Design and Development: Creating a Profitable FEC

The secret of successful design lies in a 30-year-old concept that is still new to the United States: concurrent design.
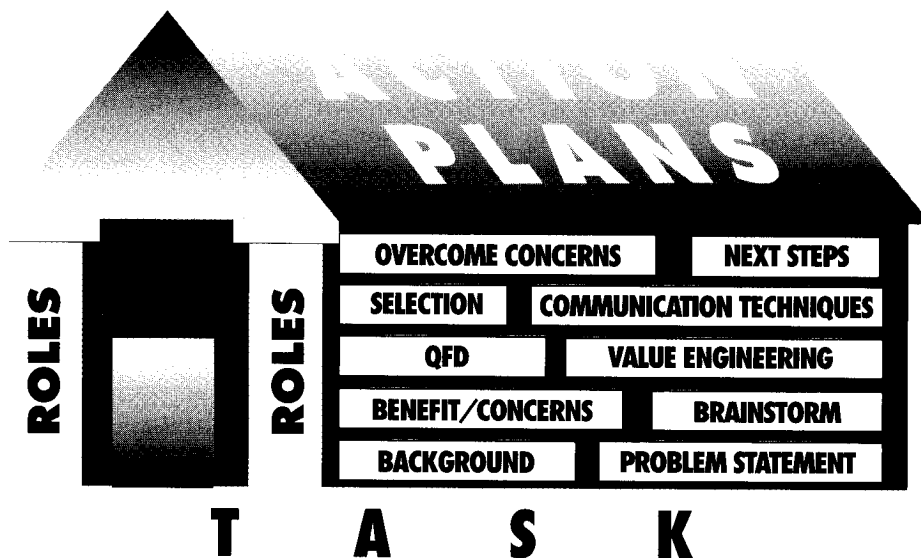
by Randy White

This is the third installment in a series about starting a family entertainment center from the ground up. Part one ("Secret of FEC Success: Know Your Market," Fall 1992) covered how to analyze a trade area and know your customer. Part two ("Customer-izing for Success," 1st Quarter 1993) gave a general overview about how to determine what target guests want and expect from your FEC. In this issue, find out how to pick a design team to build a quality FEC without breaking your budget.

So now you know who your guests are and what they want from your FEC. Congratulations. You're one step—albeit a giant one—from opening day. How well the design and development process is managed determines whether your FEC delights or bores its guests. The design and development process must generate creativity and make the most of every dollar spent. Most importantly, it must always stay focused on the guest. The task becomes more difficult considering the complexity of an FEC, the development of which requires a multitude of specialists in these broad disciplines:
• market/customer research;
• economics (including development cost, revenue/expenses, and financing);

How well the
•
design and
•
development
•
process is
•
managed
•
determines
•
whether your
•
FEC delights or
•
bores guests.

ROLES ROLES

PLANS

OVERCOME CONCERNS | NEXT STEPS
SELECTION | COMMUNICATION TECHNIQUES
QFD | VALUE ENGINEERING
BENEFIT/CONCERNS | BRAINSTORM
BACKGROUND | PROBLEM STATEMENT

T A S K

- design of the facility;
- construction;
- operations; and
- marketing.

Not only must development involve a large number of specialists from these disciplines, but it is further complicated by the need to create the FEC concept—location, size, mix, and theme—simultaneous with the feasibility study, which includes market and consumer research. The only way to get the best project for your money is through early interaction and collaboration among members of the design team.

squeezes the stage after it, often closing off options that could improve quality, reduce cost, and speed up development.
4. The cost is unknown until the contractor's bid is in. If the bid exceeds the budget, it costs more to redesign—often at the expense of quality—and the project faces frustrating delays.
5. There is no unified vision to guide design. Instead of a team working to create an FEC that delights guests, individuals work separately to solve problems within their field. They lose the benefits of a broad view and collaborative

concurrent design. When it comes to design, like most things in life, you get what you pay for. The traditional design approach takes less time, and therefore less money, but does not produce the excellence needed for market domination. A design approach that uses concurrent design and market research costs more at the start, but pays off big in the long run. Some of the many benefits of this investment include:
- an excellent FEC design (good doesn't cut it anymore);
- potential for innovations that improve quality and reduce cost;
- fewer last-minute design changes;
- faster completion times;
- lower capital and operational costs;
- improved safety; and
- delighted guests, market dominance, and the profits that result.

A design approach that uses concurrent design and market research costs more at the start, but pays off big in the long run.

This is not how it is usually done. The traditional design approach is administered by an architect. It is sequential and linear, starting with floor and site plans and structural design. That piece is passed down the assembly line to specialists who, one by one, create the lighting, electrical, and mechanical systems. Eventually, the project lands on the desk of a general contractor for bidding and construction.

There are six major problems to this linear, sequential approach—problems that affect the cost and quality of an FEC:
1. The voice of the guest is lost during design.
2. The vision of the project is narrowed to include only architectural-type design disciplines at the expense of operations, marketing, and other factors.
3. Each stage of design

creativity.
6. The facility, operations, and marketing are developed bit-by-bit, instead of as part of a cohesive whole.

Designing an FEC this way makes as much sense as, in the words of physicist David Bohm, gluing together the fragments of a broken mirror to see a true reflection. By the time the picture begins to come together, it may be too late to change decisions made at the start of the assembly line without unnecessary cost or loss of quality. The result is that the FEC doesn't provide the quality, guest satisfaction, income, and profit it could have.

CONCURRENT DESIGN CREATES EXCELLENCE

Creating an FEC that caters to its market requires an approach that is new to the United States:

The underlying principle of concurrent design is the assembly of a multidisciplinary, cross-functional team that tackles design simultaneously. Because concurrent design requires that these teams work together rather than just passing the project down the line, the entire design process speeds up, product quality improves, and budgets are met. Concurrent design of an FEC means pulling together the people who design the facility and business, as well as those who produce and support it. Everyone jumps into the sandbox at once, with specialists from many different areas participating as members of a team.

The Japanese have used this concept successfully for more

than three decades. It is now gaining wide acceptance among American manufacturers, who find that it helps them develop the right product and get it to the market more quickly and at the right price. Manufacturers call the process "concurrent engineering," and one of its recent successes is the Chrysler Corporation's new Viper sports car.

Core members of an FEC concurrent design team usually include the:
• development manager;
• financial manager/analyst;
• marketing/customer researcher;
• general contractor;
• architect;
• interior designer/ merchandiser;
• civil engineer; and
• operations director.

Other specialists rotate onto the concurrent design team when needed. The core group hears from specialists such as building subcontractors, graphic artists, experts in individual recreation elements and design, landscape architects, and food and menu stylists when their expertise is needed. FECs also benefit from involving an insurance loss control specialist during design, as he or she can suggest changes that later will reduce costs for casualty and liability insurance.

HOW CONCURRENT DESIGN WORKS

Every team needs a coach. For the concurrent design team, that coach is the project design and development manager, who stands at the center of the design process. Like a film pro-

ducer, the development manager must incorporate a host of interrelated logistical, financial, and production tasks administered by a multidisciplinary team of specialists, and takes ultimate responsibility for the appearance and the commercial success of the product. For the FEC owner, the right development manager makes the difference between a pearl and a piece of sand.

The Disney organization calls the tasks for which a producer/manager is responsible the "Triangle of Success": design intent, budget, and schedule. The development manager pulls all the seemingly fractured parts into a seamless whole. The manager sees the big picture, but also has adequate competency in all aspects of the design and construction, from zoning codes and regulations to operational aspects like food and beverage.

It is the job—the obsession—of the development manager to be a constant advocate for guest satisfaction and interest. In a sense, when a development manager speaks, his must be the voice of the thousands who will visit the FEC. Whether those guests are delighted or disappointed depends on how well the manager does his job. The development manager establishes the common goal for all design team members: a design process driven by the voice of the guest.

There usually are some hefty egos on the FEC design team. The development manager's role, then, includes stimulating constant cooperation and communication among team mem-

bers. To do this, the development manager makes sure that all the team members receive the information they need, and that they are involved at the right times. Collaboration occurs during a series of team meetings, where members brainstorm about the project.

To illustrate how concurrent design differs from the traditional process, let's say an FEC owner plans to include an interactive children's play area. In the traditional process, the area and room size are designated, then those parameters are passed along to a designer, perhaps a specialist in soft play.

With concurrent design, however, the development manager holds a brainstorming meeting involving the core team members, soft play and other equipment designers, and maybe a child psychologist or play expert. At the meeting, the team defines the attributes, criteria, and design parameters that the child and parent will experience, a definition based on research and on team members' knowledge. Then, the team reviews budget and revenue goals and operational considerations. Concurrent design promotes flexibility and innovation. And with everyone working together, constraints that could reduce quality or kill the project can be identified and dealt with early.

Perhaps the soft play equipment designer would explain that a clear height of 18 feet would allow a three-level structure with greater capacity in less square footage. Because the general contractor and the architect are at the table, they can explore the possibility. If

necessary, they can consult with the structural engineer and steel supplier by phone during the meeting.

This flexibility is impossible within the traditional design process. By the time the soft play designer gets involved, the ceiling height is locked in, and the opportunity for greater capacity, higher peak-time revenue, and an enhanced guest experience is lost. In addition, concurrent design ensures that panic doesn't hit when construction bids come in, because the general contractor, subcontractors, and suppliers are involved throughout the process.

During a management project of White Hutchinson Entertainment Group, the owner's financing representative indicated at an early team meeting that mortgage financing might not come through due to the specialized nature of the FEC building. After looking into the problem, the team was able to design a building and site that met all FEC requirements, but was readily convertible to retail, warehouse, or other commercial uses. That meant the appraiser considered the building retail property, rather than special purpose, and gave it a high appraised value. Without concurrent design, the site and building would have been designed to meet FEC requirements, but might not have been financed.

BUILDING A TEAM THAT WORKS

Building teamwork is like building a house, according to the Metropolitan Life Insurance Company, which uses the concept to model team building (see figure 1 on page 29). The foundation is the task—developing an FEC—that brings the team together. The roles of team members become the posts of the house, which support the walls and roof. Unless each team member knows exactly what role he or she is to play, the posts are placed incorrectly and the walls buckle. The bricks in the walls are the sequence of steps the team follows to solve problems. The communication techniques the team uses are the mortar that holds the bricks together. Finally, the roof is the action plan used to implement team ideas and solutions.

The first component of teamwork is choosing individuals who are team players. In addition, despite the fact that the amusement industry is male-dominated, it is a good idea to include women on the design team. After all, women represent at least 50 percent of the typical FEC's customers, and mothers probably make most decisions about which FEC the family visits. Women team members, along with their professional expertise, bring different life experiences to bear on design factors of which men may not even be aware—issues and needs that impact guest satisfaction in important ways. Having women on the team can bring new perspectives to problems, revealing ways to delight guests that strictly male-directed efforts may not uncover.

Choosing team players is especially important because the skills and knowledge needed to be part of an FEC concurrent design team are special and don't always match conventional criteria. For example, an owner may want to go with the architect who has the most experience with FECs, but that experience can be a detriment if the person won't consider new solutions or hasn't worked in a team situation. Architects with no direct FEC experience, but with related experience, can be a plus because they may be more open-minded. Oddly enough, many good ideas within any industry come from outside that industry, because outsiders aren't prejudiced by conventional wisdom.

Interpersonal communication is the key to teamwork. At meetings, the development manager encourages members to participate and protects them from attack, a common problem during the brainstorming sessions needed for creating design and engineering. He or she makes sure members aren't intimidated, and keeps good ideas from getting lost.

In a brainstorming session, every possible solution is tossed in the hopper. The development manager knows that even a seemingly foolish response can prompt a breakthrough solution. People tend to assume that there is only one right answer—theirs—and try to discourage ideas that seem outlandish or those that challenge their own.

DESIGN PROFESSIONALS AND TEAMWORK

Design professionals are not like other people. Their creative process and egos are rarely understood by outsiders. Design professionals such as

the architect, interior designer/merchandiser, graphic artist, and food stylist pose the greatest potential for ungluing the team. Making sure they don't is where seasoned development managers earn their keep.

Good design, especially in an aesthetic sense, results from a private creative process. The design process is cerebral and seemingly chaotic, an intensely private search for a viable aesthetic or scientific solution that often enlists the subconscious mind. Many design professionals are motivated by a poetic, artistic concept of design, and by the idea of professional achievement and recognition from which flows a financial reward. They view design as an end in itself. Owners are motivated to maximize financial performance, market share, and their own wealth. Owners see the design professional's contribution as one of many steps in the development process. To them, the design professional's work is a means to a financial end, not an end in itself.

The design team's job is to accomplish the owner's goals, but the owner's goals and those of individual team members are often far apart. The problem is aggravated because many design professionals have not worked as members of a multidisciplinary team. Architects, in particular, are accustomed to working within the parameters of a traditional design process, without contractors and subcontractors, and are used to being in charge.

Development managers walk on thin ice while the schematic design is created. They must understand the psyche of the designer—most importantly, the designer's drive for artistic achievement—even when that drive is at odds with project objectives. The development manager must intervene selectively, but never stifle the creative process. Criticism during this creative design process, while a variety of ideas are being tested, can destroy the potential for creative solutions and anger the designer.

However, development managers are the owner's representative. They must make sure that the designer's product contributes to the team process and meets project goals. If the development manager can do this, the design that emerges will the satisfy the design professionals and meet the needs of the owner.

Members of a concurrent design team must rely on other professionals to ensure that the FEC has design integrity and a clear theme.

Development managers ensure that the product meets project goals.

The development manager assigns design coordination responsibilities to each design professional, some of which overlap and invade what is traditionally considered the domain of the other professionals. For example, there is the potential for clashes between the architect and interior designer/merchandiser. Traditionally, their work is independent, not interdependent. The architect designs the building shell and then passes the project along to the interior designer. Concurrent design for an FEC demands that they work together to create a unified design concept or theme. That means the exterior reflects and complements interior design elements and character, and communicates what's going on inside.

To create a common theme using concurrent design, the development manager redefines the architect and interior designer/merchandiser's roles. The architect is asked to coordinate all design for the structural, mechanical, and building code elements, and the interior designer/merchandiser takes on coordination of all visual elements, finish materials, and interior and exterior layout.

Skillful management of the concurrent design process won't eliminate all possibilities for an ego collision. However, if development managers clearly define roles when they bring the design professionals on to the team, the odds of clashing are slim—and your finished facility profits, fat. ●

Randy White is a principal of White Hutchinson Entertainment Group, a Kansas City-based firm that performs market and feasibility analyses, economic planning and design operations consulting.