

Indian River Marina, Delaware, after a four-year rebuild. Photo courtesy: Sullivan Flotation Systems, Inc



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water depths at and around the marina, and the condition of piles, docks, bulkheads, utilities, buildings and other items. If the berthing area has insufficient depth, dredging has to be a top priority and this may lead to scaling back the 'wish list' of new amenities or postponing construction of some of them.

Deciding what should be included in the project is typically an iterative process that examines many 'what if' scenarios. For example, how much more revenue can result from adding more slips for 50 to 100ft vessels? How much more would it cost to build 15 of these instead of 10? And how often will the additional five be occupied? A pro forma to analyse where money is best spent is a critical component of every major project.

Aiming for the high-end

In the popular yachting area of Newport, Rhode Island, Forty 1° North Marina Resort had a clear goal to create a high-end facility to stand apart from other Newport marinas. The project aimed to construct a world-class marina, restaurant, dinner club and lodging that would appeal to owners of yachts up to 250 feet long. Providing amenities and services to appeal to this clientele has guided all aspects of the project.

The site included an existing marina whose bulkhead and docks had completely deteriorated. This infrastructure not only had to be rebuilt to ensure continued safe operation, it also had to be tailored for the targeted clientele. New amenities included upgraded electrical service, vessel pump-out, bath houses and wireless internet service. "Upgraded electrical service enables us to offer yachts 200 amps of 480 volt service, which can be hard to come by in New England," says Peter Borden, managing director of Forty 1° North.

Plans for dockside amenities were based on an intimate understanding of the desires of the target market. For instance, the planning team made pump-out service available at

Budgeting for your 'wish list'

Market strategy, financial awareness and a realistic and accurate appraisal of your customer base are all key factors when planning marina projects. Tim Mason of Applied Technology & Management (ATM) gives guidance

There is no standard 'list' of where to spend funds when it comes to budgeting for new marinas or marina renovations. The minimum requirements include a dock and cleats - that is, a berth and safe user access to vessels. Beyond these basics, there is a wide array of amenity and utility choices that will vary based on the facility's target customers. In some cases, a facility owner or manager may know exactly what the market and customers demand. In other cases, the critical elements are less obvious and require some due diligence.

Whether the facility is new or existing, a common project process is recommended. All of the elements in this process - feasibility and planning, through site studies, obtaining permits, final plans and specifications, construction and other critical issues - must be addressed according to project-specific goals. The marina's market strategy and financial position should guide these goals.

Every project should include an examination of the facility's revenue streams, expenses, capital fund allocations and debts early in the process. This exercise helps guide the project's objectives, scope and schedule. Before marina design is initiated, it is paramount that planners examine the project's capital budget and potential revenue from all sources. Decisions about how infrastructure should be built or reconstructed and what can be done to improve existing operations and services will impact the cost of the project and the marina's annual bottom line for many years. The owner or operator should involve their consultants early, develop a communications process that works well for them and seek appropriate input from customers.

Marina docks at Forty 1° North Marina Resort in Rhode Island prior to refurbishment

A pro forma - a financial projection model that examines expenses and income - should be completed (or audited in the case of a renovation) to discern the state of finances and project them into the future. Such studies take into account the possible addition of new amenities and services resulting from the project, and can model the return on investment of particular aspects. If additional slips are added, for instance, one can project the resulting income from them. Most pro formas look forward at least five years and can look as far ahead as 10 to 20 years, and the input parameters can be as detailed as deemed necessary.

What is feasible and desirable for a particular marina project depends partly upon the condition of existing infrastructure and services, as well as their capacity to handle proposed new uses. These issues are addressed by engineering surveys that look at





Close-up view of new docks at Forty 1° North. The original bulkheads and docks had deteriorated badly.

have created immediate cash flow allowing a larger amount of capital revenue to invest.” However, most slipholders were unfamiliar with the benefits of drystacks and wanted the wet slips built first. Thus, dry stack construction was postponed.

To cope with cash flow limitations, construction was phased over four years. During the first year, the southern half of the marina was constructed. The northern half was built in a later phase, along with upland amenities including cottages.

Since project completion, boat traffic, slip usage and revenues have all increased at Indian River Marina, which now boasts 274 floating slips, an additional 14 set aside for transients and 156 drystack berths. Even though

the marina was obliged to adhere to a strict project budget, the plan provided the right mix of amenities to the target clientele to generate a positive return on investment.

There are many variables to consider when devising a project budget. Choices in materials and design are based on cost, durability and other factors. Engineers and contractors should make clear to the owner what those choices entail. For instance, new synthetic products for dock construction may have a longer lifespan than wood but could be more costly. A cost/benefit analysis should be undertaken to determine if the investment in a synthetic product is worth the expense. Would the premium needed to pay for the synthetic material be better spent elsewhere, such as on an upgrade of the electrical system, for example? The answer often depends upon customer expectations, the offerings of competing marinas and the options preferred by regulators.

Another element factoring into the budgeting and planning process is competitive bidding. There are various methods of procurement for construction. Preparation of a clear set of project requirements (plans, specifications and contract documents) is critical to ensure

Replacement docks have given Indian River Marina a new lease of life.



Planning projects in a down economy

In the midst of a significant global economic downturn, many marina owners are wary of taking on capital projects.

However, deteriorating infrastructure will not pause until it is convenient for the owner to pay for repairs and upgrades. Even if a marina owner isn't ready to reconstruct or expand, he or she can advance planning, feasibility studies (including pro formas), design and begin the permitting process. Facilities that aren't planning any major changes and have kept up with maintenance could also benefit from an operations audit or pro forma 'tune up'.

In many areas, obtaining approvals for a new marina or a major renovation/expansion can take from six months to two or more years. An owner who postpones a necessary renovation until the economy shows signs of improvement may have to wait two or more years before construction can start! On the other hand, marina owners who have done the legwork for a renovation or new project will be able to move quickly to construction when they are ready. The prepared owner puts himself in a strong competitive position. For projects that are approved and have financing, construction in a depressed economy offers owners the savings of lower fuel costs, surplus materials and contractor availability.

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'apples-to-apples' bids. Bids for one of our recent marina construction projects in the Caribbean varied only 10% between the low and high bidder. This was within the owner's expected range and validated the financial model. Much larger variance in bid prices may result from a poorly prepared or incomplete set of bid documents and may be cause for concern. Up front investment in proper planning, permitting and design phases is crucial to fully develop an understanding of the project's costs and benefits.

There are seemingly endless possibilities when planning a marina project. The details may seem overwhelming. That's why it is vital to have a good grasp of what investments need to be made to continue to provide current services, what upgrades could generate additional revenue and how much the facility can afford to spend. A good plan results from minimising the unknowns and having a firm grasp on the services and experience the target market expects.

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every berth. This system is more convenient for clients than arranging for service from a pump-out barge and is thus unique to Newport. "We also needed these pump-outs so people dining at the pavilion restaurant wouldn't be exposed to odours from pump-out barges while they eat," Borden explains.

Prioritising on a tight budget

Serving a wide swath of the boating public, Indian River Marina in the Rehoboth Beach area of Delaware had a much different challenge. The state-owned facility had been underfunded for many years, with little money available for capital replacement. In the mid-1990s, the floating docks and the bulkhead were reaching the end of their lifespans and beginning to deteriorate. The state legislature was reluctant to pay for the reconstruction but, after several years of effort, parks and recreation officials were able to tap into an endowment and some federal grants to fund a major renovation.

The facility's pro forma helped convince legislators to allow the marina to use state endowment funds earmarked for recreation. "Due to our prime location on the Atlantic Ocean, we had a waiting list of over 100 boats," says Britt Murray, chief of the Office of Design for Delaware's Division of Parks and Recreation. "We said that if we make an investment, we can make at least six per cent on that investment."

As funding was staggered, the project had to be completed in phases leaving officials to prioritise not only on what to build but also when to build it. Officials held meetings and ATM developed a website to receive slipholder input on the construction plan. One of the chief complaints about the existing facility was inadequate fuelling capacity causing long lines at the pumps. As a result, the renovated marina included 18 positions capable of receiving high-speed fuel - increased from 10 in the old facility - and an additional fuelling station was added adjacent to the new drystack building.

One idea floated at the public meetings was to construct the drystack first. "This would have been relatively inexpensive," Murray says, "and would

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