The Business of Science Centers

By Charlie Trautmann

During my 26 years as executive director of the Sciencenter in Ithaca, New York (www.sciencenter.org), I worked with our board and staff to grow the institution from a small, all-volunteer venture to a center that welcomes 100,000 guests each year onsite and reaches 1 million others worldwide through traveling exhibitions and educational programs. In nurturing this transformation, our team grappled with developing a business model to support growth and stability while responding to external changes.

The Sciencenter is a relatively small museum of 40,000 square feet (3,716 square meters) with an annual budget of $2.5 million and a staff of 27. Many science museum professionals contend that small museums are fundamentally different from large museums, and I agree. Relationships with their communities differ, organizational structures differ, and financial issues differ. So, although many of the following suggestions apply to museums of all sizes, some may not. Caveat emptor!
1. Understand your community. Every museum should design its business model around local aspirations and conditions. It is helpful—if not essential—to meet regularly with leaders, youth programmers, parents, audience members, donors, and other stakeholders to understand what makes the most sense for your community.

2. Create a compelling vision. It's also critical to identify the business you're in. Is it primarily education, entertainment, or something else? The answer drives your business model and helps you decide whether your next project should be a zip line or a sustainability gallery. As U.S. business guru Jim Collins advocates, choose a direction that you're passionate about, that drives your economic engine, and that you could (in theory) be the best at. In the ScienCenter's case, we decided we are in the business of "empowering every young person to use science in shaping a better future—for themselves, their community, and the world they will soon inherit."

3. Identify the strategies needed to advance your vision. After much community listening and internal discussion, the ScienCenter concluded that the most effective approach to pursuing our vision was to start our programming at birth and provide different, age-appropriate offerings in science, technology, engineering, and math (STEM) at three key developmental stages: preschool, elementary school, and middle school. This focus affects every decision we make as an organization and forms the basis for our business model. For example, we recently renovated our building to support the very different types of activities of pre-, elementary, and middle schoolers. A senior team meets twice monthly to identify and frame grant proposals for all three program initiatives, and we support our fundraising efforts by public relations messaging that educates our community about what we're doing with the three initiatives and why it's important.

4. Be necessary, not just nice. As Ann Bowers, founding trustee of the former Noyce Foundation, has emphasized, anything a museum does to endear itself to its community is money in the bank. Providing access for underserved audiences is not only good for social equity, it's also likely to be noticed by your mayor, local foundations, and...
5. **Understand the difference between constructing a new building and operating it afterward.** Be wary of directors and board members who want to build a building but don’t want to stick around to run it. Others will be left to deal with the facilities and financial problems for decades. It’s far safer to hire a CEO who intends to run the new facility after building it. David Ellis of the Museum of Science, Boston, mentored a generation of museum finance directors and taught us to “always use one-time money for one-time projects.” In other words, don’t use capital campaign funds (which are one-time) to operate a new museum or expansion (which is ongoing). Plan the project so it can support itself, or painful layoffs will likely be necessary shortly after opening.

6. **Be careful with attendance estimates.** Science center attendance has been flat for years, as documented by ASTC’s regular surveys. Most interactive museums log 2–16 visitors per square foot of exhibit space per year. (See Figure 1 on page 32.) Children’s museums tend to draw the most visitors, while less interactive natural history museums tend to draw fewer, as do expansions of any museum. Be wary of any long-term estimate predicting more than eight visitors per square foot per year for a new science center or more than four for an expansion.

7. **Think long-term.** If your charter (and country) allows it, start an endowment. The Sciencenter started an endowment with $40,000 shortly after opening in 1993—to the dismay of some board members who insisted that operating funds were the only priority and that “we can always start an endowment later.” Twenty-four years on, however, the fund is worth $4 million, provides 5% of our revenue, and has planned gifts in the pipeline to provide 8–10% of future revenue. (See Figure 2 below.)

8. **Be diverse in the boardroom.** Many museums have gotten into trouble from an oversaturation of strong business egos with money and connections, but a corresponding shortage of educators, human resources professionals, and

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**FIGURE 2: SCIENCE CENTER’S FY2015 REVENUES ($2.5 million total)**

- Admission and Membership: 16%
- Programs, Store, Other Earned: 17%
- Traveling Exhibition Rental: 22%
- Donations: 18%
- Grants: 22%
- Endowment: 5%

Developing a series of diverse and relatively independent income streams can help a museum weather financial challenges and stabilize its operations over the long term. (Source: 2015 Sciencenter Annual Report)
FIGURE 3: ONE-YEAR TRAILING ATTENDANCE (with average ticket price)

Plotting attendance for the previous 12 months eliminates seasonality and helps a museum document the impact of its business strategy by identifying long-term trends and the impact of short-term exhibitions and events. (Source: Scient center attendance records)

9. **Strive for diversity of income.** While ultimately linked to the external economy, each of the Scient center’s six revenue sources is somewhat independent, allowing for readjustment if any one source comes under pressure. (See Figure 2 on page 33.) Worldwide, many science centers funded primarily through one (often public) source have run into trouble, because there was no base of ongoing support after building campaign funds were gone, or because operating budgets were reduced over time. Furthermore, public funding may turn from feast one year to famine the next, following a political leadership change.

10. **Avoid debt!** Build only what you can afford and avoid long-term debt. Debt debilitates the annual budget and wreaks havoc with an organization’s capacity to take on new opportunities. Several ambitious museums, for example, have recently overbuilt or under-funded, requiring unbudgeted long-term loans. To add insult to injury, museums under such pressure often cut the exhibits budget to finish the building, leaving them with crippling debt service and empty galleries that discourage visitation and reduce earned income when it is desperately needed.

11. **Be “antifragile.”** Beyond being resilient to challenges, “antifragile” organizations recover and learn from challenges and actually get stronger from them, similar to muscles getting stronger when exercised. Good museums are resilient; the best museums design their business systems to be nimble, take advantage of adversity, and use challenges to improve their operations. The Scient center takes this approach by conducting a brief, quarterly staff climate survey that allows us to relatively quickly identify human resource issues that affect morale and reduce productivity. The surveys also help us identify solutions to make our team more cohesive, more productive, and better able to support our business objectives and educational vision.

12. **Create sustainable change.** Blockbuster exhibitions tend to breed audiences that come only for blockbusters. An alternative business model is to
provide frequent small changes, such as moving exhibits around, adding smaller or less expensive exhibitions, and regularly changing interactive floor programs. With this model, guests don’t have to look up the current exhibition, because they know they will see something new at every visit. This approach often reduces exhibit and marketing costs and uses word-of-mouth to build a loyal, year-round audience.

Business models are much more than the percentages of earned and unearned income. In fact, because each community and each museum is different, the concept of earned versus unearned income is not particularly useful as a decision-making tool. The most successful museums have business models that respond to the aspirations of their community, follow their educational vision, and maintain a long-term financial strategy that transcends the current leadership.

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A Sciencenter staff member helps create sustainable change in the center by building an exhibit in the shop. Photo courtesy the Sciencenter