

# BRAINSTORMING THE FUTURE

## CBSO FRONT-END EVALUATION REPORT

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## **PURPOSE**

The focus of the November 9, 2006 Community Based Science Organization (CBSO) Roundtable was to gather participants' ideas for future CBSO and the Science Museum of Minnesota (SMM) partnerships. These ideas were used to inform the development of a grant proposal for a new program that would involve CBSOs and SMM.

## **METHODOLOGY**

In order to gather ideas for a future program, a brainstorming method was used. The goal of the brainstorming activity was for participants to re-imagine the way SMM and CBSOs collaborate to facilitate better community-based science in Minnesota. Participants were asked to think about what this collaboration would look like. They were encouraged to be creative, innovative, and not limit themselves by financial resources or the existing program structure. To guide the brainstorming process, participants were asked to address six characteristics of a program. For each of the characteristics, questions were provided to help define the characteristic (see below). Participants were given around 30 – 40 minutes to brainstorm ideas.

### ***Characteristics of a New Program***

#### **Program Goals**

- What are the program's goals? What needs does the program address?

#### **Activities & Products**

- What activities would take place? What products would be developed?

#### **Audience**

- Who should be involved in order to make the program successful? Why is it important they are involved? What would their involvement entail?
- What audiences, outside of the CBSOs and SMM, would be reached? How would the program impact them?

#### **Location**

- Where would various activities take place?

#### **Partnership Roles**

- What does the collaboration look like?
- What is the nature of the relationship between CBSOs?
- What is the nature of the relationship between SMM and CBSOs?

#### **Impact**

- How would CBSOs benefit from the program/collaboration?
- How would SMM benefit from the program/collaboration?

## RESULTS & DISCUSSION

The idea behind the brainstorming method was to get as many ideas as possible out on the table. The results were analyzed based on themes that emerged for each of the six characteristics. The occurrence of themes across the five groups was then tallied for each characteristic. The results are reported below by each characteristic. Themes occurring in most or all of the groups are considered stronger themes than those that only come up in a few groups.

### Program Goals

Participants were asked to describe the goals of this new program and the needs it would address. Group responses were coded into themes as illustrated in Table 1. Themes are grouped based on whether the goals are related to public outreach activities or CBSO activities.

Table 1: Themes for Program Goals

Themes	Number of Groups (Out of 5)
<i>Goals Related to Public Outreach Activities</i>	
Increase public's interest in science	5
Increase public's understanding of science	4
Expand audiences reached by activities	3
Increase public's involvement in science	2
<i>Goals Related to CBSO Program Activities</i>	
Create connections among CBSOs	4
Increase diversity of CBSOs	2
Secure funding	2
Involve groups other than CBSOs	2
Other goals for CBSO program activities	2

#### ***Goals Related to Public Outreach Activities***

A common theme throughout the groups was the desire to create a program that had a positive impact on the public. All five groups suggested the goal of increasing the public's interest in science. They felt programs should promote science and make it accessible so as to get people excited about science. "Make science fun, accessible, and interesting." "Marketing the value of science." "Get audience as excited about our subject as we are." Four groups also felt that a new program should have the goal of increasing the public's understanding of science. "Impact science literacy." Suggested topics to address with the public included environmental issues and

conservation, the scientific method, responses to negative scientific information in the media, and the importance of science in everyday life. *“How about ways to teach people how to ask questions? People quit asking questions sometimes and sometimes what young people learn in school – that’s it. No further questioning is done.”* *“Make public more adept at understanding science. We need people to begin to understand the science behind what is happening in the natural world.”* Two groups wanted to go a step further and increase the public’s involvement in science-related activities. *“Citizen scientists as the outcome. Make it completely participatory and encourage their involvement and help collect information for the scientific community. There are just tons of things they can do like frog monitoring.”* *“Develop an educational program that would get people to take action.”*

In addition to the impact on public audiences, three groups wanted to expand the range of audiences reached by program activities. Audiences mentioned included scientists, families, and statewide audiences. *“Should advance grander science causes by involving community as well as scientists.”* See the “Audiences” section of this report for more detailed information about audiences this new program could possibly reach.

### ***Goals Related to CBSO Program Activities***

Creating connections between CBSOs was a goal mentioned by four groups. Ideas for connections included sharing expertise, sharing resources, and creating a collaborative project. *“Sharing CBSO resources, especially for organizations with limited funds and expertise.”* *“Include as many groups as possible to reach objectives. Work on a project where you combine all of them (nature centers) together on a project. Something that would benefit all of them.”* One group stressed the need for an online database to help establish these connections. Groups also mentioned that connections and resulting projects would strengthen organizations involved. *“Help CBSOs develop finished projects to further their goals.”*

Participants suggested increasing the involvement of individuals and organizations. Two groups felt that increasing the diversity of CBSOs should be a goal. They mentioned increasing the diversity of membership in CBSOs as well as the diversity of CBSOs involved in the program. *“Make this known to a more multicultural community. Multicultural face in science. Get diverse organizations involved.”* Two groups felt that a goal of the program should be to involve organizations and individuals not considered CBSOs. Specifically mentioned were faith-based organizations, political organizations, and educators. *“How faith-based and political organizations can be more supportive and affirming of science. Affirm science’s role in political decision-making.”* *“Get marketing teachers involved on the project to help the organizations sell their ideas.”*

Some groups had suggestions of other program goals. Two groups said funding was one of the needs of a new program. Groups suggested finding grants and other sustainable funding sources. *“Need sustainable funding to expand.”* One group expressed the need to document the effectiveness of the program and share it with the larger community. *“Follow up with current CBSO participant orgs. Did our work help your organization? How did your work help us?”* Another group felt that a goal of the program should be to function as a clearinghouse for whatever is going on in the state.

## Activities and Products

Participants were asked what activities should take place and what products should be developed as part of a future CBSO program. Group responses were coded into themes based on the intended audience as illustrated in Table 2.

Table 2: Themes for Activities and Products

Themes	Number of Groups (Out of 5)
<i>Activities &amp; Products for CBSO Audience</i>	
Professional development events	4
Professional development tools	4
CBSO website	4
Tours	3
Promotional materials	2
Sharing expertise	2
Other activities and products for CBSO audience	1
<i>Activities &amp; Products for a Public Audience</i>	
Public science events	3
Exhibits	3
Media	3

### *Activities & Products for CBSOs*

CBSOs expressed a desire to have access to professional development activities and tools through a future CBSO program. Four groups mentioned a variety of professional development events they would like to participate in, including skill sessions, workshops, roundtables, an annual meeting, and expert presentations. One group suggested offering credit or certification for professional development activities. Four groups desired a variety of professional development tools. These tools included CD or DVD tutorials, information on how to start a CBSO, marketing strategies, diversity plan, and template for educational model. *“Diversity plan of how to include all members of the community.” “Educational model in writing that CBSOs could adapt to their needs.”* Two groups wanted CBSOs’ to share their expertise with each other to help their members grow professionally. Suggested activities to share expertise included mentorships, staff exchanges, and shadowing experiences. *“Getting somebody in your center that could be a resource. Like an in-house consultant.”*

A CBSO website was a product four of the groups said they would like to see in a future program. Suggested website components included a resources database, calendar of CBSO activities, links to CBSO websites, and access to a listserv. *“What are participants doing now? Link with (CBSO) home websites and project alumni. How about a listserv?”* A few groups

stressed the need for the website to serve as a clearinghouse to assist in identifying potential partnerships and to access what other organizations are doing, what resources they have available, and what others have learned. *“Web could provide one-stop shopping looking for activities and field trips. Sort in different ways – location, standards met, ages.” “If (CBSOs) do experiments, then publish what is learned.”*

Three groups said they would like to continue tours to other CBSO sites. *“Field trips to other CBSOs. Bats in Crystal Cave, for example.” “Like having those cruise ship tours but going to museums and nature centers (worldwide).”*

Some groups had ideas for other types of CBSO activities and products. Two groups felt that one of the products should be promotional material for CBSOs, such as a promotional CD or DVD. One group wanted to have a competition to award the best CBSO projects. *“How about a competition judging activities that CBSOs do. Best of the best projects.”*

### ***Activities & Products for a Public Audience***

Public science outreach was deemed an important activity of a future CBSO program. Participants noted three avenues for outreach: events, exhibits, and media. Three groups mentioned public science events, specifically Science Summits or science fun fairs. *“Let the kids display their stuff and let parents come and see it (as part of Summit).” “What about a fun fair here all about science. Have guys with songs and fun things.”* Three groups would like to develop educational exhibits. *“Develop exhibits for the SMM but with the groups involved.” “Have a program where any organization that wants can build an exhibit to be housed at a nature center. Many organizations have no permanent site, they just meet where available.”* In addition to public exhibits, one group also mentioned creating corporate exhibits. Three groups suggested various forms of educational media for reaching public audiences. Media formats included newsletters, magazines, CDs, website, television, and radio. *“How about a SMM/CBSO science show for radio and/or TV?”*

## Audience

Participants were asked who should be involved in a future CBSO program to ensure it is successful. Participants were also asked what audiences this new program would reach. Group responses were coded into themes as illustrated in Table 3.

Table 3: Themes for Audiences

Themes	Number of Groups (Out of 5)
<i>Organizations and Individuals Involved</i>	
CBSOs	5
Organizations not considered CBSOs	3
Artists	2
Other individuals involved	2
<i>Audiences Reached by CBSO Activities</i>	
General audiences of all ages	4
Formal education audiences	4
Ethnically and culturally diverse audiences	3
Informal education youth groups	2
Audiences through media	2
Other audiences reached by CBSO activities	1

### ***Organizations and Individuals Involved***

All five groups felt CBSOs were an important part of the program and should continue to be involved. A few groups suggested means to expand the involvement of CBSOs. One group desired the increased involvement of diverse organizations. Another group suggested the involvement of national organizations. *“Consider the involvement of the national organization of some selected participants you are working with. This would give you the opportunity to tap into a large fund base that might be difficult to find at the local level. Any significant developments that are accomplished on the local level would be easier to get accepted nationally.”*

The involvement of other types of organizations and individuals were also mentioned. Three groups suggested the involvement of non-CBSO organizations, such as neighborhood organizations, service groups, trade associations, special interest groups, state agencies, area Chambers of Commerce, and corporations. *“A Chamber of Commerce could help with publicity.”* Two groups suggested the involvement of artists. *“Artists can articulate the vision of a project.”* One group mentioned the involvement of legislators since they can help obtain funding for CBSOs. Another group thought the involvement of college marketing students would be beneficial in helping nature centers attract more people. *“Students could be assigned to look for potential ideas toward solving this problem (of attracting people).”*

### ***Audiences of CBSO Activities***

Participants wanted to ensure CBSO activities reached a variety of general audiences. Four groups mentioned audiences of varying ages including youth, family groups, adults, and senior citizens. *“Everything starts with the family. The road to involvement is the family.” “Stimulate science career interest in youth.”* In addition to diverse ages, three groups mentioned reaching ethnically and culturally diverse audiences. *“Get African-Americans involved in science and Latinos, Asians, etc.” “How can we excite people of different backgrounds? Can we broaden our ideas of science and honor other cultures too?”*

Various educational audiences could also be reached by CBSO activities. Four of the groups specified that they would like to reach formal education audiences including school age students, teachers, college students, home school groups, and the Minnesota Department of Education. *“The Minnesota Department of Education could be an audience because they write curricula.”* Two groups mentioned specific informal education youth groups such as Boy Scouts, Girl Scouts, and 4H. *“It seems like it would be a natural connection to fit nature centers to Girl Scouts and Boys Scouts.”*

Some groups cited other types of audiences that should be involved. Two of the groups mentioned that CBSOs could reach audiences of various media outlets including television, Internet, and radio audiences. *“Partnership with NPR Science Friday.” “Web audiences are truly worldwide.”* One group also stressed the need to reach rural audiences. *“Small mini-exhibits circulate to rural areas. CBSOs could be hosts of those mini exhibits.”*



## Location

Participants were asked where CBSO activities should take place. Group responses were coded into themes as illustrated in Table 4. As evident by the variety of responses, CBSO activities could take place in a wide variety of locations.

Table 4: Themes for Location

Themes	Number of Groups (Out of 5)
CBSO Sites	5
Varied geographic locations	4
Formal education sites	4
Outdoor public spaces	4
Indoor public spaces	3
Corporate sites	2
Online	2
Other locations	1

All five groups mentioned CBSO sites, including the Science Museum of Minnesota. *“Nature centers because they have a facility.” “Rotate CBSO exhibits and programs among each other.”* Four of the groups stressed that no matter where activities take place, they should be held in various geographic locations. Specifically mentioned were inner city, suburbs, rural areas of Minnesota, and worldwide. One group suggested reaching various geographic locations through a traveling program. *“Take the show on the road, a science road show.”*

Four groups mentioned formal education locations. Education settings included both schools and higher education settings. *“One of the locations should be schools because education is important to all of us.” “What about tours in laboratories (at universities)? We used to look forward to kids coming in. It was fun.”*

Outdoor and indoor public spaces were cited as locations for CBSO activities. Four groups suggested holding activities at outdoor locations such as the state fair, zoos, and parks (national, state, and city parks). Three of the groups mentioned holding activities at indoor community spaces. These spaces included libraries, shopping malls, theaters, churches, and convention centers.

A variety of other locations were mentioned by some of the groups. Two groups suggested corporate sites. Two groups felt the program should have a virtual presence. Additional locations mentioned by only one group included educational conferences and retreat centers.

## Partnership Roles

Participants were asked what the collaboration should look like and to describe the nature of the relationships between CBSOs and with SMM. Group responses were coded into themes as illustrated in Table 5.

Table 5: Themes for Partnership Roles

Themes	Number of Groups (Out of 5)
Collaborative projects between CBSOs	5
SMM's partnership with CBSOs	3
Financial partnerships	3
Sharing expertise between CBSOs	2
Partnerships outside of CBSOs	2
Other partnership roles	2

Partnerships between CBSOs was a strong theme among groups. Five groups felt that CBSOs should collaborate on projects. *“Like-minded CBSOs could develop ideas together with similar objectives. Come together to combine program development and outcome.” “Need a who’s who for networking and helping each other with skills, tools, podcasts, etc.” “One group does the work of another if they have knowledge or expertise.”* Types of projects mentioned included exhibits, events, programs, and marketing. In addition to collaborative projects, two groups suggested that CBSOs could share their expertise through mentorships.

Three groups defined the role SMM would play in the partnership. SMM’s main role would be continuing to provide their expertise to CBSOs. Specific areas of expertise noted included marketing, design, development, communication, and outreach. *“I think what the SMM excels in is their expertise in communication and outreach. To me that’s one of the essential things they give to the CBSOs.”* Other suggested partnership roles included SMM providing leadership and SMM serving as a resource hub. *“Maybe the science museum should be like a library in a way or storage for all the CBSOs.”*

Three groups felt that partnerships could be developed that would provide financial benefits. Some of the suggested partnerships were with funders. *“Look for sponsor for collaborations to fund activities.” “Build contractual relationships.” “Ways to provide free programming - partner with people who have money.”* Other suggested partnerships were related to assistance with obtaining funding. *“Grant writing and fund solicitation.” “(Create) power points for grant proposals.”*

Two groups suggested partnerships with organizations or individuals outside of CBSOs. Specific partners included schools, artists, and musicians. *“Artists and scientists. Reach resource of*

*artists that we could tap for new technologies to create art.” “Music concert at SMM. ‘Science of Sound.’”*

A variety of other partnership roles were mentioned by only one group. One of these roles was establishing a flow of information among groups involved in the program. *“A flow of information between the CBSOs at least and even between the CBSOs and SMM.”* Another role mentioned was the recruitment of new organizations to the program. *“Pyramid scheme of CBSOs recommending new people to next workshop.”*

## Impact

Participants were asked to describe how CBSOs and SMM would benefit from the program. Group responses were coded into themes as illustrated in Table 6.

Table 6: Themes for Impact

Themes	Number of Groups (Out of 5)
Expand CBSO and SMM audiences	4
Bettering the community through educational outreach	3
Help CBSOs and SMM carry out their missions	3
Increase connections among CBSOs	3
Financial impact	3
Professional development	2
Enhance image of CBSOs and SMM	2

The strongest theme was impact of the program on public audiences, specifically the increased number of people reached, the impact of educational outreach, and the ability to carry out an organization's mission. Four groups thought a new program would help them reach more people throughout the state and increase the number of members or clients. CBSOs could share audiences at events and SMM could function as an avenue for teachers to contact CBSOs, thus helping CBSOs expand their public relations. Three groups mentioned the impact of educational outreach activities. Educational impacts included increasing the public's scientific literacy, influencing behavior change to positively impact the environment, and overall bettering the community through education. Additionally, three groups said the program would impact CBSOs and SMM by helping them carry out their missions.

As mentioned in the "Partnership Roles" section, connections between organizations were cited as an important part of a new program. Three groups felt connections between CBSOs and with SMM would result in greater access to resources and expertise, new ideas, and collaborative projects. *"Get special expertise involved that is not here, such as our wolf expertise."* *"The CBSOs really benefit from the SMM expertise and communication to bring their ideas across and how to say it."* *"Add abilities beyond what our organization can do."*

Three groups mentioned the financial impact of the program. Financial impacts included increased funding for sciences, opportunities for in-kind contributions, more efficient development of exhibits, and help securing funding. *"We can talk about our work collectively, so it looks more appealing to funders."*

Groups mentioned additional ways the program would enhance their organizations. Two groups felt that the professional development opportunities of the program would strengthen their

organization, specifically the opportunities to learn new knowledge and skills. *“New ways of reaching our target audiences.” “Skill building is huge!”* Two groups thought CBSOs’ and SMM’s involvement in the program would enhance their images. *“Somehow making SMM more than a museum. It needs to be a vital, active, growing institution.” “We all take it up a notch.”*

## SUMMARY

Overall, roundtable participants provided a wide range of ideas for a new CBSO program. However, there were two themes that came out strong across the six characteristics. Roundtable participants stressed the importance of public outreach activities and connections between CBSOs and with SMM.

Public outreach activities were frequently cited as an important part of a new CBSO program. Some of the most frequently mentioned program goals were educational outcomes of increasing the public's interest, understanding, and involvement in science. Participants provided ideas for a variety of educational events, exhibits, and media that would help the program meet these goals. These activities would also help CBSOs and SMM carry out their missions. Another program goal was expanding public audiences reached by program activities. Roundtable participants suggested a variety of potential audiences that could be reached as well as locations to hold outreach activities.

Another frequently mentioned feature of a new program was the development of stronger connections between CBSOs and with SMM. These connections would help organizations and their members grow professionally as well as develop projects to reach educational outreach goals. Participants envisioned a range of potential connections. In some cases connections may involve sharing ideas, expertise, and resources. This sharing could occur between CBSOs and the SMM could continue to offer their expertise. A CBSO website as well as professional development events and tools were also suggested as means to share knowledge and develop skills. Connections between organizations may be more involved and result in a collaborative project developed by a number of organizations.