



## **Marina planning as a part of port and urban development**

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### **Abstract:**

The changing of ports worldwide needs a new relationship between port and city. Many unused ports are located in excellent sites of urban structures and must be integrated in the dynamic and continuous process of their development. Further the increase of the maritime industry and tourism is a huge chance for ports and cities. The planning of maritime possibilities such as terminals for cruise industry, berth for super yachts and marinas for sport boats must be integrated in the urban development. These specific elements need the best and correct sites and sizes and capacities. They must be planned inside the urban structures and waterfronts. The architectural and economic quality is important. And finally the specific aspects and needs of the Mediterranean areas and cities are considered.

### **Keywords:**

Port and city – Urban waterfronts – Maritime industry – Cruise industry – Super yachts – Marinas – Tourist amenities – Marina architectural design

### **1. Introduction**

Since the mid 70<sup>th</sup>s the commercial shipping industry worldwide is going down, many former harbours and ports are unused or used by interim (e.g. landbased logistic companies). Totally different is the increase of the cruise industry. On the other side the areas of former commercial ports and harbours are located in excellent urban sites and at waterfronts. As a consequence of the extension of the cities these areas are nowadays located in down-town sites and excellent locations by the cities. From the economic point of view these areas are undervalued. This development worldwide is well known and a few innovative urban concepts show this changing from a former commercial port-city to the modern cruise terminal and tourism port-city. A process of transformation in the urban development is necessary and for this it is necessary to understand the basics and structures of this process.

### **2. Renaissance of water in the cities**

Most human settlements were founded on existing natural waters. Riverbanks, shorelines and coasts are predestined for the settlements. In former times, water was a necessity and a need for the daily life. Artificial and technologized waterways were

constructed in post-industrial times and the natural water was forgotten in the structures of most cities. Waterfront-development as an urban planning work started worldwide in the early 70<sup>th</sup>. Since this time a new renaissance of the relationship between city and water/port started worldwide. A second aspect is the development of a new maritime industry. Since ca. 30 years the cruise shipping industry is increasing. Tourist attractive destinations are searched worldwide for sea and river cruise-shipping. The combination between city and terminal (cruise vessels) is a high potential development aspect. And finally the yacht and sport-boat sector are also increasing. Boating and yachting are a new market, not only in the industry-nations, more and more in the third countries too (India, Brazil, Mexico, etc.). The necessity of maritime infrastructures is huge.

### **3. City and water – a huge potential for development**

Urban development at the water or revitalizing of ports and waterfronts are the biggest potential for cities worldwide. In most cases the sizes and areas of the port development are big. Many hectares or square kilometres are the normal size. The length of an urban waterfront can be many kilometres. So, the development projects have an essential sense for the whole urban development and for economic and social behavior of the inhabitants. The tourist image of a new city at the water is generally positive and the quality of the city increases.

### **4. Leisure and nautical tourism as catalysis of the urban development**

The successful waterfront projects show that the integration of elements for leisure and tourism are highly important for success. The urban water areas are "playgrounds" for all kinds of peoples. Residents and guests, tourists and visitors are for most time at waterfronts. So, the offers for leisure and tourism are necessary. Most important are gastronomic offers like bars, cafes and restaurants.

A second important group of elements is the yachting and boating business. The boats and ships offer an excellent atmosphere and background for leisure at the water. It is very interesting to watch the (super-) yachts and boats.

A third element is the attractive cruise business. These huge ships are important for the city and offer interest to watch. "Ship-watching" from a platform on the top of a cruise terminal could be a magnet for visiting the urban waterfront.

### **5. Modern marinas – centre of life at urban waterfronts**

Modern marinas are a typical urban element. They bring people together at a very attractive location: the waterfront. The benefits of urban marinas are mostly unknown, but the efforts could be big.

An urban marina is not a technical infrastructure like a parking place or a commercial harbour. The modern marina is an element of architectural and urban design like a public park, a market place or a public promenade. Here is urban life and the right

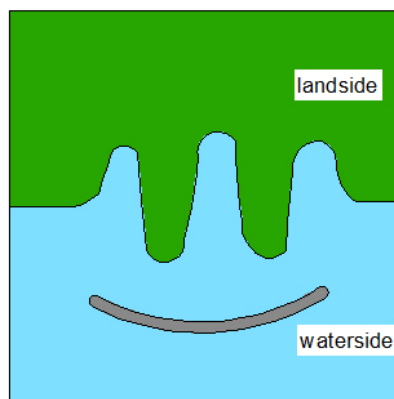
location is in down-town-centre. Many marinas are located outside of the city, this is wrong. A modern marina must offer a lot of possibilities for boaters and other guests. A marina should have open access for public walking; it should present gastronomic offers at the right places for watching boats and yachts, shops for merchandising and cultural offers like galleries, museums, sea life and more.

The economic efforts of these marinas are great for the city, for the marina business (shops, restaurants etc.) as well as for the boating business.

One berth brings ca. 10 visitors in an urban marina. Nearly 50 berths generate 1 employment in the marina. So, urban marinas are perfect elements to increase the urban development.

## **6. How to design and plan urban marinas?**

To design modern and urban marinas is a job for specialized marina designers or architects (HAASS, 2009). An urban marina contents a landside and a waterside. Both must be planned in an integrated and combined way, like a dovetail (figure 1).



*Figure 1. Combined and integrated design of marina by water and landscape.*



*Figure 2. Levels of a marina for public/private access.*

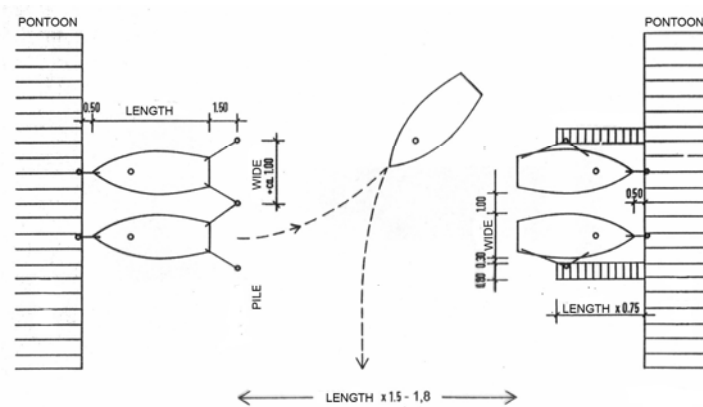
Those are the concepts of the success and efforts of modern marinas. Further the urban marina must have an individual and a public access. The safety and security of the private boats and yachts must be guaranteed. This part of marina, the berth area, must be locked, but visible from the public area. This goal can be achieved through a 2-level

facility. The upper level is used for public access, the under level is a closed area for private boats (figure 2).

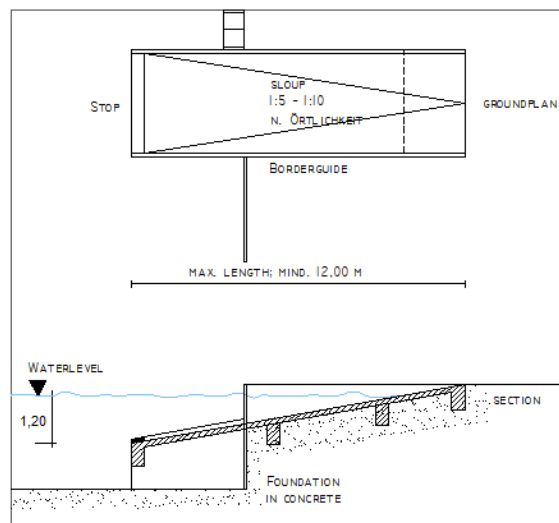
The marina should be an architectural ensemble including water and landside facilities (water constructions, buildings and green spaces, etc.). The mixture of these 3 components is an excellent marina design. The planning of the breakwater, the pontoons and the berths is an important part of the design. The nautical functions (dimensions, sizes and spaces of berths) are important (figure 3).

Floating pontoons are the best way for berthing boats. The breakwater could be a nice and interesting walkway "on the sea". The equipment of pontoons and breakwaters by lights and safety equipment is necessary. Further a slipway is necessary. This should be free of charge for public access and easy to maintain (fig. 4).

Domestic boaters with trailer boats need facilities: public ramps and slips help to promote boating and nautical leisure.



*Figure 3. Waterside facilities of marinas.*



*Figure 4. Public slipway; technical principle.*

An urban marina must offer public events. The best could be an annual event with many various elements. This makes a marina attractive and produces publicity. A good marketing of this event is necessary and helpful. The subjects of the events could be various, from exhibitions of cars, boats to fashion shows and more. A great open place is necessary for these events. For the architectural design of a marina it is important to find a common design identity using the same forms, colours and symbols.

A problem could be the planning of enough parking areas. One car parking is necessary for each 3 berths. In the Mediterranean areas car parking should be covered. It is comfortable to park cars in front of berths. Further parking areas are necessary for trailers. They must be locked. Finally public parking areas for guests and visitors and parking zones for buses must be planned.

The berths for super yachts need a specific area. This area must be protected, supervised and locked. A public access is impossible. On the other hand this area is a perfect target for watching. The service facilities for super yachts are much more. Super yacht berths are only possible in very high quality tourist destinations (Balears, Côte d'Azur etc. Some places/destinations on the south coast of the Mediterranean Sea are predestined for this (e.g. Morocco).

From the economic and tourist point of view, the combination of marina, super yachts and cruise terminals would be the best infrastructure for a city harbour. For the urban development this integrated development is very attractive too. A site of many hectares and a minimum water depth of 20 metres are necessary. This is a problem in most ports. So it is possible to organize the cruise vessels on an anchor place in front of the port/city and transport the passengers by boat shuttle (like e.g. Dubrovnik). So, all facets of nautical tourism (boating, super yachts and cruise vessels) can be combined. The best way for the development of these facilities is to start with a feasibility study. The results will show the local possibilities, the tourist attractions and solutions for the financing and maintenance. If the results are positive the next step could be an architectural competition or the development of an urban master plan. Many of these planning steps can be financed by the EU or by the World bank.

The south coast of Mediterranean Sea is a potential increasing area for nautical tourism, because the marinas, ports and berths in the northern part of the Mediterranean Sea are plenty. The tourist potentials are great and the actual conditions are positive too.

## **7. Reference**

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