

What's up with Climbers?

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#IA23

What's Up With Climbers

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Learning Outcomes

1. Alignment and fit for your museum
2. Understanding complexity to achieve better end results
3. Longer-term considerations

BEFORE YOU BUILD



A Case Study: MOXI
The Wolf Museum of Exploration + Innovation,
Santa Barbara, CA



Working with an Exhibit Master Plan: Assessing exhibit opportunities



Getting the Board...on Board

1. Strategic alignment
2. Knowing your cost (cu ft)
3. Knowing your "why"

Reasons to have a climber?

1

3

2

4

Reasons to have a climber?

1

3

2

WOW factor

Reasons to have a climber?

1

Alignment

2

WOW factor

Empty blue box for reason 1

Empty blue box for reason 1

Empty blue box for reason 2

Empty blue box for reason 2

Reasons to have a climber?

1

Alignment

Risky play

WOW factor

Reasons to have a climber?

Gross motor skills

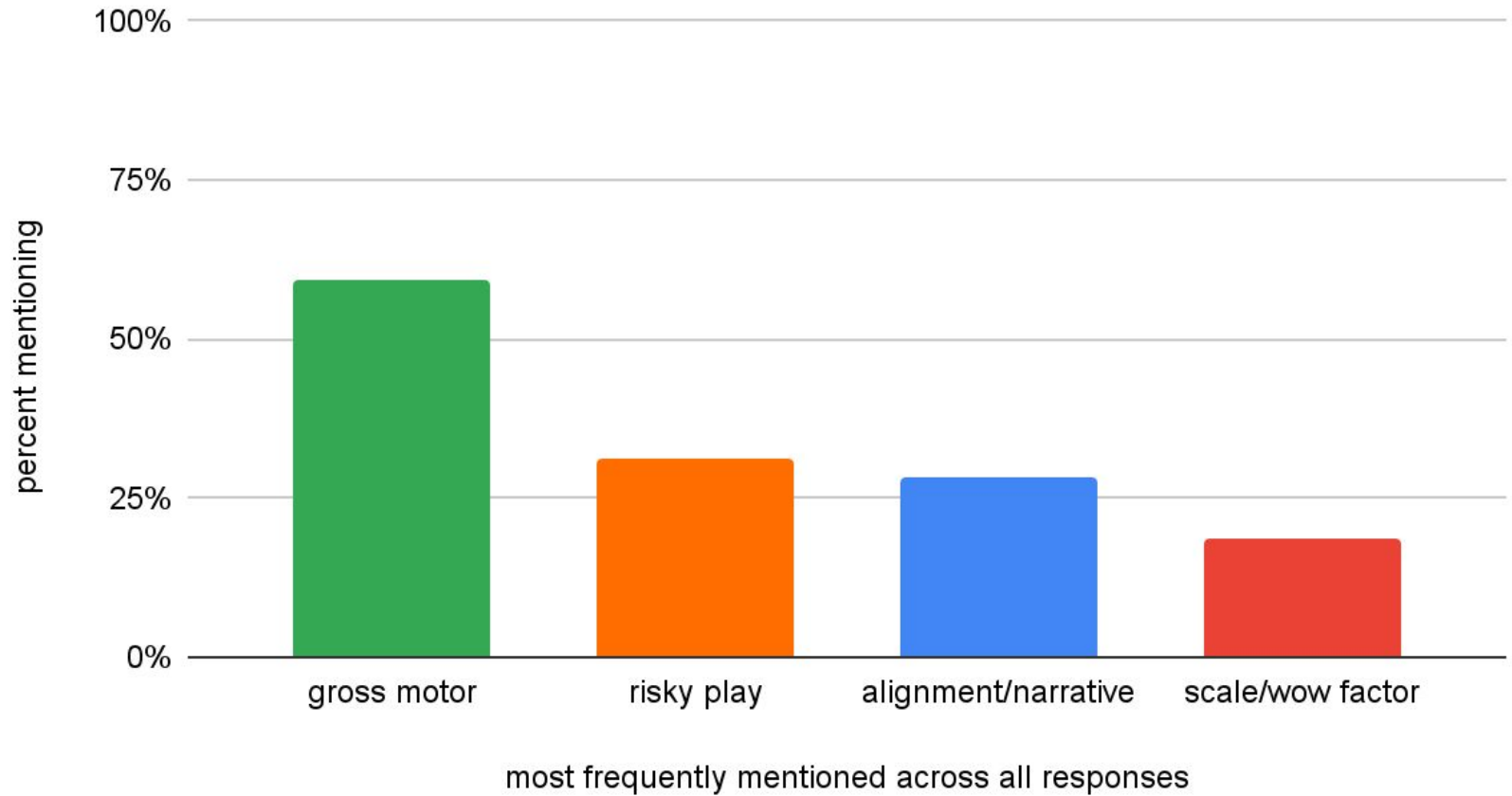
Alignment

Risky play

WOW factor



Why have a climber?



MOXI's WHY?

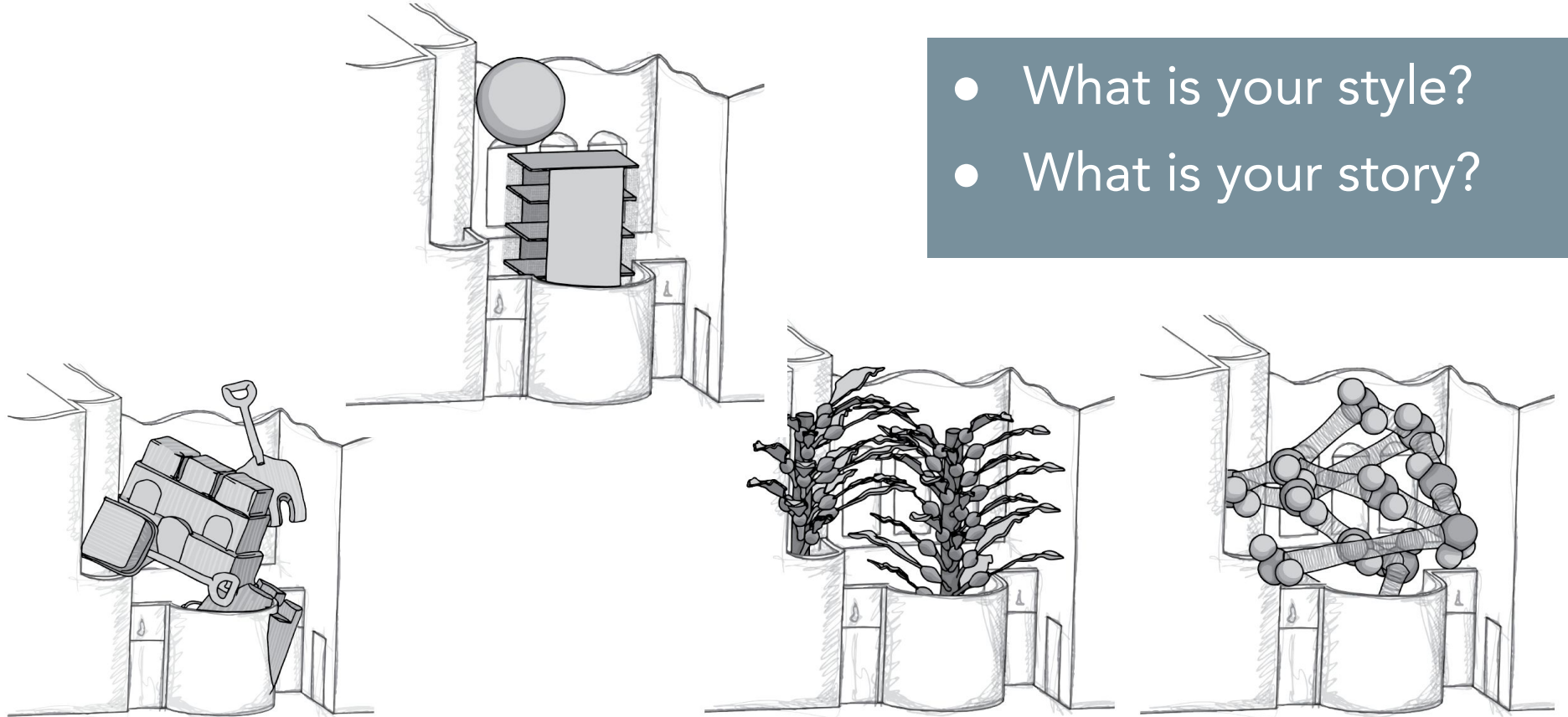
1. Exhibit designed for target audience
2. Opportunity to articulate educational objectives through exhibit design
3. Placement enhances the visitor experience
4. Unique on Central Coast of CA

IT'S NOT MISSING, BUT IT'S A WELCOME ADDITION.

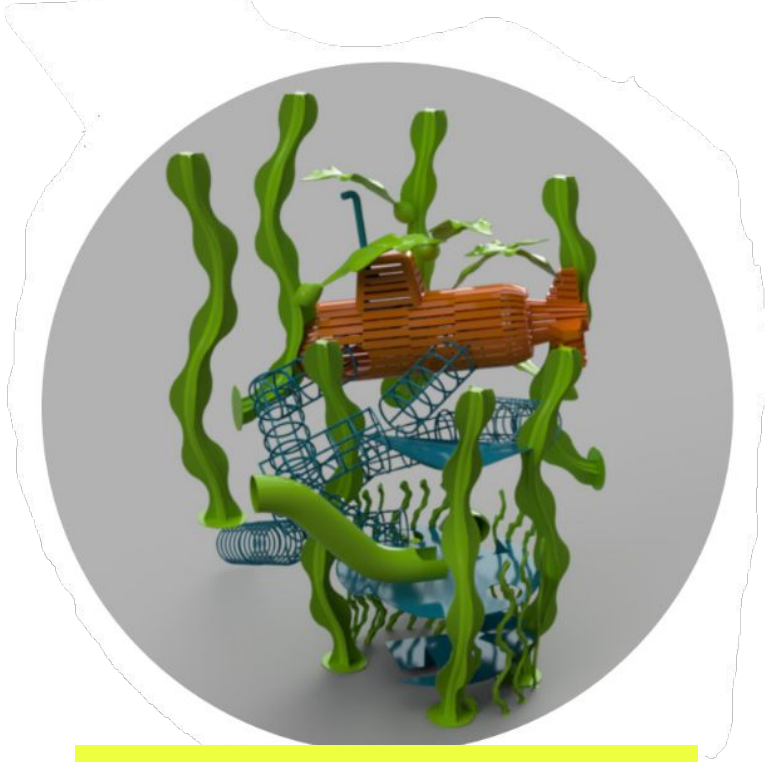


Working with Conceptual Designs

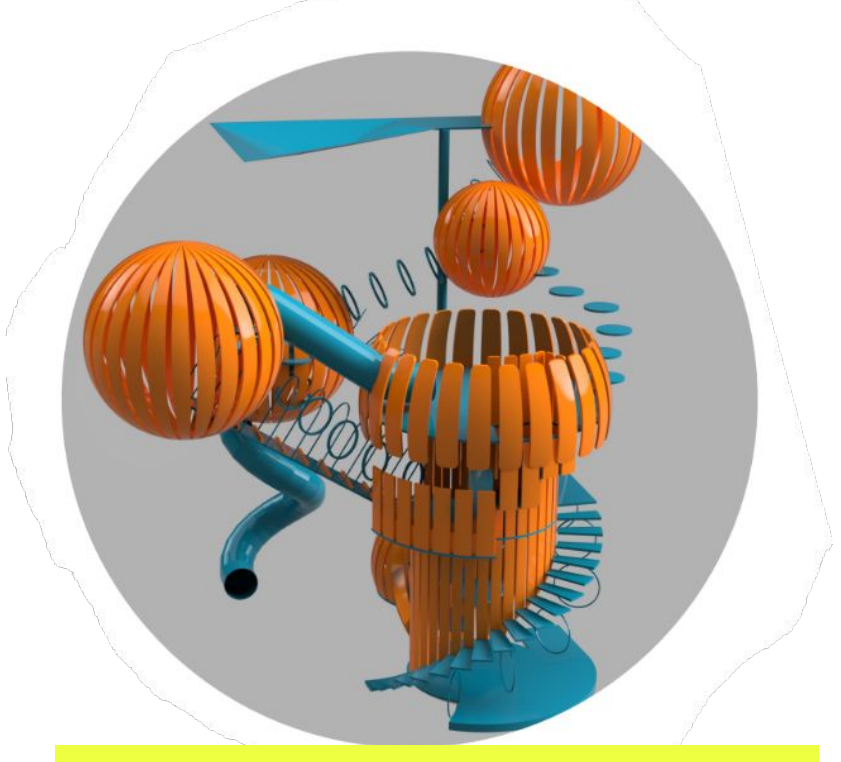
- What is your style?
- What is your story?



A Tale of Two Climbers: What's Your Story?



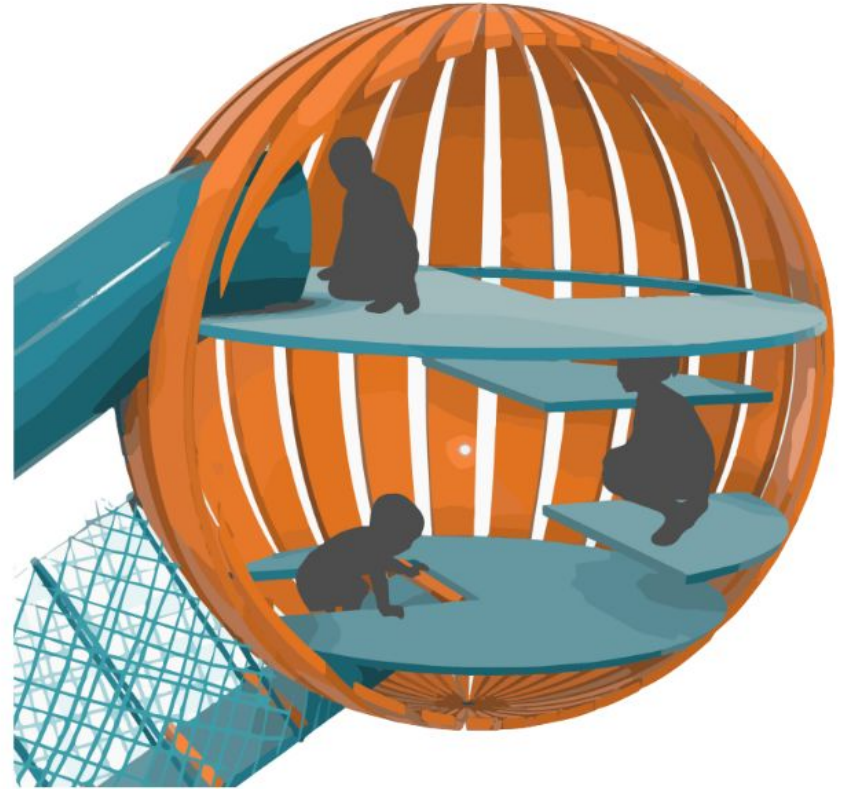
A) Kelp Forest Climber



B) Simple Machines Climber

Iterating on Conceptual Designs

- Cheapest time to make changes to your climber
- Align with educational objectives
- Aligns with exhibit objectives
- Avoid the Frankenstein-ed exhibit experience: Make it make sense in your existing space!



Design & Installation



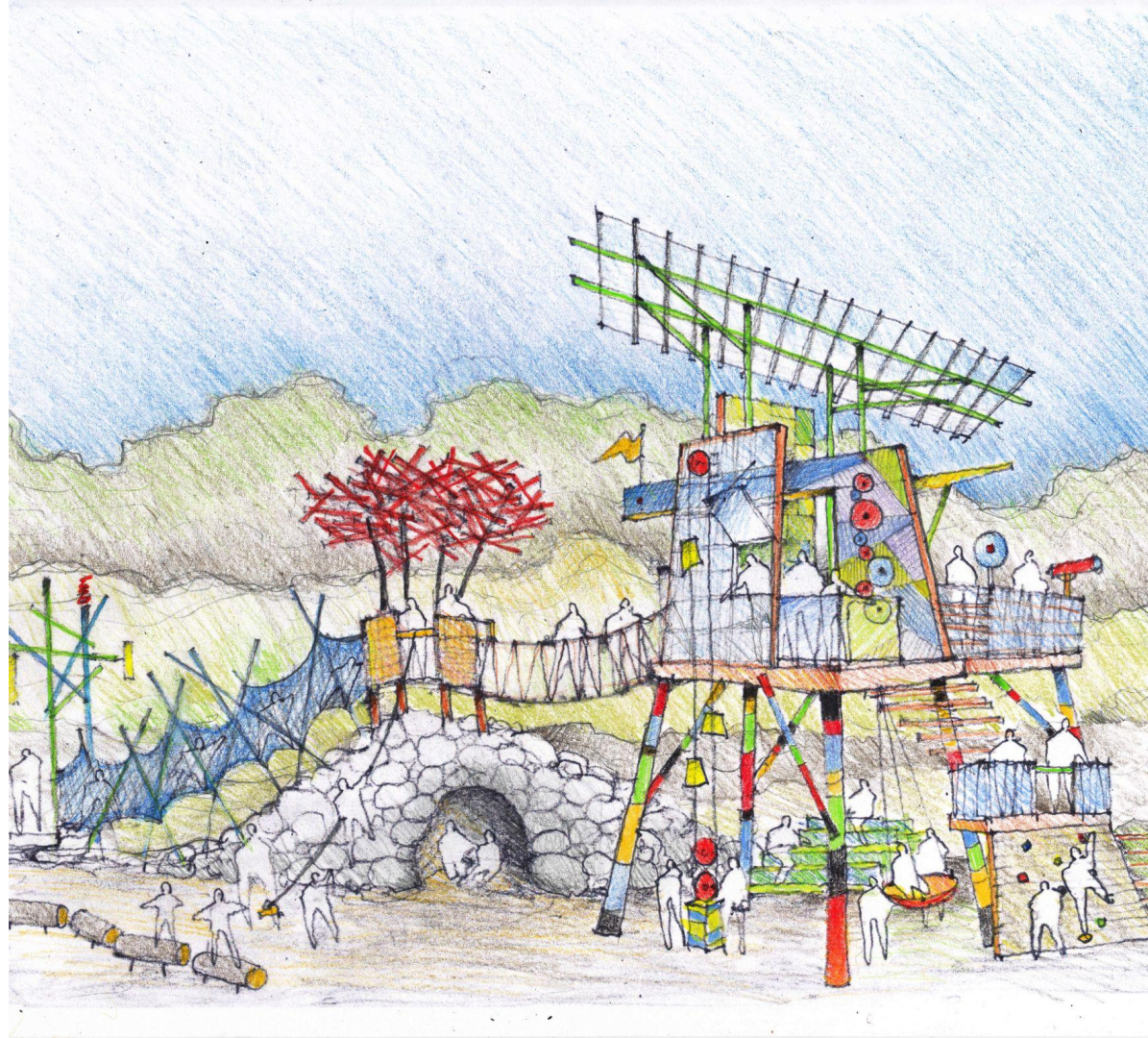
Project Parameters

- Target budget
- Project timeline
- Target age range
- Experience goals
- Location selection
- Staffing & operations
- Fabricator selection



Project Phases

- Concept Design
 - Stakeholder review
- Schematic Design
 - SD budgeting
 - Fire marshal review
- Design Development
 - DD budgeting
 - Safety code consultant
- Construction Documents
 - Fabrication contract
- Fabrication
- Installation



Key design considerations

- Variety of challenges and destinations
- Staff access for emergencies & cleaning
- Durable & easy to clean materials
- Entry & exit on the same level
- Clear sightlines for caregivers & children
- Design for easily replaceable parts
- ADA Accessibility
- Multiple paths to avoid choke points

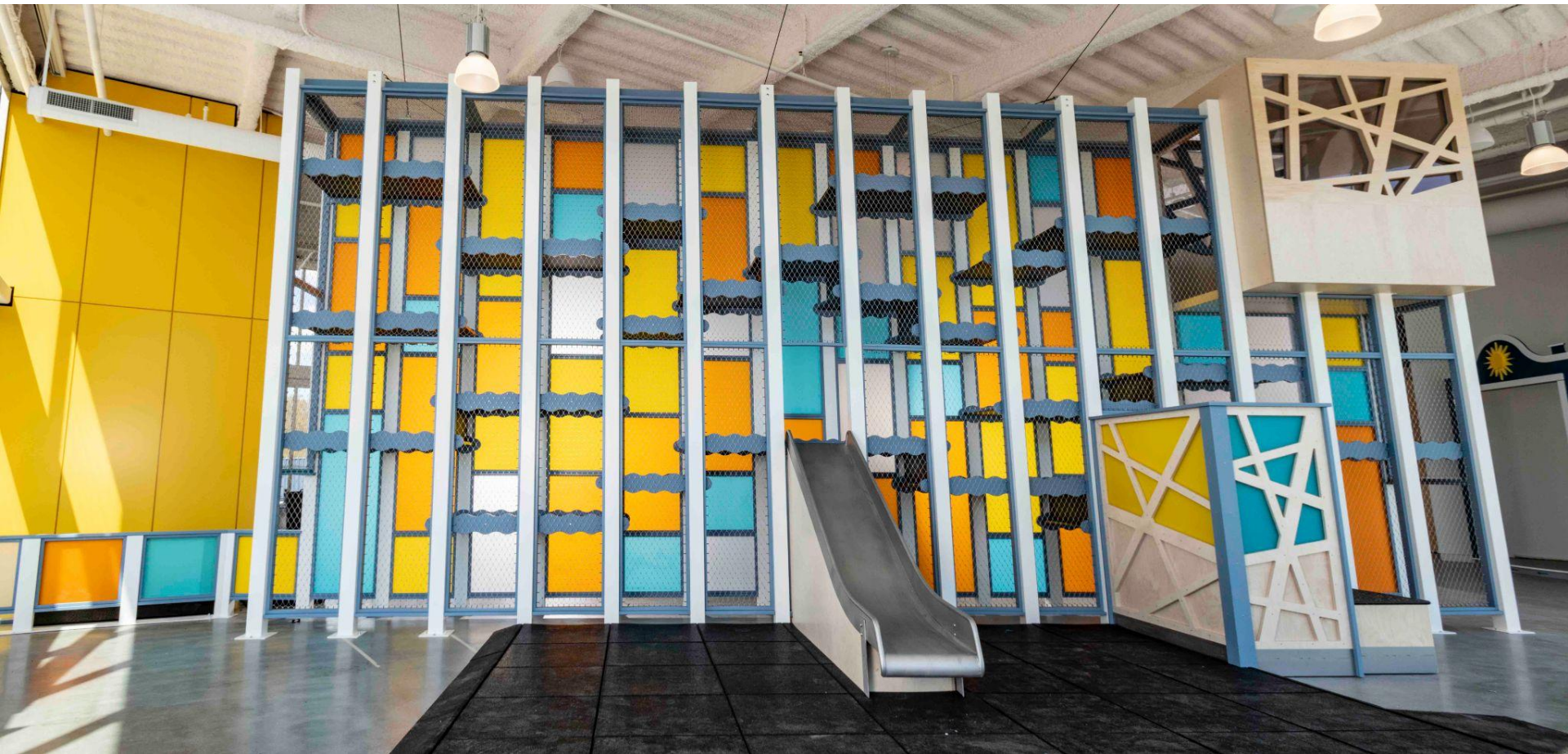


ADA Accessibility

- Requires 50% of experiences are ADA accessible
- Equivalent types of experiences
- Transfer platforms with handholds or ramp
- Obvious accessible pathway recommended

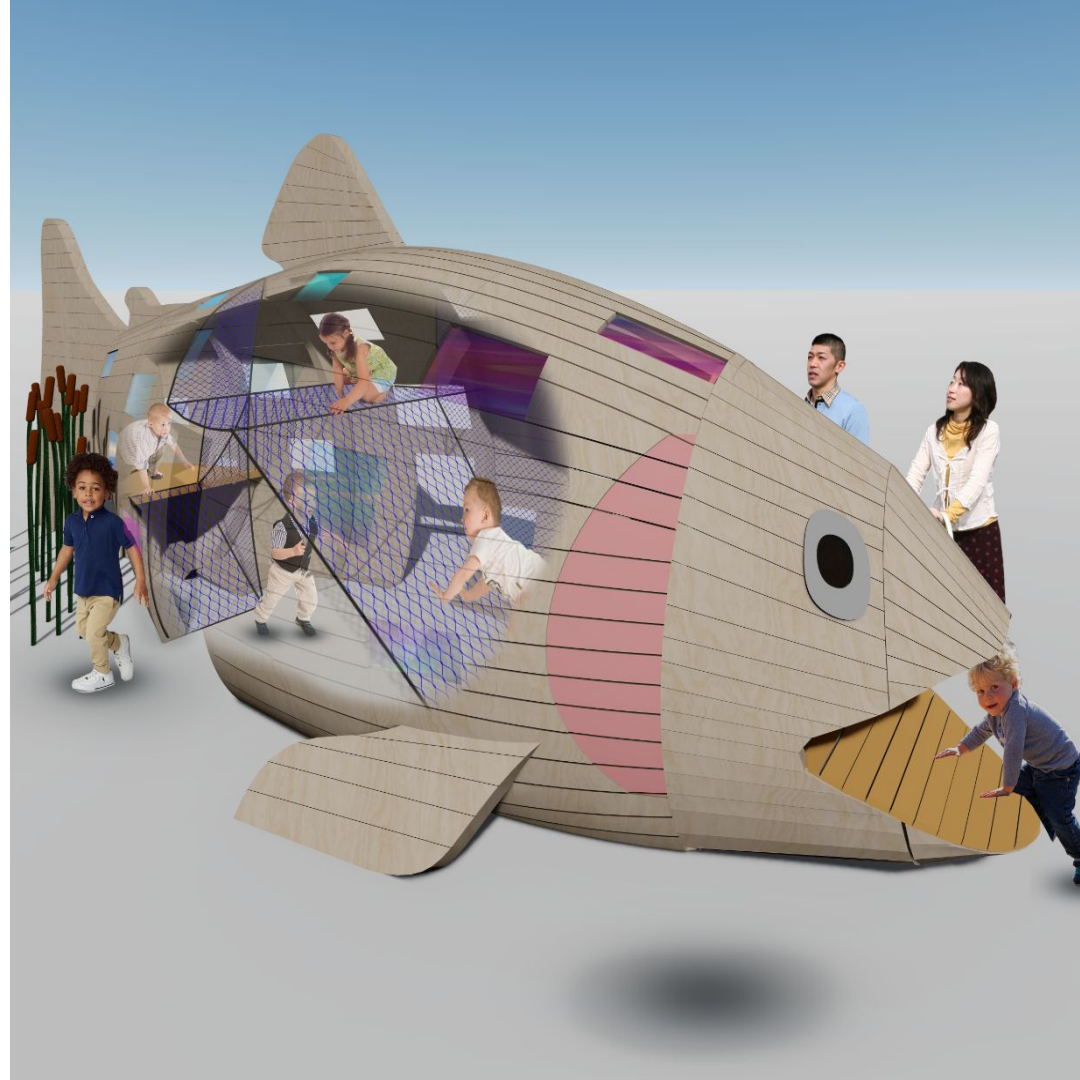


Accessible Pathway



Safety Guidelines

- Age ranges
 - Ages 6 - 23 months
 - Ages 2yrs – 5yrs
 - Ages 5yrs – 12yrs
- Access to climber
 - Outdoor with 24 hr. access (playground)
 - Outdoor/indoor ticketed access (children's museum)



Material Considerations

- Netting has a lifespan so design for replacement. Netting can be a climb hazard depending on location
- Stainless steel mesh for non-climb surfaces, very durable & transparent
- High density plastics for high wear surfaces & direct sun. Easy to clean
- Metal surfaces are durable but get hot in direct sun:
 - Stainless steel: no maintenance extremely durable
 - Painted metal: durable and can be easily touch up
 - Powder coated metal: extremely durable but hard to touch up

Structural Engineering

- Large or complex climbers require structural engineering
- The building or site location require evaluation by an engineer: floor slab, footers, ceiling and columns attachments
- Engage an engineer as early as possible



Fabrication

- Select fabricator with climber experience
- Understand what they will build vs. subcontract
- Ideally contract with fabricator at end of Schematic Design
- Include a 10%-20% contingency
- Designer & museum shop drawing review
- Shop visit(s) during fabrication



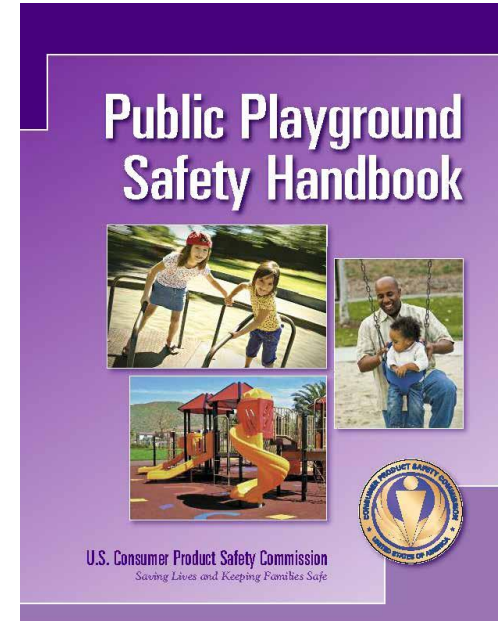
Installation

- Installation planning begins during design
- Identify unloading pathways & staging areas
- Establish a plan for assembly work hours & safety perimeter to protect visitors
- Clear communication of punch list process
- Soft opening/ public opening timeline



Safety and Accessibility Standards Resources

- ADA Standards
- Playground Safety Handbook
- Guide to ADA Accessibility for Play Areas Handbook
- ASTM F1487: Playground Safety Standards (2-12yrs)
- ASTM F2373: Play Equipment Safety (6-23 months)



Great! But what's it going to cost?



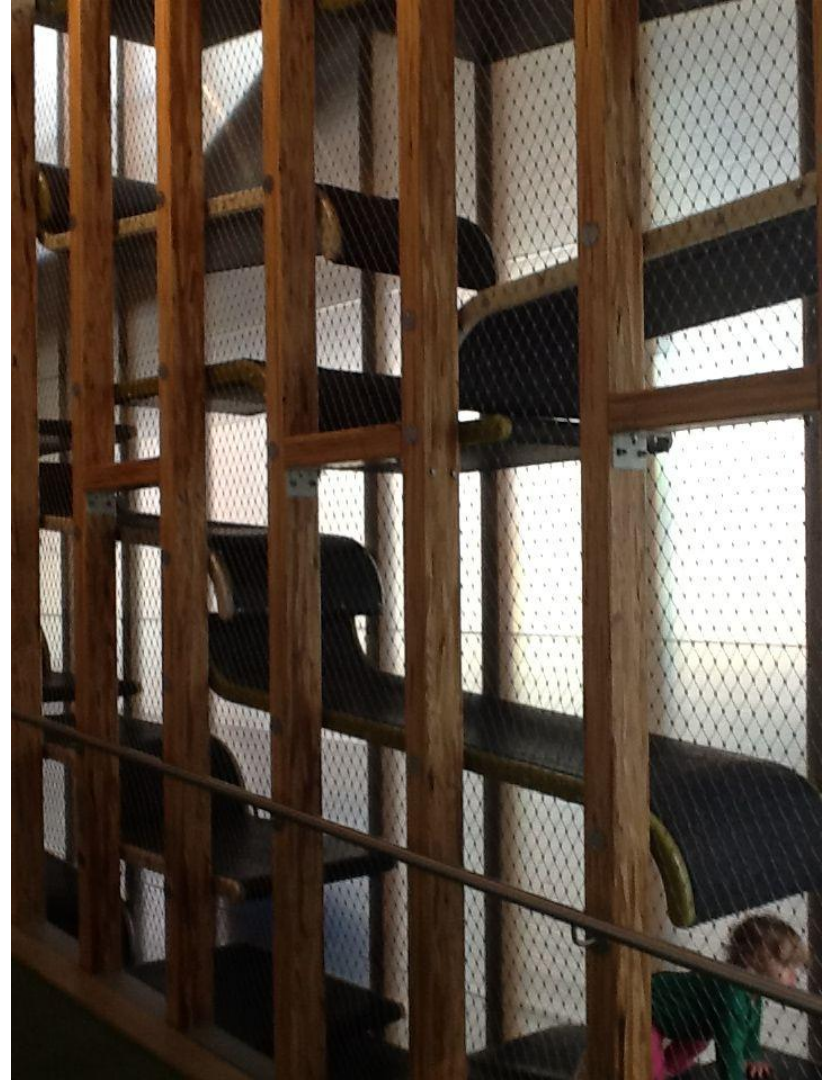
Expense Categories

Initial Design + Fabrication + Installation

Annual maintenance + cleaning

Staffing

Repairs + Replacement



Initial Design, Fabrication & Installation

- Scale and complexity
 - Simple prefabricated
\$50k-150k
 - Medium scale
\$150k-500k
 - Large/complex
\$500k-\$3m



Operational Considerations

- Maintenance + repairs
- Staffing
- Replacement components

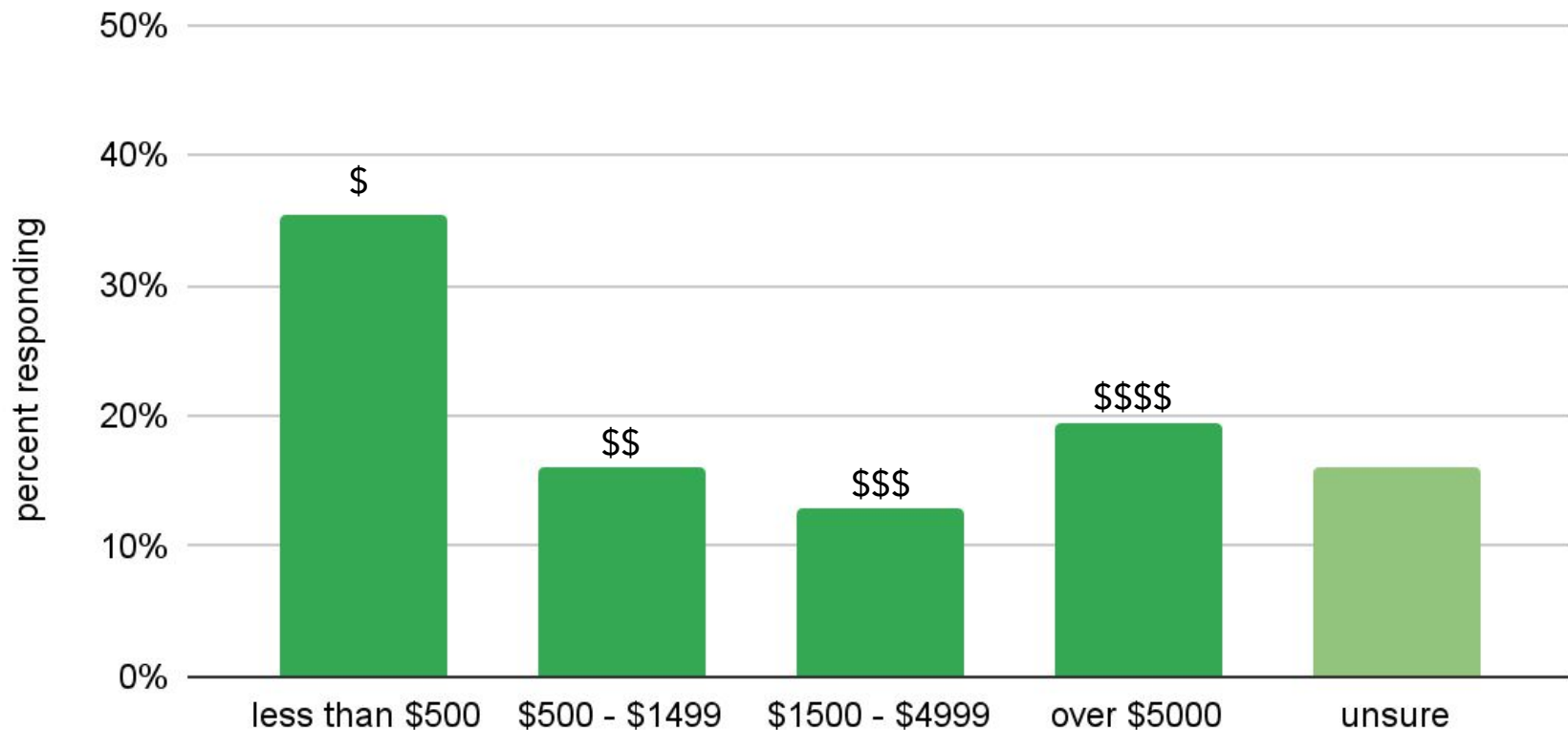


Maintenance

- cleaning
- safety inspections
- adjustments
- replacing worn components

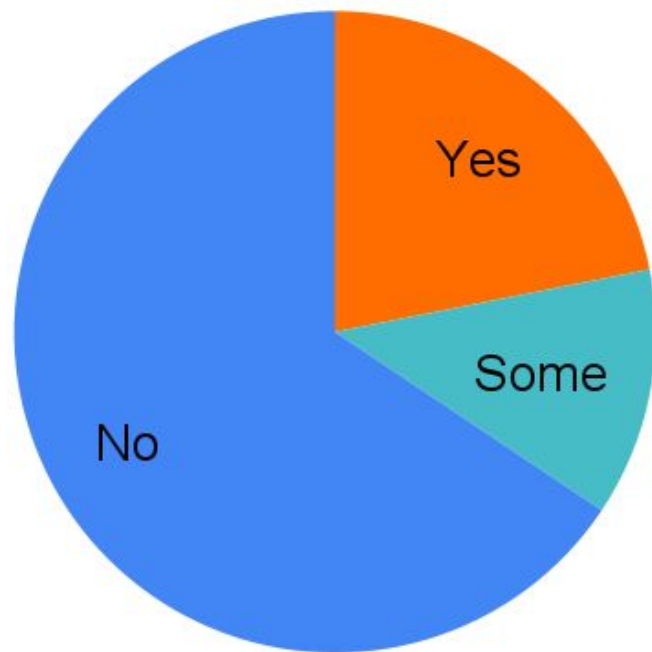


Estimated Annual Maintenance Costs*



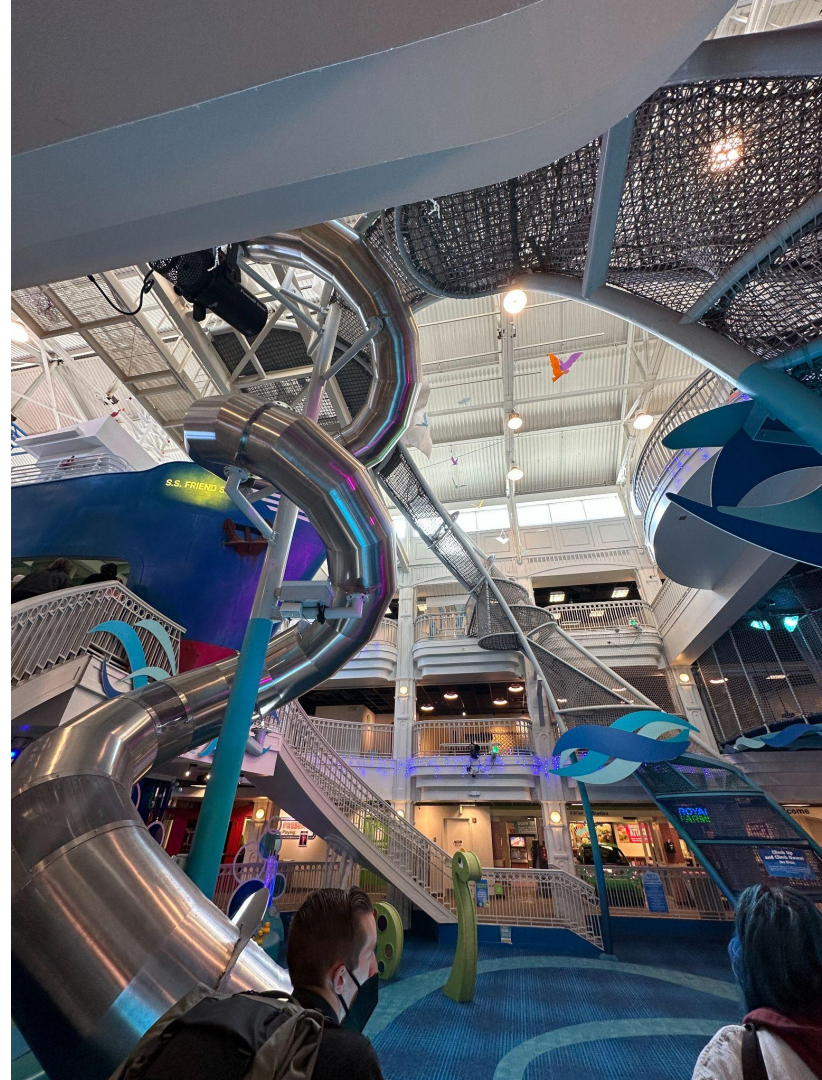
*excludes staffing

Dedicated staffing



Aspects requiring staff intervention

- controlled entry/exits
- unique features: harness, helmets, spotters
- controlled direction of travel
- crowd control (read... "field trips")
- accessibility
- "scared or stuck" children
- "accidents"



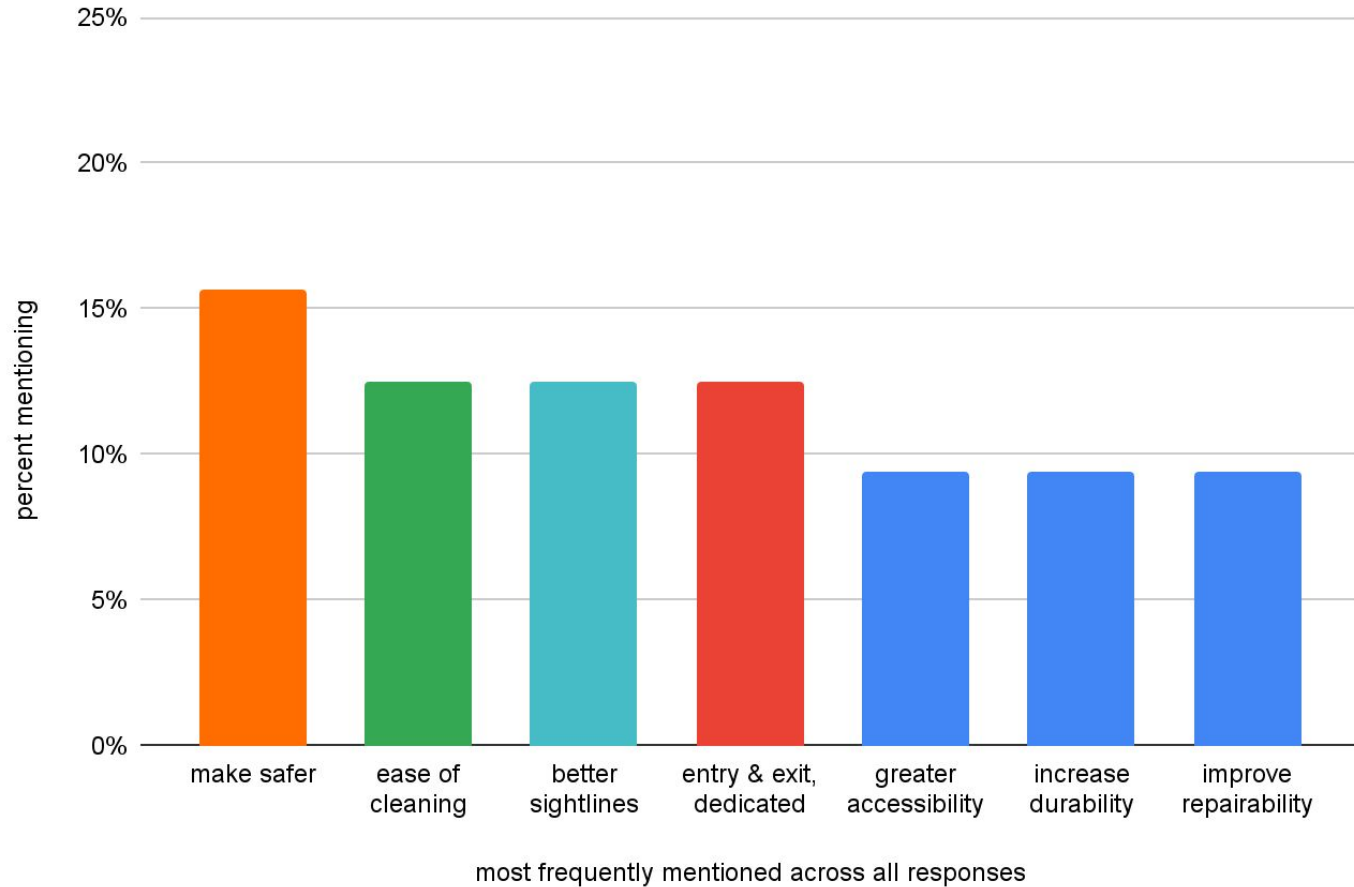
Operational Considerations

- Maintenance + repairs
- Staffing
- Replacement components





What is one thing you'd like to do to improve your climber(s)?



Q & A

Key Takeaways:

1. Alignment and fit for your museum
What's your story?
2. Understanding complexity to
achieve better results
Thoughtful design
3. Longer-term considerations
Operating costs



Safety and Accessibility
Standards Resources