technology enterprises that need engineering staff.

Lessons learned through the planning and implementation of these projects are briefly described below.

7.2 Lessons learned

The importance of visions, goals and plans

A first condition for a successful regeneration process is the existence of a plan with formulated goals and visions. The plan may be formulated as a vision, concrete goals, or a more concrete and detailed plan for the regeneration. Both in Aalborg, Brest, and Cork, regeneration plans have been in place with different levels of detail. Typically, the initial visionary plans are further elaborated in the process with the preparation of detailed master plans and local area plans.

The importance of a broad consensus

Just as important as the existence of a realistic regeneration plan is the broad support to the plan from the stakeholders that will have key roles in implementing it. To some extent, this has been the case in both Aalborg, Brest and Cork. but in the case of Brest, private investors have been reluctant to support and actively participate in the implementation, whereas the public stakeholders have supported the plans and contributed to the implementation. In Cork, the support from the private sector also seemed to be rather limited for some time until the market conditions were in place for some of the planned projects. To some extent, the plans also seem to be undermined by other public stakeholders and lack support from some of the landowners in the docklands. This has led to delays and to the implementation of construction projects that are not in full compliance with the plans of the city.

In Aalborg, the local authorities have strived to achieve a broad consensus and support from all stakeholders from the early planning stages, and they have maintained a close contact and communication with stakeholders in all the process of implementation. Together with other factors, this has led to a faster implementation of the plans and a high level of goal achievement.

The importance of realistic plan and budgets

It is of course also important for the value of the plans that they are realistic in the sense that they are feasible, based on realistic estimates of investment costs and assumptions on the future operations and demand. This is the case both for the regeneration plan as such and for the individual elements and projects of the plan.

It is therefore important to critically study the investment costs before the plan is approved. Large and visionary projects, designed by creative architects tend to become more expensive than expected, and the costs of foundations, decontamination or protection against flooding may be considerable and often higher than anticipated. The House of Music in Aalborg ended up with an investment budget that was double as high as initially expected, which is not an unusual situation for major investment projects.

In the case of “Between the Bridges” in Aalborg, an ambitious and visionary plan ended up in a neighbourhood that was very different from the planned visions. the planned small shops and

life in the streets was never realized, which was apparently, among other things, the result of an insufficient analysis of priorities and behaviour of the citizens and entrepreneurs in such areas.

Like other projects, regeneration projects also need a sufficient demand and a viable operational strategy to survive. This is the case for private investment projects, where the investors must be assumed to have ensured a satisfactory profitability over a certain lifetime, but it is also important for projects implemented for public budgets. This is particularly the case when the project depends on continued public support. The question is then, if it will be possible to generate a continued public support, and if such support will be taken from budgets that would otherwise be spent on other projects or activities and thus make such activities suffer? There may also be too much focus on the investment phase and the first few years of operation. This was the case for the Utzon Centre in Aalborg, where budgets were secured for the initial years of operation, but then, it had to seriously change strategies to ensure the financial sustainability.

Testing demand through public involvement and pilot projects.

A better assessment of the need or the demand for a project may be achieved by actively involving citizens, which may have the additional benefit of building up public support and trust in the project and giving the citizens a sense of ownership of it. The involvement of citizens through hearings and other types of communication has reportedly, in many cases changed regeneration plans in Aalborg. The need or the demand for activities in an area may also be assessed, and the area may be opened up for new uses by inviting the public to make use of the areas via early permanent or temporary pilot projects before the full implementation of the regeneration project. This has been done, for example, by arranging public events in Brest while regeneration was under way, and by allowing temporary use of the Eastern Harbour area in Aalborg during regeneration implementation.

Attraction of private investors

Regeneration projects that are considered economically feasible or politically desirable, but uncertain or not financially viable for potential investors may still be implemented by private investors. If the financial viability, however, is considered insufficient or uncertain, e.g. due to the current expectations or market fluctuations, it will be hard to attract private investors. The late start of private investments in the regeneration of the docklands in Cork was due to an inability to access funding and an insufficient financial viability of the planned, particularly residential projects, and it seems reasonable to believe that in Brest, a much higher share of the investments might have been implemented by private investors, had they been (slightly) more profitable. This might have been obtained by adjusting the planned projects and thereby making the investments more profitable for the investor. This may be achieved e.g. by improving the infrastructure of the area, doing the necessary decontamination, lifting requirements to the planned constructions, accepting a lower quality of constructions, or by

increasing the building rate and the maximum capacity of the buildings. However, this will only work if it doesn't reduce the value, and thereby the resulting demand and market prices correspondingly.

Public agencies may in other ways increase the profitability of planned regeneration projects, e.g. through long term rent agreements with an investor or in other ways. This tool was widely used in cultural projects along the central harbourfront in Aalborg. By moving rent agreements from existing facilities to planned new buildings, like Nordkraft and the Utzon Centre, the viability of the new projects improved.

On the other hand, if the development of an area is already profitable, it may be possible to reduce the financial rate of return by opposite actions and increasing the requirements or by charging a land value capture or planning tax as it is seen in Brest, and still being able to attract investors. The experience from Aalborg shows that it is also possible to make private investors pay for non-commercial parts of the regeneration, such as infrastructure and urban areas, when this is compensated for e.g. by allowing higher building rates,

Flagship projects attract other projects

An important driver or catalyst for the regeneration process can be a flagship project, successfully implemented early in the process. After a successful case, many potential investors may be attracted to be part of a success. This has been seen with La Carène in Brest and the House of Music in Aalborg. Both projects have made it more interesting for other projects to locate along the same harbourfront.

Difficult or impossible to estimate long term impacts

The impacts of regeneration and of individual regeneration projects is very uncertain, and in many cases it will not be possible to measure or even estimate them. This is due to many different reasons. Measuring the impacts will thus require knowledge about the alternative situation without the regeneration and about causes and effects in the process. A relevant question is also if the impacts are caused by the regeneration or by other urban development projects.

Further research

Further research will be needed in the coming years to follow up on the impacts to be monitored in concrete cases at both district-, city-, and regional level to better understand the economics of the area.

7.3 Proposals for sustainable city regeneration for similar port cities

On the basis of the above considerations from the case study, the following proposals are given for small and medium-sized port-cities that are planning a regeneration of the waterfront.

- a. Identify the most important public and private stakeholders and involve citizens and relevant stakeholders in a focused idea generation process at an early stage. Develop long lists of ideas and set priorities on the background of a clear picture of the port city and planning context.
- b. Define opportunities, risks and constraints to the future development and take a decision early in the process, either to keep maritime and urban functions separated or how to mix them. Map the landowners, identify their specific interests in the regeneration and assess the implications for the timing of the regeneration. This is happening in Cork. There is a clear picture of the fragmented land ownership in the area which is being used to inform plans for the area, particularly the opportunity it provides to introduce site-specific nature-based solutions to flooding issues. There is also a clear sense of phasing in Cork in terms of staging the regeneration process, with Tivoli docks not expected to be redeveloped for at least a decade at which stage the north and south docks should be complete.
- c. Involve architects and planners and ask for alternative land use plans. Spend the necessary time and resources on the discussions and further improvements. Keep citizens and other stakeholders, including landowners and potential investors, actively involved in this phase.
- d. After drafting an integrated development vision and selecting a strategic plan, prepare an outline time plan.
- e. Decide the roles and responsibilities in the process of the various public and private stakeholders. Make it clear who is managing and coordinating the process and make sure that this role is placed at a sufficiently high organisational level with a certain access to the financial resources.
- f. Break down the overall plan and define the individual projects of the plan. Involve technical and economic specialists for a further design and for the assessment of the economic and financial viability of individual projects and for the whole plan.
- g. Consider potential public-private partnership models for the implementation and decide how the projects may be shared between public and private actors while keeping satisfactory economic as well as financial rates of return.
- h. Make sure that the necessary land and financial budgets are available. What are the necessary contributions from other public bodies and what may still be required from private investors
- i. During the implementation process keep an eye to the financial and economic viability of adjustments that might be negotiated and decided.
- j. Monitor and evaluate regularly the implementation on the background of visions and goals, if possible as an integrated part of existing planning processes.. Adjust the plan when needed for an improved outcome.

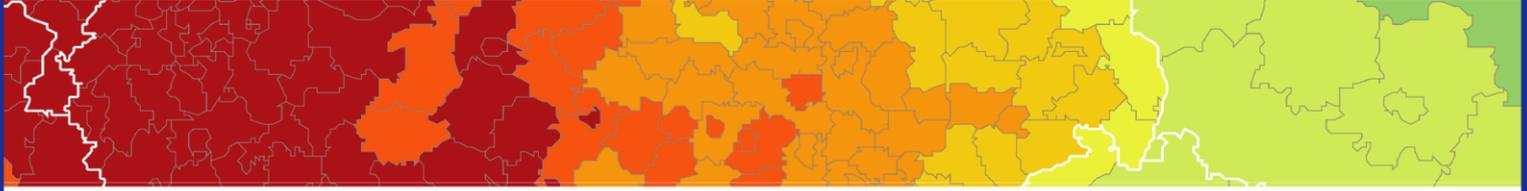
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