

Conceptual Target Budgets Nightmare, Fantasy, or Reality?

By Kris Collins

Introduction

Given that the museum industry is a learning community, I am constantly speaking and collaborating with my network and colleagues on the process of setting target budgets for planned projects. It is a topic that makes owners and designers cringe, yet the industry doesn't seem to be truly keeping track of how expensive museum projects actually are.

Owners have an obligation to set target budgets for their planned capital projects, but they often don't know where to start. *How much should a museum cost?* is a bottom-line question that can only be answered when you consider a different question: *What is the best process for developing a conceptual target budget?*

For some reason, both owners and designers do a delicate dance around the topic of *How much will we spend on the project?* Many owners don't want to even provide a budget; they just want it to evolve. This is a problematic strategy, causing designers to wonder what an acceptable budget is—or worse, they just start dreaming up the most fabulous thing ever! Many designers who know their business will want to establish a “design-to” budget up front, so they know where to aim their pencils.

Museum staff and creative project teams are sometimes directed to start the design work, based on incomplete project goals. This can become a recipe for disaster. Get organized first! One of the most important activities an owner can do is to clearly establish project goals before giving the go-ahead for a project to start. These goals should include:

1. Project mission, target audience, interpretive planning goals

2. Scope and program of space needs (written design vision)

3. Target Budget

4. Target Schedule
5. Testing and alignment with fundraising feasibility to keep pace with schedule and overall budget
6. Target Annualized Operational Budget (and staffing plan)

Many owners don't want to even provide a budget; they just want it to evolve.

All of these items can come to life in a Feasibility Study, which ordinarily costs less than 0.5% of a project, and takes three to four months. However, few owners in the marketplace plan for this important step. This article will focus specifically on the best practices to develop the Target Budget, explain why a study period up front is so helpful, and provide some useful metrics on how much museums are really spending on their projects.

The Challenge at Hand

One of the biggest problems we have seen collectively in the industry is that owners start projects with unrealistic budgets, leaving out critical costs that should have been considered. This incomplete budget gives false hope that the projects can be done for that

price. If nobody on the team raises their hand early, owners end up having to make a hard decision later to increase the budget, scale back on projects after they've been over-designed—or worse, scrap the project completely.

Owner teams should—but don't always—establish a clear process for engaging design professionals, with maintaining budgets a stated priority. I have found that many primary project leaders and key stakeholders want what they want, and are willing to increase budgets or ignore escalating costs as the design evolves. To increase the budget, though, ask yourself: should museums just plan to do more fundraising? Is there capacity for increased donations? Is there a risk of cratering trust with previous donors who committed to a different vision or budget?

To learn more and better understand what museums are actually spending, I studied 40 different projects. The sample data was collected from museum projects that were either completed within the past five years, or are in the planning stage. One note: this conversation is specific to museums aiming to feature immersive and interactive experiences, versus static displays of objects or art. All budgets were adjusted for inflation to today's dollars.

But, before reviewing the findings, let's look at *everything that should be considered* in an ideal conceptual target budget.

Ten Things to Consider When Establishing a Target Budget

1. Don't Skip the Feasibility Study

The Feasibility Study lays out the business plan for the project. It's

surprising how many owners and design professionals charge ahead into projects without: knowing *existing conditions* for the work to build upon, agreeing on the *main objectives*, documenting the *expected program (SF)*, understanding *expected costs*, having a clear *work plan*, and having some basic understanding of what the *staffing/operational plan* is.

This is also a perfect time to confirm the interpretive plan, which would include major themes, identify target visitors, undertake visitor surveys to confirm why the project is important to the community, and establish some sense of how the museum fits into the local museum marketplace. These are all basic questions that a Feasibility Study can answer, at a conceptual level, to set a project on the right path.

2. Don't Forget Benchmarking

When you begin the planning process, do your research—and part of that should be speaking with similar institutions about what they have been spending on exhibits, media, and construction. Exhibits also can vary widely from \$200/SF to over \$1,000 SF, depending on the desired use of technology, artifact cases and supports, media, special features, themed environments, etc. Also consider repurposing existing buildings for museum use—new construction of museums takes much more in hard costs than renovating an existing building. A comparable museum going into an existing building would have twice as much of the overall budget (as a %) for exhibits. Lastly, you should consider operating and lifecycle costs for peer organizations.

3. Don't set the Budget without Team Engagement

Consider that the architect and exhibit designer should be a team, working to develop the visitor experience within the framework of a stunning building that needs to support the planned functionality *and* meet the agreed-to budget. Providing a magazine-cover

building rendering without having substance in relation to planned exhibits won't go too far with donors and sponsors, who recognize that visitors won't visit to just see the building.

The ideal sequence: develop interpretive planning goals, program, budget, fundraising feasibility—all before sketching anything! It's a big mistake to start designing the building and experience before you have these basics in hand, along with stakeholder buy-in. It's better to hash out target budgets, space needs and project goals between the design teams early; disagreements up front can forecast future problems.

When you begin the planning process, do your research.

4. Don't Pinch Pennies Up Front—Make an Investment!

Sometimes we see that clients are hesitant to spend up-front money, or they are conflicted on how to get started so they can begin their fundraising. The early study period—even early design phases—can be a time to try out a design team on a limited engagement, to see if they're the best fit for your project.

Design is subjective, and it's easy to change things in a conceptual phase when it's just lines on paper. Remember this simple principle: "Planning is less expensive than change orders." Goals and principles should lead the design effort, solving identifiable problems, rather than creating chaos by solving problems that don't exist.

5. Don't Be an Ostrich Regarding Your Existing Conditions

Existing buildings often have long-term deferred maintenance needs. Ignoring

these conditions can cause an increase in construction costs by at least 10–20%—or as much as 40%! Have a Physical Condition Assessment (PCA) done before doing any design work. If it's just infrastructure upgrades needed for new exhibits in an existing building, that is a huge unknown that needs professional study before establishing a budget.

Sites also have a major impact on budgets and schedule: soil conditions, utilities, zoning constraints, historic/architectural review boards, parking. Knowing the existing risks for a property is crucial.

6. Don't Ignore Leadership Obligations

Ideally, the up-front program and goals should be unchanged. Be ruthless about these initial goals, and don't get distracted by the "new-good-idea fairy." Have clarity and buy-in with your entire team about the *why*, so that everything can stay targeted. Many clients (and designers) love the conceptual phase—and it *is* fun. However, when the designs at various levels are approved, leave them approved. Help your entire team understand that the process involved in building a museum requires a series of approvals, and that when something that was approved six months ago has changes (or tweaks), it will cost additional money and time.

An unending design process that carries on during construction is guaranteed to wildly increase costs and delay completion. Business ethics also overlay the project-team culture, so the client's behavior and directions should be compliant with the signed agreements, and consistent with what your mom would expect.

7. Don't Assemble a Partial Budget

Even when preparing a conceptual budget, you should try to take in a full view of project-related costs. One thing that is helpful is to consider a very detailed checklist of what could be spent on a project, and think through what budget categories would apply.

In Figure 1, you can see the major budget categories where you can spend money. It's important to set up budget partitions, so that an over-reaching building project doesn't take all the money and leave the exhibits with diminished resources.

8. Don't Forget About Staff Input—Plan for It!

Museum managers, operational staff and docents all have a unique perspective, and valuable insights regarding visitor interests, educational plans, collections, stories, and practical considerations. Leaving them out of the process is a missed opportunity.

Be aware that, in an existing museum, staff will be effectively doing two jobs during the project. Staff can suffer burnout, and delays in scheduling meetings and collecting feedback.

Be careful of donor input, which can also lead to mission creep.

9. Don't Ignore That Little Voice in Your Head When It Asks "How Is that Going To Work?"

Designers are in the business of creating incredible visitor experiences, unique to each owner, and sometimes that means producing elements that appear to be beyond belief. What's "practical" doesn't always align with the design intent, so it's important to have trusted partners in place who can provide early cost estimates, prototyping, and acceptable solutions during the design phases.

Custom-made glass elevators are hard to repair, water features require Sisyphean efforts to maintain the look, hard-to-install objects become expensive objects to fix, and so on. This isn't to say that fantastic architecture isn't

stunning, but some level of practicality is always helpful.

10. Don't Forget to Build in Owner's Contingency—Track It!

The owner's contingency is a separate fund, as well as a percentage of the budget, which starts out high and slowly decreases as the project retires project risks (hidden conditions, delays, missed cost items, etc.), and as the contractors and vendors are locked into contract amounts (see Figure 2).

The owner's contingency is eventually absorbed into the other project categories—primarily because humans can't see into a project's future to predict what will go wrong. It's an insurance policy to protect the budget, but should *not* be available as a slush fund for added dreamy change orders. Like everything else in the budget, the contingency should be monitored and revised monthly.

FIGURE 1
Sample Cost Distribution

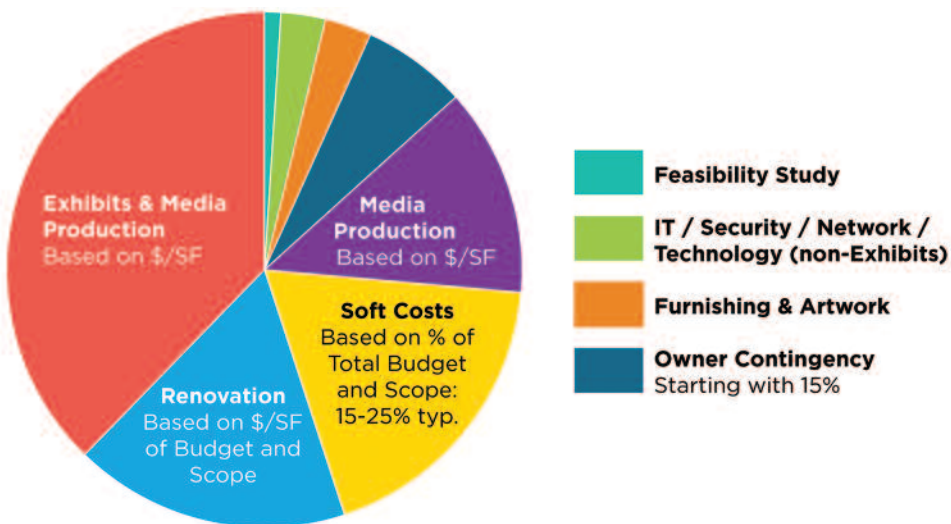
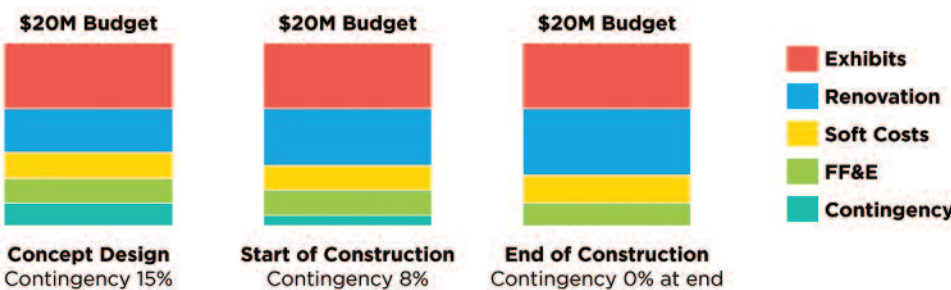


FIGURE 2



So How Much Should a Museum Cost? Where to Start with a Concept Target Budget?

Breaking down the overall budget into partitioned categories is the best place to start. Within these budget categories, you can prepare an estimate based on benchmarking. This is how I develop a museum conceptual budget. Remember, this budget is established before anything is designed.

Exhibit fabrication, exhibit lighting and AV hardware can all be conceived as \$/SF, but consider the level of graphics, technology, media, cases and supports, artifacts, and so on. Do some benchmarking first to see what you like, and inquire what it costs to create—you may need to be strategic to get this information, because people don't like to talk about how much they spent.

Media production (software, short films, interactive media, etc.) is based on the expectations of technology and interactive media, and is often done as a percentage of the exhibit budget up front. Don't say things like "state-of-

the-art media experiences” to *anyone*, unless you have the funding to back it up. Museums are becoming more reliant on technology, and procuring media producers is a tricky part of the business—but that’s another article. In my opinion, we need to consider media production as part of exhibit costs, because it is so integral.

Renovation, construction and infrastructure costs can be based on \$/SF and the expected scope of work. A good cost estimator can develop a conceptual estimate quickly, and it’s an affordable, high-value item. Even if you’re doing just an exhibit renovation project, infrastructure costs are not to be ignored or faked. Infrastructure reaches the end of its useful life, and what a perfect time to get it updated as part of your exhibit project! Also, see the MGAC website (<https://www.mgac.com/blog/cost-drivers-of-historic-adaptive-reuse-projects/>) for an article on expected costs for adaptive re-use.

Soft costs should be 15–25% of the overall budget, on average. Depending on a variety of factors, and if you are targeting a well-known Starchitect, have your eyes open.

Other costs need special attention—go through a budget checklist to ballpark these costs. Site improvements, legal, FF&E (aka Fixtures, Furniture and Equipment) can be ballparked on \$/SF, based on the program.

The owner’s contingency is to be used for unexpected costs within the budget categories. Start with an owner’s contingency of at least 15%. These funds are absorbed by other categories over time. This is very different than an estimating contingency.

How Much Are Other Experience-Based Museums Spending?

For the results of our study, see the budget charts in Figures 3 and 4. Within our 40 sample museum projects, exhibit-related costs were the most telling for Exhibit Fabrication and AV Hardware (blue) and Media Production (pink).

- Each category of “small, medium and large” had data from 13 projects, and the values have been adjusted for inflation in today’s dollars. Remember, case studies were either finished within the past five years, or are in their planning stages. Given that costs were adjusted to today’s dollars, assume awarding a contract in 2021.
- Pretty much all sizes were spending between \$475–500/SF for exhibit fabrication (including AV hardware and lighting), plus around \$120–190/SF for media production—and this is just the average! The mean cost/SF range was a 20–30% variance from average.
- Add these together, and these projects are in the \$600–700/SF range for exhibits, AV hardware, exhibit lighting, and media production. Remember that this can very easily jump up to \$1,000/SF.
- You’ll notice that larger museums generally have a lower \$/SF. This is because of the size and efficiency of a giant museum. Conversely, smaller museums generally spend more because of inefficiencies in mobilizing a team.
- Analysis showed that, in general, museum exhibit budgets take up about 20–30% of the exhibit costs, saved for just media production.

FIGURE 3
Exhibit Fab / AV / Media Production Budgets

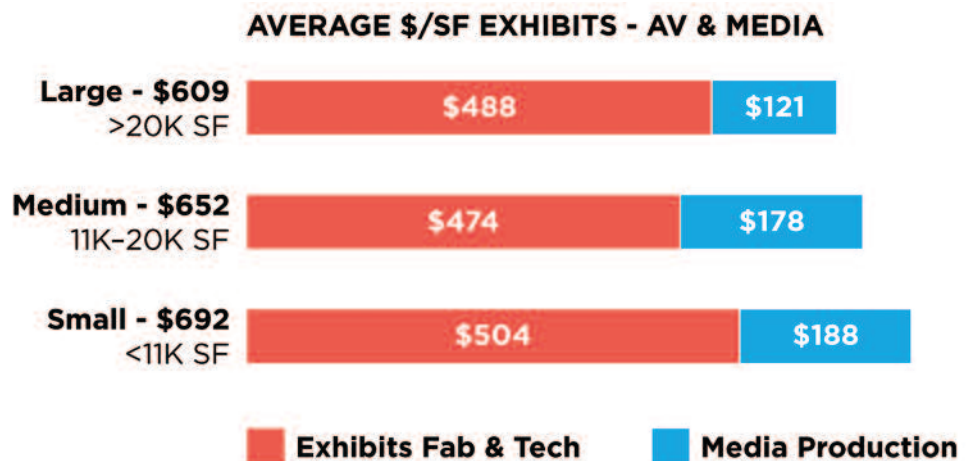
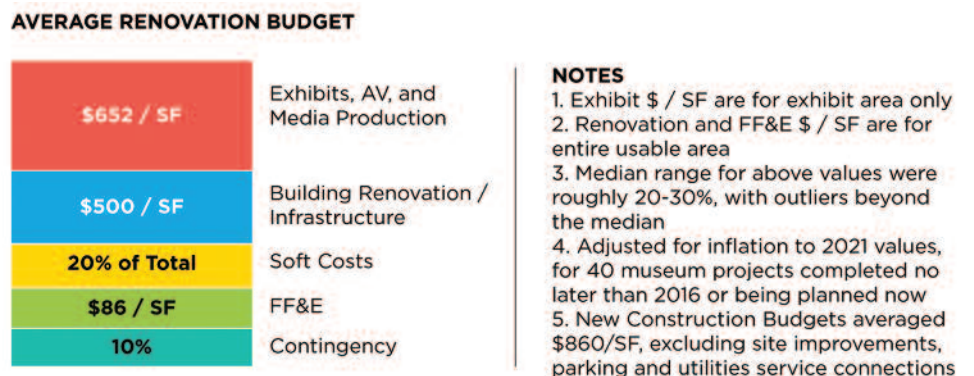


FIGURE 4
Total Museum Renovation Project Budgets



- On average, for the 40 projects studied, new construction is at least \$200/SF greater than renovation projects, without even considering the site and parking costs. MGAC has prepared a separate study on Cost Drivers of Historic Adaptive Reuse Projects (<https://www.mgac.com/blog/cost-drivers-of-historic-adaptive-reuse-projects/>), which addresses the expected costs for both renovations and new construction. See www.mgac.com/blog for more information.

Conclusions: Establishing a Conceptual Budget Isn't Easy!

We have shared the *average project costs* in this study. However, consider that most museum owners and designers

want their projects to be *above average*—right? There is so much to consider before declaring a project budget. Benchmarking is so critical to study first. Many things influence exhibition target budgets and expectations: density, size, technology, artifacts, media, art, visitorship, competitive marketplace, location/region, infrastructure. Benchmark your ideas and target experience.

Program SF × \$/SF and % of budgets is the dependable way to establish a concept target budget—do this before you start designing anything. The great thing about \$/SF at concept analysis is that, if you have a realistic view of what it will cost to build something, you might shrink your program of needs, so you don't end up over-designed and over-budget. This is a classic, common

problem in museum projects, and the strongest reason for preparing a realistic conceptual target budget.

Please Share Your Data To Improve This Study

We would love to receive more information about museum projects you may have, and we would keep it confidential. This study is prepared for the good of the museum industry. 🏛️

This is a companion article to a webinar given by Praxis Museum Projects Group and co-sponsored by NAME.

Kris Collins is a member of IAMFA, Praxis, and is Managing Director of the Cultural Practice group at MGAC, where he has led cultural projects for 21 years as an Owner's Representative. Kris can be contacted at kcollins@mgac.com.



Become a Member of IAMFA

International Association of Museum Facility Administrators membership offers invaluable professional benefits for its hundreds of facility managers of archives, libraries, museums and other cultural institutions.

Benefits of IAMFA Membership:

- Annual IAMFA Conferences
- Free Subscription to Triannual *Papyrus Magazine*
- Benchmarking Exercises
- Earn Continuing Education Units
- Network with Your Peers
- Exclusive Job Postings
- ... and more!

For more information on IAMFA benefits and membership categories or to become a member, please go to

www.iamfa.org/membership

Email: IAMFA1990@gmail.com