

# ADVENTURE EXPERIENCE DESIGN

How to choose the right mix (capacity, space,  
and operations) for FEC, retail, and hospitality



**HIX** ADVENTURE



# INTRODUCTION

In an environment where attention is limited and entertainment options compete minute by minute, physical venues (FECs, retail, and hospitality) require experiences that support key business metrics: traffic, dwell time, conversion, and repeat visits—without compromising operational capacity or execution consistency.

Family Entertainment Centers (FECs), shopping malls, hotels, and resorts face the same equation: attract visitors, extend dwell time, and convert that time into revenue (ticket sales, on-site spending, upsell), while maintaining stable flow during peak hours and effectively managing staff workload.

Adventure experiences succeed when they are designed as a system: the right mix selection, an operable layout, a capacity model (cycles/rotation), space requirements, and the integration of engineering and operations. The goal is not to “add elements,” but to build an attraction that is measurable, operable, and scalable.

# EXECUTIVE SUMMARY

In this document, you will find:

- A framework to define the right experience mix based on business objectives and venue type (FEC, retail, or hospitality).
- Criteria to design real capacity: cycle times, flow, control points, queues, and bottlenecks.
- Space variables that impact operations (clear height, spans, circulation, backstage, and technical access).
- Integrated safety as a design requirement (engineering, on-site verification, and commissioning), without operational friction.
- An “operable design” checklist to evaluate projects before investing.

The difference between a high-impact attraction and a profitable, sustainable one is not just visual—it lies in its ability to operate consistently, absorb peak demand, and maintain the experience standard through clear procedures, planned maintenance, and controlled cycle times.

Designed for:

- FEC owners, directors, and managers
- Developers and operators of shopping malls / retail centers
- Experience and operations directors in hotels, resorts, and destinations
- Project teams evaluating new parks, expansions, or space reconversions

How to use this framework (10 minutes):

1. Define the business objective
2. Select the type of experiences
3. Design for real capacity and flow
4. Validate required space (operable layout)
5. Ensure operational delivery: training, criteria, checklists, and routines

# 1 The Objective Defines the Design (and the Mix)

Before selecting attractions, define the expected outcome. The business objective shapes the mix, the guest journey sequence, the queue and briefing area layout, and the operating model (staffing, cycle times, and supervision).

**Objective A: Increase traffic.** Works well in retail and FECs. Requires high visual-impact experiences, fast onboarding, and strong hourly throughput.

**Objective B: Increase dwell time.** Key for retail and resorts. Requires level-based progression, integrated waiting areas, and efficient circulation.

**Objective C: Increase average ticket (upsell).** Common in resorts and destinations. Requires packages, premium tiers, and differentiated experiences.

**Objective D: Increase repeat visits.** Critical for FECs. Requires variety, gamification, and measurable progression.

**Core idea:** The right mix is not the biggest—it's the one that best converts your objective within the available space and operational capacity.

# 2 Experience Selection: How to Define the Right Mix

Defining the right mix is not about “adding more elements,” but about aligning: business objective, audience, site constraints, operational capacity, and monetization. A design is successful when throughput (people/hour) is predictable and operations do not rely on improvisation.

## 2.0 The Right Decision Order (to Avoid Rework)

**1) Business objective:** traffic / dwell time / ticket / repeat visits

**2) Audience profile:** families, teens, corporate, tourists, school groups, etc.

**3) Site constraints:** clear height, spans, circulation, access, existing structure, indoor/outdoor

**4) Real capacity:** cycle times (briefing + gearing up + experience + exit), queues, and available staff

**5) Monetization model:** single ticket, packages, upsell, memberships, events

**6) Operations defined from the design stage:** signage, supervision, preventive maintenance, and training

Rule of thumb: if your mix requires more operational effort than your team can sustain (across shifts, peak hours, and staff turnover), the design becomes fragile and the experience loses consistency.



## 2.1 What Type of Experiences Fit Each Objective

**If your objective is traffic:** focus on high visual-impact experiences and fast onboarding.

**Examples:** • An iconic element visible from outside (captures attention and curiosity)

- Short experiences (5–10 minutes) with high turnover
- Integrated viewing/photo areas (without disrupting flow)

**If your objective is dwell time:** design for journey and progression.

**Examples:** • Multi-level experiences (easy – medium – advanced)

- Routes that encourage guests to stay longer (micro-challenges, stations)
- Waiting areas with visibility and control (low friction)

**If your objective is ticket/upsell:** a mix with premium layers works best.

**Examples:** • Premium tier or flagship experience (limited capacity/time slots)

- Packages (family / extreme / premium)
- Add-ons: photo/video, fast pass, guided experiences

**If your objective is repeat visits:** you need variety and measurable progression.

**Examples:** • Score/time-based challenges (gamification)

- Seasonal route changes or “missions”
- Levels and achievements (clear progression)

## 2.2 Design-Defining Decisions (That Must Be Solved Early)

**A) Indoor vs. Outdoor.** Indoor: flow control, height constraints, queues, and “showcase effect” dominate. Outdoor: climate, durability, and technical access dominate.

**B) Guest movement.** Quick entry/exit (retail/FEC) vs. journey-based dwell time (resort/destination). Define where guests wait without blocking operations.

**C) Induction and supervision dependency.** The more complex the experience, the more control points and solid training are required. Design must reduce friction and eliminate ambiguous user decisions.

## 2.3 Recommended Mix by Venue Type (Impact + Operability)

### 2.3.1 FEC (Family Entertainment Center)

Priority: rotation + repeat visits + operational control

#### Suggested mix:

- High-impact visible element (drives internal traffic)
- Progressive multi-level experience (repeatability)
- Short, high-rotation experience (families/kids)
- Optional: score/time for gamification

Operational notes: Simple and repeatable briefing; clear control points; flow that avoids crossings and congestion.

### 2.3.2 Retail (Shopping Centers)

Priority: dwell time + content + conversion.

#### Suggested mix:

- Iconic high-impact “showcase” element
- 5–15 minute journey (content + dwell time)
- Integrated waiting area (without invading common areas)

Operational notes: Designed queue; visible supervision; integration with mall schedules and peak traffic.

### 2.3.3 Hotels / Resorts / Destinations

Priority: premium experience + upsell + reputation

#### Suggested mix:

- Flagship high-impact experience + complementary family options
- Difficulty layers / time slots / capacity limits
- Tiered packages (basic / family / premium)

Operational notes: Frictionless operation (onboarding + clear routes); weather/contingency protocols; booking integration when applicable.



# 3

## Real Capacity + Flow (Design That Can Actually Operate)

Real capacity is not a theoretical number. It is the result of briefing time, gearing up, the experience itself, exit/rotation, control points, and staff capacity.

### 3.1 A Quick Capacity Model

Capacity/hour  $\approx$  (people per cycle)  $\times$  (60 / minutes per cycle)  
Where "minutes per cycle" includes: briefing + harnessing + experience + exit.

#### **Rule of thumb:**

*if the design does not reduce friction, operations compensate with speed—and that's where errors begin.*

### 3.2 Flow Design (What Separates a Stable Park from a Chaotic One)

Key principles:

- Smart zoning: entry, briefing, waiting area, start point, course, and exit
- Avoid crossings: routes should not create counterflows
- Visible control points: supervision without the need to "chase" guests
- Resolved bottlenecks: transitions, access points, and gearing-up areas

### 3.3 The Operational Layer That Must Be Built into the Layout

Although this is a design document, there are operational elements that must be defined from the start:

- A visible and well-positioned briefing area
- Clear signage (rules and restrictions)
- Technical and maintenance access points
- Dedicated areas for inspection, logbooks, and equipment storage

# 4

## Required Space: From Square Footage to an Operable Layout

It's not enough to say "we fit within X square feet." A professional layout must consider both physical and operational variables.

### 4.1 Physical Variables

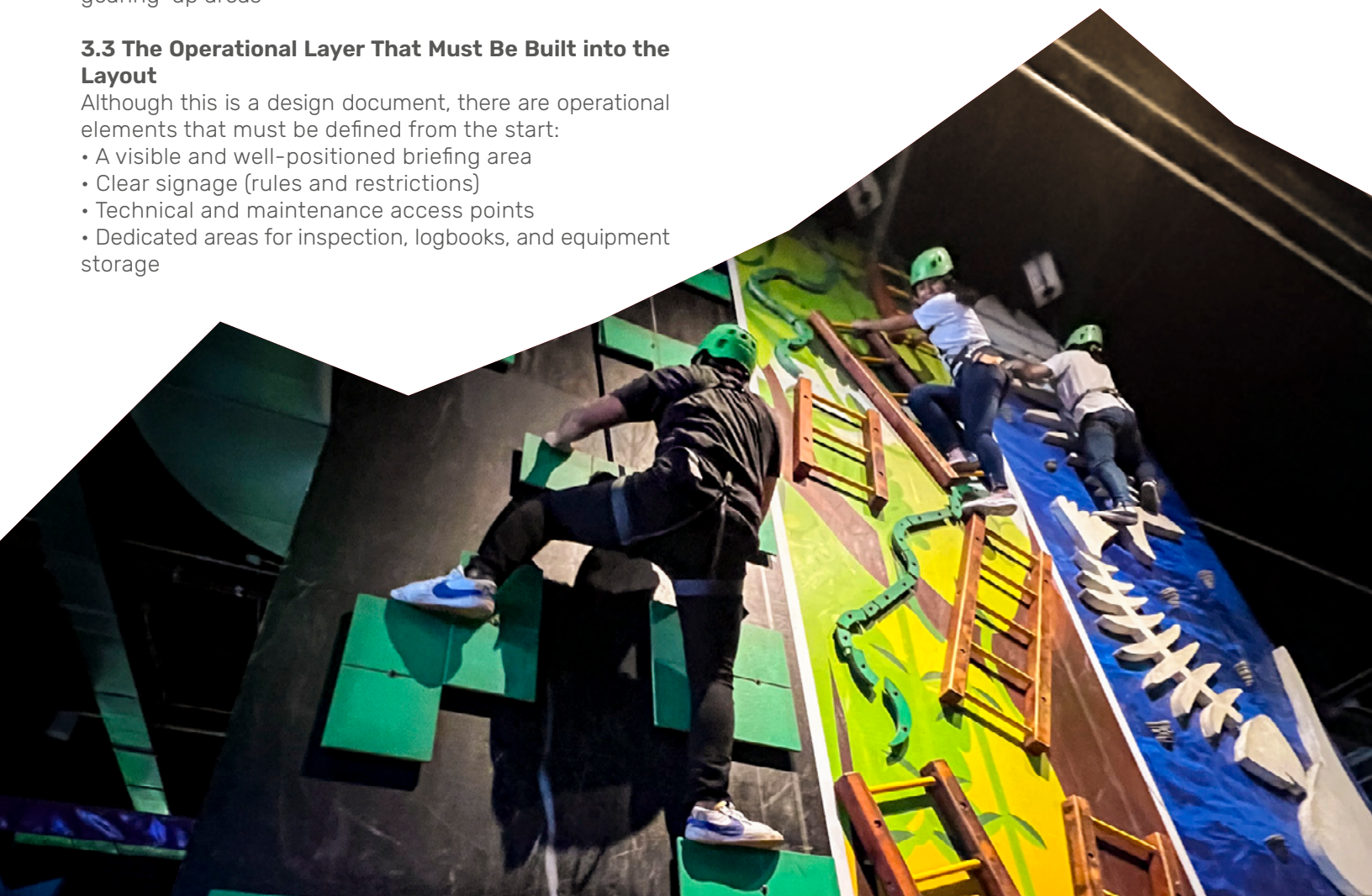
Clear height and spans; entry and exit routes; queue and briefing areas; staff and operational spaces; technical and maintenance access.

### 4.2 Operational Variables (The Ones Often Overlooked—and Costly Later)

Where guests gear up; where restrictions are validated (height/age/condition); where supervision takes place; how temporary stops are managed without collapsing the queue; and how technical access is enabled for inspection and maintenance.

#### **Desired outcome:**

*a space where the guest moves "naturally," and operations do not rely on improvisation.*



# 5

## Safety Integrated into Design (Safety by Design)

In adventure experiences, safety is an engineering and operational requirement defined from the design stage. At Hix Adventure, as members of ACCT International, we use the ANSI/ACCT framework as a reference to translate industry standards into design and operational decisions. This includes: selection of the belay system, load and anchoring criteria, on-site verification, and operational protocols that reduce human error while maintaining real capacity during peak hours.

In practice, most failures do not occur “on the element,” but at the interface: incomplete briefing, poorly executed gear-up, blind spots in supervision, or ambiguous user criteria. That is why safety and operability must be designed together.

### 5.1 Safety as a System: 4 Layers That Must Work Together

**Layer 1 – Experience and flow (human factors)** Clear zoning; integrated queues and briefing; supervision points with real visibility; transitions without crossings or congestion.

**Layer 2 – Engineering (loads, anchors, and durability)** Load criteria per user and per component; safety factors; material selection for high-usage environments; design that considers access for inspection and replacement of consumables.

**Layer 3 – Installation and verification (QA/QC on-site)** Controlled installation sequences; staged inspection of anchors and critical points; verification of alignment, tension, and safety elements before operational release (commissioning).

**Layer 4 – Launch and operations (SOPs)** Standardized briefing; signage and restrictions placed at decision points; role-based training matrix; inspection routines (pre-opening/weekly/monthly) and logbooks.

Technical partners and critical systems: In height-based projects, the selection of the belay system defines the operational standard. HIX Adventure integrates solutions from specialized partners, such as continuous belay systems (continuous lifeline) from CLiC-iT and auto-belay/descent devices like TRUBLUE by TruBlue Technologies, to minimize the risk of accidental disengagement and standardize the experience without relying on constant staff intervention.

### 5.2 Safety Decisions to Resolve Before “Choosing Attractions”

User profile; level of supervision the venue can sustain; selection of the belay system (continuous vs. traditional) based on typology; definition of briefing and signage; inspection and maintenance strategy (access, frequency, consumables); contingencies (weather, downtime, incidents) and compatibility with the capacity model.

### 5.3 What Makes an Experience “Safe” Also Makes It Operable

**Example 1 – Less ambiguity = less human error.** When the layout guides behavior (queue, briefing, gear-up, and route), variability is reduced and operations become repeatable.

**Example 2 – Supervision by design.** Control points positioned by line of sight (not by “running”) enable preventive control and sustain throughput.

**Example 3 – Planned maintenance.** Technical access, identified consumables, and defined routines reduce unplanned downtime and protect the experience.

### 5.4 Minimum Safety Deliverables (What Must Be Ready at Handover)

Flow and control point map; briefing script + signage package; role-based training matrix; inspection checklists (pre-opening/weekly/monthly) + logbook; preventive maintenance guidelines and consumables; contingency and escalation protocols.

As members of ACCT International, we incorporate ANSI/ACCT 03-2019 standards as a globally recognized technical reference for the design, fabrication, installation, inspection, and operation of challenge courses, aerial adventure parks, and canopy/zip line tours. ACCT is an ANSI-accredited standards developer (American National Standards Institute), ensuring a formal process of consensus, public review, and periodic updates. In practice, we translate these criteria into measurable decisions: belay system selection, load and anchoring criteria, line-of-sight control points, documented inspection routines, and standardized operating procedures to minimize variability and human error.

At Hix Adventure, we deliver projects ready to operate: engineering + fabrication + verified installation (QA/QC and commissioning) + documentation and training aligned with ANSI/ACCT standards, with full traceability (logbooks, checklists, and routines) to sustain safety, real capacity, and experience consistency from day one.

# 6

## Experience Packages (Suggested Mix by Venue)

The following scenarios serve as a guide to structure a coherent mix. They are not fixed formulas—they are flexible templates that can be adapted based on space and business objectives.

### Scenario 1:

#### FEC Focused on Repeat Visits (Variety + Progression)

Objective: Encourage guests to return (and progress through levels).

Suggested mix:

- High-impact visible element
- Multi-level progressive route
- Fast, high-rotation experience for families
- Score/time-based challenges (gamification)

**Design for operations:** Visible and fast onboarding; control points that allow supervision without “chasing”; queue and exit designed to avoid congestion at access points.

Typical monetization: Time-based ticket (30/60 min) + upsell (fast lane, photo/video). Events and birthday parties as revenue multipliers.

### Scenario 2:

#### Retail Focused on Dwell Time (Content + Conversion)

Objective: Increase dwell time and create shareable content.

Suggested mix:

- Iconic, high-impact “showcase” element
- Short journey (5 to 15 minutes)
- Integrated observation/photo area
- Micro-challenges that create memorable moments (without oversaturation)

**Design for operations:** Well-designed queue (where it starts, ends, and flows); ultra-clear signage and onboarding; flow control aligned with mall peak hours.

Typical monetization: Quick ticket + bundles (family, couples, time-based promotions). Brand activations and seasonal campaigns.

### Scenario 3:

#### Resort Focused on Upsell (Premium Experience + Reputation)

Objective: Sell a differentiated experience while maintaining premium service standards.

Suggested mix:

- High-impact flagship experience (the resort’s “signature”)
- Complementary family experiences for volume
- Premium/advanced tiers with limited capacity (time-slot based sales)

**Design for operations:** Frictionless onboarding (briefing + gearing up without stress); clear routes, control points, and contingency planning; preventive maintenance integrated into operations.

Typical monetization: Premium experience by time slot + tiered packages (family/premium). Upsell through photo/video and fast access where applicable.

### Quick Guide to Adjust the Mix (Without Redesigning the Project)

- To increase real capacity: simplify onboarding and reduce friction in transitions
- To increase dwell time: add level progression and stations
- To increase ticket value: introduce premium tiers (limited capacity/time slots), packages, and add-ons
- To increase repeat visits: incorporate gamification, alternate routes, and seasonal challenges

# 7

## HIX Services Catalog (End-to-End)

A solid project does not end with installation. It must launch ready for operation—with documentation, training, and clear criteria—to sustain capacity, experience quality, and maintenance from day one.

### 7.1 Typical Phases

- 1) Discovery and brief (objectives, audience, space, constraints)
- 2) Concept design (mix, layout, guest journey narrative, and operating model)
- 3) Engineering (structural criteria, anchoring, and definition of critical systems)
- 4) Fabrication / construction
- 5) Installation, verification, and on-site commissioning
- 6) Operator staff training (SOPs, inspections, and contingency management)
- 7) Handover: operational documentation, routines, and recommendations to maintain standards

# 8 "Operable Design" Checklist

Use this as a quick scan before moving forward.

## Objective and Experience

Is the main objective clear (traffic / dwell time / ticket / repeat visits)?

Does the mix align with the venue type?

Is there a high-impact flagship experience along with complementary experiences?

## Capacity and Flow

Has target capacity per hour and cycle times been defined?

Is there a visible and controlled briefing area?

Does the flow avoid crossings and predictable bottlenecks?

Are staff control points clear and visible?

## Required Space

Have clear height, spans, and circulation been validated?

Are queues/waiting areas integrated without disrupting venue operations?

Are there technical access points and space for maintenance?

SI NO

## Planned Operations and Safety

Does zoning prevent crossings and congestion at transitions?

Are there visible control points for effective supervision?

Is the briefing designed as part of the layout?

Are signage and restrictions clearly defined and properly placed?

Is there a preventive inspection/maintenance plan and logbook?

Is there a role-based training matrix?

Are there contingency and escalation protocols (weather, downtime, incidents)?

SI NO

# CONCLUSION

Designing an adventure experience is not just about selecting attractions. It is about building a system that meets a business objective, works within real spatial constraints, and sustains a stable operation: capacity, flow, supervision, and maintenance—all defined from the start.

When the mix, real capacity, layout, and operations are resolved during the design stage, the project becomes more profitable, more scalable, and easier to operate—even during peak demand.

# ABOUT HIX ADVENTURE



At Hix Adventure, we design and manufacture custom adventure experiences: high ropes courses (Hix Challenge), climbing walls and vertical solutions (Hix Climb), and zip lines / controlled flight experiences (Hix Flight).

We operate with an end-to-end approach (design, engineering, fabrication, installation, and operational onboarding), with protocols aligned to international industry standards. We are also members of ACCT International and apply ANSI/ACCT standards as a reference framework to translate global best practices into operable, measurable, and consistent adventure circuits.

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**HIX ADVENTURE**

**HIX Challenge**  
Rope Courses & Obstacle Courses

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Ziplines and free falls

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Climbing walls and Boulders

**WE BUILD EXPERIENCE**  
Climbing walls, Zip lines,  
Adventure circuits, and Free falls.

At **HIX Adventure** we design, manufacture, and install adventure projects in controlled, safe, and easy-to-operate environments. We provide the experience of challenge and satisfaction.



**Certified safety equipment**

**TruBlue TECHNOLOGIES** | **CLIC-IT** | **CLIMB KOREA**

Our global partnerships give us the confidence to work with the best and safest protective equipment for adventure. We are members of the Association for Challenge Course Technology. Our projects comply with the International standard **ACCT**, ensuring adventure and safety.

## We build and install:

**CLIMBING WALLS**

**SUSPENSION BRIDGES**

**ZIP LINES**

**ROPES COURSES**



