The industry today continues to be flooded with splashes of color. Enticing looking slides and fancy graphics are now done so well that one might get the impression that designing a waterpark is no more than simply arranging a series of water features into an eye pleasing plan with pops of color. However, the majority of such concepts often overlook the fundamentals of a well thought out waterpark design—the ability to not only capture the eye of our guests, but to capture the maximum profit capacity through the placement of attractions and revenue venues.

Designing a waterpark that truly raises the guest experience and their spending potential involves the creative management of many factors. Familiarity on the part of the designer with how waterparks are actually utilized by guests and operated by staff is essential. A well designed waterpark or related attraction expansion should efficiently direct increased numbers of guests while capitalizing on spending, allowing operators to manage guest activities with a smaller staff resulting in lower operational costs & a higher return.

THE “BIG IDEA” DESIGN
It Starts with a Site Plan and…CARS.

Let’s say that you, as a part of a park development team, have a site selected and are ready for your waterpark designer to begin their process. Your feasibility study has provided a projection on annual attendance and design-day guest capacity recommendations. At this stage, big picture site diagramming will be used to break the site down into major areas like vehicle entry, parking, drop-off, main gate, waterpark, operations and service. The locations of these elements are driven by the site’s shape, topography, access to roads, views of the waterpark from highways and the ownership’s philosophy on operations. Generally, two or three site diagrams will be prepared to explore the best arrangement of these program items.

Operational factors such as parking fees, for example, need to be considered so that specific vehicle entry requirements like space for ticket/control booths, vehicle queuing lane and drop-off loop lane that bypasses pay parking should also be incorporated. These...
items, typically are ignored or downplayed in many concepts, are actually critical program items as parking comprises 40-50 percent of a typical park’s overall development area, far larger than any slide complex or mega wave pool. While parking areas may not be part of the “pretty picture,” they are essential to the functional and profit potential of your park.

THE SPINE, THE RADIAL AND THE LOOP
Paths to Fun, Predetermined for Your Guests.

Pedestrian circulation paths can be organized into three general categories that can help to select proper water feature and anchor attraction locations:

• The SPINE: This concept is based on a single main path that connects all major elements, driving repeated exposure to a variety of food, beverage and retail outlets. (Six Flags Great America, Illinois)

• The RADIAL: This ‘Hub and Spoke’ concept has a central core and paths that extend out to major attractions, promoting cross circulation while alleviating an overcrowded feel on busy days. (Six Flags Hurricane Harbor, New Jersey)

• The LOOP: All major elements are organized on a single path that circulates around one or two core attractions, driving guests to feature areas along the path of the full loop. (Disney’s Typhoon Lagoon, Florida)

Food, beverage and retail opportunities are strategically located in each of these park designs to take full advantage of the deliberate circulation paths designed to move people through the park. Physical influences such as topography, roads, regulatory and natural buffers, as well as internal and external view corridors should be noted since these factors typically help decide which site diagram to use for development into a workable plan.

PROGRAM
Think about how people spend, and design movement around those habits.

Your feasibility study gives the waterpark designer a target design-day attendance goal. These potential capacity numbers will drive the program of the waterpark in respect to its water features and support buildings. This is a good time to consider front gate operations, cash storage, retail area requirements and locations of all food and beverage concessions as well as park maintenance support.

It’s also a good time to think about the sizes of these elements and how they could be organized with adjacencies or combinations to help consolidate utilities and staff requirements.

Other essential items to consider that can help drive the success of your park are:

• Does your feasibility study address group sales? If your market is heavily corporate, dedicated facilities may be needed, but consider that the kitchen provides dual use to ‘public’ food venues.

• Do you want to be able to section off portions of the park to run on reduced staff at the beginning and end of the season? This can also allow for selling of ‘zones’ to groups on off days & hours.

CONCEPT DESIGN
The beginnings of pretty picture.

You may have noticed that we have not yet discussed the mix of pools and waterslides that will be incorporated into your waterpark. In fact, with the most successful plans, the early stages of design are actually less about the individual water features and more about organization and identifying site opportunities. Quite often those ‘pretty picture’ concept plans rely on trying to sell fiberglass and other attractions through jazzy colors and shapes, often resulting in the functional necessities being neglected and having to be added in on the back end.

Concept development is about looking at options, developing several solutions and then stepping back. Once there is a “big idea” site diagram with a pedestrian entry point and flow plan, the fine tuning begins! There is no right or wrong way to begin developing
the concept at this point, each site typically requires a customized effort and may require a number of sketch variants. A well thought out site diagram will guide your designer through these early decisions, allowing them to make the best decisions in response to challenges as they arise. A few key points to consider during this process:

- Guest lounge areas are as important as pools and slides to overall guest satisfaction, experience and revenue generation. These areas are typically associated with large water bodies like the wave pool or multi-level activity pools. Keep large expanses of deck and signature attractions away from the front entry so you can draw guests deeper into the park and increase contact time with revenue opportunities.

- Promote circulation within the park by locating major features away from each other, creating destinations. This will disperse guests throughout the park and drive them past a variety of retail and food venues helping to increase passive patron experience and entice spending.

- Leave room for expansion. When developing the plan, leave a few areas where additional features can be added between existing attractions. This allows growth without increasing the overall footprint of the park.

- As the park is being designed, it should be visualized from the guest’s viewpoint on the ground, and in parallel thought about how the operations team will keep it functioning efficiently.
  - What are the vistas being provided to the guests?
  - Is the food building turned so the façade is visible and inviting?
  - Where will cleaning staff be stationed and how visible are these areas?

Once the concept is organized, begin refining the features of the park. For this phase of the design, use vendor-specific slide, play structure, custom pool vessels and feature layouts. This helps ensure that the right amount of space is reserved for the rides and pools as well as allowing for the addition of ride queues and tube corrals to properly support these features.

One should note that rivers, swim lagoons and wave experiences are often equal or higher capacity features to waterslide complex options. The proper balance is key to the guest experience and to meeting guest capacity and spending goals.

**STAFF**

**The Face of Your Brand and the Engine of your Park.**

Many parks are struggling with having sufficient staff to run their parks. This is especially the case at the beginning and end of the season. A number of factors can affect staff quantity:

- **Ride Selection:** Speed thrill slides are more staff intensive per rider than lower thrill rides.

- **Feature Design:** Wider and shorter rivers require fewer guards per rider.
• **Building Design:** Common kitchen areas can supply multiple serve lines

• **Mechanical Plants:** Fewer locations keep staff working rather than moving around

Looking for opportunities to reduce staff can make a huge difference not only in how many rides will be running on a given day but how profitable the park will be. This is where the waterpark designer’s exposure to operations is an essential asset to the park owner and operator. Too many waterparks are built based on an incomplete concept or a contrived aesthetic, verses an attractive and user-friendly park designed around functional success.

**SUN, FUN, SUCCESS**

Thoughtful design and an in-depth planning process will provide an enjoyable waterpark experience for you and your guests, building a successful foundation for park operators to make their patrons’ experience much more of a splash, year after year! More than a pretty picture, a well-developed waterpark design will add significantly to your bottom line.

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**about the author**

Ryan G. Snyder has over two decades in diverse sectors of design, engineering, branding, manufacturing and construction fields; with 15 years in the aquatics industry, he brings a creative problem solving capability to the industry. Snyder currently serves as ADG’s Manager of Project Planning and hands-on creative director designing and overseeing some of the more unique waterparks and attractions from concept design to opening day. Current and past clients include Camelback Lodge and Aquatopia Indoor Waterpark; Columbus Zoo; Six Flags; Massanutten; Kalahari Resorts; Wilderness Resorts; Wet’n’Wild; Cowabunga Bay Las Vegas; Kentucky Kingdom and numerous parks across North America and beyond.