ENVIRONMENTAL EXHIBIT COLLABORATIVE (EEC) FINAL EVALUATION

This report, prepared by Randi Korn & Associates, Inc. (RK&A) presents evaluation findings for the final year of the Environmental Exhibit Collaborative (EEC)—made up of the EcoTarium, The Discovery Museum (TDM), ECHO, and the Children's Museum and Theater of Maine (CMTM). Evaluation in the final year was comprised of periodic journal entries by individual participants, environmental scans completed by each institution, and a Learning Circle facilitated by Randi Korn & Associates. Journal entries reflect a select number of participants' responses to specific aspects of the EEC, like workshops (a complete summary of the journal entries is in the appendix of this report). Environmental scans are comprehensive self-assessments conducted internally at each institution and included more staff than those directly involved in the EEC (instructions for the scans are in the appendix). The Learning Circle was a group conversation facilitated by RK&A in March 2014, designed to help EEC participants reflect on their experiences by collectively processing their achievements and challenges.

FINDINGS

One of the most notable (and somewhat unexpected) outcomes of the EEC emerged in the Learning Circle and is a subtle shift in the collaboration from being four distinct individual organizations focused around distinct content areas to a collaboration with blurred boundaries, both among the institutions and also between the various content areas. Moreover, it seems that within each institution, the EEC had started to move away from being in the hands of just those staff members directly involved in the project, toward greater involvement by other staff members. This blurring of boundaries suggests that the EEC has started to become entrenched in the institutions— it is not so much an "add-on" as it is becoming an integral part of the institutions and individuals involved. As will be shown in this report, each institution has taken on new activities or new ways of working that may not have happened without the EEC grant as the instigator. And, even though the EEC may be responsible for these new activities, it is now difficult to differentiate anything as specifically EEC-based; as one participant said in the Learning Circle, "No longer can [we] point out the EEC project [as separate], it has filtered down and spread; there has been culture shift." Even though the grant period is coming to an end, EEC participants do not see the collaboration as ending along with it. The EEC will continue to exist and participants will continue to seek grants to fund its continuation.

The report is organized into two sections. The first section describes the achievements of the EEC in regard to its original impact areas (open-ended investigation, family learning, prototyping, and evaluation). The second section describes the nature and extent of the collaboration overall. Unexpected outcomes will also be noted where applicable. And, finally, the appendix includes the summary report of the journal entries that took place over the last 18 months.

ORIGINAL IMPACTS

PROTOTYPING

Of the four original impact areas—open-ended investigation, family learning, prototyping, and evaluation—prototyping became the area central to the EEC. In fact, the other impact areas became nearly subsumed as part of prototyping. Prototyping's dominance was not evident in the first year of the grant—even though the prototyping workshop by Paul Orselli was very well received by participants who became excited at the prospect of additional prototyping. By the end

of 2012, many of the participants continued to express doubts that prototyping could become an institutional priority, mostly because of the time involved. In the 2012 Learning Circle, participants were conflicted over what, if anything, to do next in regard to prototyping.

This unforeseen shift in prototyping—from being a challenge to becoming a dominant part of the EEC—happened during one of the two-day workshops in 2013. In that meeting, the group decided to alter its approach to prototyping going forward. Rather than testing prototypes brought by each museum, the group chose to focus exclusively on the projects in development at the host museum. This exclusive focus approach first occurred randomly at the 2012 November meeting and seemed to address the "scattered" feel of the older approach. The meetings in 2013 were scheduled around the project schedule of each museum, so that the group arrived at a key point in the host museum's project(s). This afforded the group a chance to spend time in deeper and more focused problem solving. More importantly, this approach gave each host museum hundreds if not thousands of dollars worth of prototyping, evaluation, and design consultation from trusted but extremely (even brutally) honest critics who knew the workings of the museum intimately. This peer critique and consulting has been so valuable that several museums have written the EEC group into other grants in the same peer evaluator-critic role.

As a result, during 2013 of the EEC, prototyping seems to have become an integral part of how each institution operates. In fact, in the environmental scans prepared by each institution, a recurring comment was that prototyping is something that has grown immensely in each Museum as a direct result of the EEC and that it has spread across the institutions beyond the original EEC activity. By the time of the Learning Circle in March 2014, each institution recounted the ways prototyping has taken hold in each of their museums.

- CMTM recounted one staff member's assessment of their department-wide effort prototyping ready-made blue foam blocks as a "paradigm shift" in the institution. Over the course of six weeks, all staff across the Museum took turns doing naturalistic observations of visitors using the blue blocks. The Museum tried out a variety of configurations and situations to see how it affected the visitor experience. As a result, their staff aligned around this initiative and the core exhibit and program team learned how to communicate the purpose and findings of the prototyping to the entire staff.

- EcoTarium converted an old underutilized space in the Museum into a permanent prototyping space where visitors are encouraged to "try things out" at designated periods of times, like school holidays. Essentially, prototyping becomes a kind of programming space.

- TDM instituted Try it Out Tuesday as a weekly prototyping program in the Museum. The program is still in its infancy, but it continues to grow. One participant said she has used it as a space to test out ideas she's been meaning to try for years. Even though they market Try it Out Tuesday as a program, they make sure the public is aware that they are "testing" something.

- ECHO cited that during the grant period, prototyping had been incorporated into several exhibits including Turtle Tank and revisions of Discovery Place. Further, prototyping has spread across the institution, including programs and evaluation of a pre-school program through a YMCA grant.

An additional, unexpected outcome was that EEC participants began prototyping programs even though the collaboration was designed around exhibits. Through other project activities, staff from the museums' education departments found ways to utilize Ex-Lab project goals to test their theories about public programming. For example, the EcoTarium has now tested one program in their local school district, Worcester Public Schools, as part of the Massachusetts 21st Century Community Learning Centers program for Out of School time. The program "Chemistories" was first developed and tested by program staff from the four museums at the Ex-Lab workshop led by Paul Orselli as a public program, and subsequently adapted and tested by EcoTarium staff. The staff reported that the Out of School time teachers stated that the student engagement in the Chemistories program was the higher than for any other similar program.

EEC participants noted they still have work to do in the area of prototyping and cited various challenges that remain: deciding what to test, knowing when to stop collecting data, making decisions based on the data, and assigning responsibility for those decisions, especially when a large group is involved.   Nevertheless, prototyping seems to be a process that "there is no turning back on" at this point. Below are a few exemplary quotations about prototyping from the environmental scans.

> I really did not realize the whole value of prototyping everything and how it can impact future decisions. I started out thinking that you prototype for exhibits because that is what the exhibit team is always doing, but really you can prototype for anything. [EcoTarium]

> We've come to understand that every member of our staff has a valuable perspective and that we represent different stakeholders. We also fully comprehend that there is no better way to find out if something is viable, family-focused and open-ended than to try it out with our visitors, observe, and then seek their feedback. People seem truly interested in being part of the exhibit and program development process here—not in focus group, but in actually getting physically and intellectually engaged in our process and materials. (CMTM)

> Because the audience is directly involved as staff start to present programs, the feedback can be both brutal and nurturing. We have started to implement in-program feedback mechanisms which should over time radically reform our efforts. I believe, as we engage audiences more we will witness the power, and then ask for more, a positive feedback loop. (ECHO)

> Over the last few months we have included regular public programming solely on the topic of prototyping. These have been purposefully carved out into the schedule to allow prototyping and guarantee that it occurs. We are still figuring out how to best use these programs to provide valuable feedback for future programs/events/exhibits, but I see this as a valuable step in a process of change. (TDM)

EVALUATION

Notably, even though evaluation was discussed as a distinct focus area in the 2012 Learning Circle, it became indecipherable from prototyping by early 2014. In 2012, the area of evaluation prompted the greatest dissatisfaction. At the end of 2012, participants had questions about evaluation and the evaluation process that remained unanswered. Many were confused about gathering data (e.g., how do you see the "aha moment?"), and knowing when to conduct a formal evaluation versus when quick-and-dirty methods would suffice. Participants also wondered how much data was enough,

how to ensure that the evaluation would be useful, and how best to ensure reliable data. In the 2014 Learning Circle and in the environmental scans and journal entries, participants referenced evaluation as "formative evaluation" exclusively and their descriptions were always connected somehow to the prototyping process. One CMTM participant aptly described the nature of evaluation in the EEC:

> Evaluation [for us in the EEC] is not so much hard number crunching, but more like observing and taking note of trends and then drawing meaning out from them. And then taking that meaning and creating something concrete from it. I think I learned a lot from being a part of that process, and now feel a lot more comfortable with the actual logistics of it. Not so much the "research in the field" of evaluation, but the nuts and bolts of taking a whole lot of information or data, thinking about it critically, drawing some conclusions and creating something (in this case, an exhibit) in response to that. (CMTM)

OPEN-ENDED INVESTIGATION

Open-ended investigation was not a focus area in 2012, and at the end of that year, participants voiced their desires for next steps in regard to this topic, including the need for each institution to use the type of open-ended investigation most appropriate to their unique needs (including the age of the target audience) and to acknowledge that it can be difficult to support content learning through open-ended investigation. EEC had two workshops focused on open-ended investigation in 2013, and they were well-received.

In the 2014 Learning Circle, open-ended investigation did not come up as a distinct topic, but rather was interwoven in the discussion on prototyping, with one participant suggesting that prototyping had allowed her institution to shift to a more open-ended way of thinking generally. Similarly, another participant said prototyping had led to more risk-taking in his institution, which in turn has led to more creativity and innovation; he explained that this can become a way of modeling open-ended investigation to visitors.

Nevertheless, in 2014, participants continued to struggle with knowing when being open-ended is appropriate. One participant cautioned that risk-taking and being open-ended should not be an excuse for mediocrity or carelessness, and that if not careful, it can be perceived as messy. Participants also struggled with knowing how open-ended to make an exhibit or how to balance it with other types of exhibits, illustrated in the quotation from the Learning Circle below.

> Did we start out saying family learning and open-ended is what we seek? Or is it something we look for balance? A more realistic understanding of what these things are make us realize it isn't always possible, not everything can be open-ended.

Even though participants still grapple with defining and utilizing open-endedness, it has clearly become a part of their internal conversations and a consideration in planning and exhibit development, as evidenced in this excerpt from the Learning Circle (the asterisks represents a change in speaker).

> [Open-ended investigation] was always there but we are more explicit about it, and it becomes a part of our conversation. *We have raised the bar on ourselves about how open-ended we can make it…the number of our ideas have increased…*Asking ourselves more

often, "is it open-ended? Can we make it more open-ended?" *The question may never be answered, [but] it is no longer implicit.

Below are quotations from two of the environmental scans, illustrating where these two institutions stand in regard to open-ended investigation.

> And also, open-ended is great, but it's not for every kid all the time. It means different things for different people. Open-ended for somebody could be paint and paper, whereas for someone else that could be really restricted. It's part of creating our own definition for how we use that here. (CMTM)

> It is really an interesting conundrum trying to develop more open-ended experiences that embrace natural sciences including live animals. With this new paradigm in mind, I am hopeful that the new Discovery Place, an exhibition that is our greatest open-ended exhibit, can further push this boundary. (ECHO)

FAMILY LEARNING

At the end of 2012, participants felt they had some basic tools to support thinking about the experience of the whole family. However, there was little evidence of growth or development in this area at the first Learning Circle. But by early 2014, participants talked about family learning in a way that suggested it has become more entrenched in their approach to exhibit or program development and prototyping. Participants from CMTM spoke about using the notion of family learning to prototype the blue foam blocks. In observations, they were explicit about looking for the ways that children versus parents were leading and using the blocks and activities. They learned that in their context, parents need to be involved with the block building for the activity to be effective. Similarly, a participant from EcoTarium said that the family learning ideas had drastically changed the way she prototypes. A participant from ECHO said they now use prototyping to explore ideas like family learning. Quotations from the environmental scans illustrate the extent to which family learning has been embraced at all four museums.

> The ACII [Adult Child Interaction Inventory] has been a huge tool that changes how I watch families. I now try to foster and support a wide variety of parents' roles in exhibits. (EcoTarium)

> I'm always thinking about parents when I develop programs. Not just logistics, like where do they stand or sit, but what's their role in this project. How old are the kids? Is it a project that will clearly need parental involvement? (CMTM)

> We keep coming back to questions of how do we promote or further family learning experiences on a regular basis. In regards to programs, we have specifically made a move to construct more programs appropriate for a wide range of ages. This is a result of this project [EEC]. And for the planning of our new building expansion, where we will find these two unique age groups all in the same building, [we consider family learning]. (TDM)

> There have been more deliberate conversations about family learning approaches to designing and delivering exhibits and programs. We have another grant that is all about working with the preschool/caregiver audience and how we can do better. (ECHO)

At the end of 2012, participants agreed that for real change to happen within each institution, they would need to "widen the net" beyond the eleven individuals directly involved in the Collaborative. Though still a work in progress, in 2014, participants talked about the ways in which this had begun to happen. For example:

- AT CMTM, the blue blocks prototyping project allowed them to disseminate EEC ideas to their entire staff, across all departments. Since every staff person was responsible for conducting observations, they all became invested in the project, and thus understood why it was happening and toward what purpose. As one staff person said, "We will be forced to explain our decision [about the blue blocks] because everybody wants to know why they made the decisions."

- ECHO has taken ideas from the EEC and is now working with its entire staff, through crowd sourcing, to develop a visitor survey.

- Participants noted that the involvement of leadership from all four collaborating institutions in the EEC, including their attendance at the meetings, creates a sustainable model of dissemination and capacity-building. For example, in an effort to better acclimate the EcoTarium's new president, EEC scheduled a "director's side bar" meeting to take place during one two-day event. This provided an opportunity for the museum directors to discuss issues outside of the project agenda. At their request, and because it proved so effective, this is now a regular feature of workshop agendas.

- The inclusion of staff from outside those directly involved in the EEC, at various points in the Collaboration, was an important part of disseminating the benefits of the project. As one said, "more staff with first-hand sharing of ideas with other collaborators is super important, [it takes] the primary project person out of the role of the filter for new information."

- Staff exchanges began at the end of the first round of funding and have had an instrumental effect on dissemination across institutions since they involved staff from varying departments. The cross-department involvement proved to be one of the most significant aspects of EEC. Host museums used the visit by an outside institution as a way to underscore internal dissemination of the goals and lessons of Exhibit Lab. Further, visiting staff's capacity to bring a fresh perspective to the table proved to be a resource for a variety of museum projects and teams, by including them in department meetings, exhibit brainstorming sessions, and one-on-one meetings with educators, visitor services, facility rental staff, and animal care staff.

- Focusing workshops on real projects at the host museum became a dissemination tool in itself. For example, three of the museums (ECHO, CMTM and EcoTarium) worked together on live-turtle interactive exhibits that were designed to engage visitors in better science practices: closer observation (through identification of individual animals), collecting data, and making predictions and asking questions (especially about turtle behavior). With each workshop meeting, web conference and staff exchange, the museums saw an aspect of another museum's turtle interactive they wanted to borrow and test. As a result, all three museums now have programs and/or exhibits that emerged from a process of continuous collaboration.

APPENDIX A: JOURNAL ENTRY SUMMARIES

JOURNAL 7: INTERACTIVITY WORKSHOP – MARCH 2013

QUESTIONS

- What is your reaction to the discussion about "interactivity," "hands-on," and related terms? In what way, if any, does your reaction to these terms impact your thinking about your Exhibit Lab or other future projects? What questions does it raise for you?

- Does the hands-on investigation/prototyping work that you did in small groups spark your thinking about your current or pending projects? If so, how? If not, do you have any thoughts on why not? How could the EEC push the process to be more productive?

- What was the impact—for you—of Ed Seidel's presentation? Of the tour of Gulf of Maine Research Institute?

- Any comments on other sections of the meeting, or lessons learned for future meetings?

- Did you find other aspects of the 2-day meeting to be helpful; if so how?

- Finally, are there concerns or questions raised for you at the meeting?

FINDINGS

Five respondents answered Journal Question 7; they represented all four institutions. Respondents did not answer all of the questions, but gave responses to the questions they felt most applied to their individual experiences. The summary below synthesizes all the responses.

- Most respondents said that the discussion of "interactivity," "hands-on," and related terms was a positive experience, saying that the conversation was "rich and helpful," and that it was "good to have a discussion of what it can mean and what we want it to mean."

- Many respondents also said that the conversation about terms helped them think about the concepts in new ways, but admitted that the definitions were still vague, saying things like, "[We] never finalized whether we thought sensory experiences were interactive."

- Many respondents said that the conversation impacted their thinking about the Exhibit Lab because it allows for "a better way of describing what I want out of our prototypes," and is a first step in "figuring out a strategy to build a connected space of interconnected goals."

- Many respondents talked about how the prototyping work sparked their thinking about current projects or the role of the Exhibit Lab in developing projects. Most of these thoughts were focused on the interactivity testing that took place at CMTM. For example, respondents said things like, "It was exciting to see the work we are doing at ECHO influence our colleagues and their thinking."

- A few respondents talked about how they were still struggling with some aspects of interactivity and engagement, wondering about the right amount of engagement and how to engage different groups of people, saying things like, "If the design of an exhibit experience causes the visitor to spend more time looking, noticing, and observing, is it interactive?"

- A few respondents talked about the fact that the interactives that were tested were not technologically savvy, but did seem to get the attention of visitors, saying things like, "Setting up backgrounds for the flatfish…was very helpful to play out ideas and possibilities, even when the animals weren't doing anything. Also, having visitors walk up and say 'what's going on?' was informative."

- A few respondents continue to worry that partners are more concerned about the mechanics of the interactives instead of the testing that is supposed to happen with visitors. One respondent noted that rapid prototyping has been successful during staff exchanges and wondered, "how can we capture that in the larger group meetings?"

- Many respondents found Ed Seidel's presentation helpful and interesting. These respondents said things like, "This was a great presentation, very, very interesting and [I] had not thought about it from that perspective before," and "I believe [his presentation] helped us come to some common understandings [about the different vocabulary used around interactivity]." One respondent thought that the Ed Seidel presentation did not present any new information and found it unimpressive. This respondent said, "Although the stop action software he brought was interesting to play with on the Turtle Tank, I think our down and dirty turtle ID drawings and questions were just as compelling and fostered deeper observation."

- There were also mixed feelings about the Gulf of Maine Research Institute tour. Several respondents thought the tour was inspiring and said that it was interesting to see how the Institute serves the student population. However, a few respondents said the tour was too long and were disappointed that "we did not get to go into any labs [or] see research happening. We saw no authentic science." Several respondents mentioned that they wished the Institute offered outdoor programs or that there was more connection to the outdoors in the programs, saying things like, "[I] also hope the kids get a good chunk of time outdoors by the waterfront or on the docks having experiences collecting water samples, or along the shore. [It] would be great for them to do some actual outdoor experiments."

JOURNAL 8: INQUIRY LEARNING WORKSHOP – MAY 2013

FINDINGS

Four respondents answered Journal Question 8; they represented all four institutions. There were no formal questions presented to participants, but they were asked to reflect on their experiences. The summary below synthesizes all the responses.

- Most respondents felt that the inquiry learning workshop was beneficial, with one respondent who did not attend reporting that she/he received "rave reviews from the staff members who did attend."

- Most respondents felt that Karen Worth's facilitation and guidance was "invaluable" and that she "challenged the group in a way no one has before and that they [the group], too, were able to challenge each other and her." Additionally, Karen was able to guide the group to an understanding of the goal of each exhibit, specifically whether an exhibit was to share a message or if it was to promote exploration and play.

- A few respondents reflected on Karen's use of the "Salad Dressing Activity." These respondents felt that the activity was a good way to remind participants that they need to

"provide people with opportunities [to] explore what they are interested in and for them to be able to make meaning."

♦ When talking about the animal engagement activity called Eat, Sleep, Play, a few respondents said that the activity was something that kids could "relate to and apply to themselves, the animals at EcoTarium, and their pets." Because of this, respondents felt that there was an impressive level of engagement at the activity.

♦ When talking about the storm water run-off activity, a few respondents felt that it was a good experience because it was a more challenging concept to test. Additionally, these respondents talked about the fact that the activity led to a productive discussion with Karen about developing open-ended experiences when there is a specific message to convey.

♦ One respondent talked about the Executive Directors conference call that took place on Friday. She/he felt that the conversation was "highly productive" and "covered many important bases."

JOURNAL 9: STAFF EXCHANGE EXPERIENCES – JULY AND AUGUST 2013

QUESTIONS

♦ What was the most useful aspect (or most important take-away) of your time during the staff exchange?

♦ What questions did the exchange raise for you?

♦ In what way, if any, did the exchange help you get more hands-on experience with formative evaluation?

♦ What further questions do you have about formative evaluation?

♦ How, if at all, did the staff exchange inform your thinking about what constitutes "interactivity?"

♦ Based on the exchange, do you have any thoughts/suggestions for the November workshop?

FINDINGS

Three respondents answered Journal Question 9; they represented all institutions except EcoTarium. Respondents did not answer all of the questions, but gave responses to the questions they felt most applied to their individual experiences. The summary below synthesizes all the responses.

♦ All respondents answered the first question, "What was the most useful aspect (or most important take-away) of your time during the staff exchange?" A couple of respondents talked about the time to focus their attention elsewhere and explore ideas—including issues or challenges shared with the exchange institution. A couple of respondents also talked about the useful conversations that happen during staff exchanges and the opportunity to receive outside feedback. One respondent talked about the chance to "just take the time to try it [an activity] out without lots of risk," saying that the staff exchange offered permission and support to "make the change to the exhibit that you have talked about" and other rapid testing ideas.

♦ All respondents talked about the questions the exchange raised for them. A couple of respondents said the exchange raised practical questions about how to handle problems

within their own institutions, having to do with the visitor experience (e.g., "how to keep older kids out of pre-school areas and how to keep younger kids out of areas designed for kids and adults?") or with the way exhibit work is completed by the staff (e.g., "How can I restructure exhibit work to engage more staff without them feeling like it is pulling them away from something else?"). A couple also mentioned questions or concerns about the collaboration as a whole, such as better understanding of "the misconceptions about staff and leadership dynamics at each partner institution," or "How can we use our EEC colleagues for more informal evaluation practice?"

♦ Two respondents got more hands-on experience with formative evaluation as a result of the staff exchange and both of these respondents reported learning new things. One respondent talked about the challenges associated with formative evaluation, specifically determining how many visitors to involve, and the importance and challenge of remaining objective when reporting and talking about findings. One respondent reported having a positive experience testing adult and child content focused on the same topic, which allowed visitors to learn similar concepts at an age-appropriate level.

♦ Respondents' questions about formative evaluation reflected their experience with the process. One respondent wanted to know more about how to be unbiased in reporting, how to encourage visitors to participate, and how many visitors are enough to consider a prototype "tested." Another respondent wondered if it was possible to embed the tools of formative evaluation (e.g., counters, cameras, etc.) into the exhibits so that the evaluation process did not have to be separate from the exhibit process.

♦ One respondent noted that interactivity does not always lead to understanding or inquiry, saying, "little kids sometimes just enjoy pouring water over and over again." Another respondent noted, "The group as a whole is coming closer together on what it means to have an interactive exhibit." A third respondent said that the interactive idea was not central to the original intent of the activity, but it "seemed visually compelling and engaging for younger kids." This respondent went on to state, "If I'm curious about an idea, will others be too? Test it!"

♦ All respondents offered ideas for the November workshop, with many of these ideas focused on continued work in evaluation and peer feedback.

JOURNAL 10: JUICY QUESTIONS WORKSHOP – SEPTEMBER 2013

QUESTIONS

♦ What did you learn? What surprised/delighted/inspired/frustrated you? Has the workshop caused you to rethink your approach to some aspect of your work?

FINDINGS

Four respondents answered Journal Question 10; they represented all institutions except for EcoTarium. Respondents did not answer all of the questions, but gave responses to the questions they felt most applied to their individual experiences. The summary below synthesizes all the responses.

♦ All respondents talked about the Juicy Questions and Active Prolonged Engagement (APE) exhibits. The respondents had positive experiences with the Juicy Questions and APE testing that they did in the exhibit space, although one respondent remained skeptical that Juicy Questions would work on the museum floor, saying, "I still think that

for the Juicy Question to work, it would have to be a facilitated activity via floor staff." Other respondents reflected on their individual experiences, with one respondent saying, "It was fascinating to see how well the [Juicy Question] process worked for my group at the fog table and how it did not work so well at the light table." Respondents found the time spent discussing Juicy Questions and APE particularly helpful, although one of these respondents wished there had been more tips provided for evaluating APE exhibits.

♦ A couple of respondents talked about the benefits of having the leadership from all four collaborating institutions in attendance at the meeting. One respondent said, "[The] building of a more sustainable model of dissemination and capacity-building requires leadership investment and real participation." Another respondent said, "I'd like to see some Director time built in to every workshop."

♦ One respondent talked about the benefit of having other staff in attendance, saying, "I think it was important for them to hear and see [and] talk with other staff from other institutions and their approach to [the] learning and exploration process…More staff with first-hand sharing of ideas with other collaborators is super important, [it takes] the primary project person out of the role of the filter for new information."

♦ One respondent reflected on the positive experience working with staff from the Exploratorium and said that it was important for every workshop to involve "at least one outside presenter so that we are less insular in our approach."

♦ One respondent talked about the importance of well-developed prototypes for use in testing situations, praising the two prototypes that were used in this workshop. This respondent said, "The staff members who presented the prototypes were truly invested in the prototypes and sincerely appreciated the feedback."

JOURNAL 11: LEARNING READINESS WORKSHOP – NOVEMBER 2013

FINDINGS

Nine respondents answered Journal Question 11; they represented all four institutions. There were no formal questions presented to participants, but they were asked to reflect on their experiences. The summary below synthesizes all the responses.

♦ Many respondents talked about the fact that, despite the differences between the institutions, there are always similarities in both the work and the challenges. One respondent said, "No longer are institutions say[ing], 'I admire what you are doing, but we could never do that.' People seem to [be] seeking ways to fit successful models from one organization into their own." A few respondents also talked about lessons they have learned from other Exhibit Lab partners. For example, one respondent said, "We spent a chunk of time talking about evaluation for ECHO. This was a very insightful portion of our meeting because it gave me ideas and resources for polling volunteer staff here at TDM."

♦ Several respondents talked about the partnership between ECHO and the local YMCA. Respondents found the discussion about the preschool program to be enlightening. One respondent said, "I liked expanding our discussion to include ECHO's community partner, the YMCA. I found it refreshing to bring two very professional but very different groups together to talk about how we approach working with preschoolers and

their care givers in different ways, but all want to provide the very best experience to create healthy and happy children."

♦ Several respondents talked about their experience observing and brainstorming in the Action Lab exhibit space. These respondents felt that they were able to come up with strong, useful ideas that could also be used at other institutions or other exhibit elements. One respondent said, "Brainstorming takes time—the larger block of time was essential to moving forward from generally good ideas to more in-depth ideas which were both things we could actually try and that also asked bigger questions."

♦ There were a few respondents who were participating in their first Exhibit Lab workshop. Although these respondents had positive experiences, they also said it was challenging to contribute because they lacked the background information on many of the projects being discussed. For example, one respondent said, "I learned a lot in a very short amount of time, [but] my big regret was that I didn't feel that I could contribute much to the group because I felt that I was playing catch-up for most of the session."

♦ A few respondents who had participated in multiple workshops reflected on the benefits of including new people and outside staff in the discussions that happen. For example, one respondent said, "Having a core group of 'regulars' brings continuity and momentum to the process. Having a group of new people forces the regulars to not make assumptions, and to reach out and articulate more fully what we're trying to do." Another respondent commented that it was great to have outside staff present their work and not just attend the meeting.

♦ A few respondents talked about the changes in the collaboration between cycle one and cycle two and continued struggles the institutions are facing. Overall, these respondents liked the fact that the workshops now focus on projects at the host museum, with one respondent commenting, "every time, we end up finding that the host museum's project(s) parallels something we're doing." Two respondents talked about the fact that collaboration is now more "second nature" and participants are more comfortable reaching out to each other. In fact, the Exhibit Lab collaboration has lead to other collaborations between the partner institutions. One respondent commented that three of the four directors were more fully engaged in the process in the second cycle, which "always translates into forward momentum for their organizations in the months following the meetings." Another respondent noted, "[we are] still struggling with how we can implement a strong dissemination program with our staff…"

♦ A few respondents talked about the idea of layering content to better appeal to a variety of age ranges. This respondent also noted, "It will likely be impossible to have every exhibit accessible to multiple age groups," and said that it was important to think about the best method for delivering varied content.

REFLECTIONS: UNEXPECTED OUTCOMES

QUESTION

♦ What have been unexpected outcomes of the Exhibit Lab project?

FINDINGS

Many Exhibit Lab partners attended the IMLS convening in Denver in September 2013. As a result of this meeting, the partners realized that unexpected outcomes of the collaboration might be

missed by the evaluation. Nine respondents submitted reflections; they represented all institutions except the CMTM.

- ♦ Many respondents talked about aspects of the staff exchanges as being unexpected outcomes of the collaboration. These unexpected outcomes included the realization that the staff exchanges provided an "information resource," an opportunity to consider and test new ideas, and the ability for staff exchanges to "spill over into other projects." Additionally, one respondent said, "The staff exchanges seem to have given us all confidence in our knowledge and perspective."

- ♦ Many respondents talked about the positive and productive experiences they had with prototyping. Several of these respondents were surprised about how much they learned prototyping on the floor of other institutions. For example, one respondent said, "Prototyping on the floor of museums that aren't yours is really powerful. You get to see how their exhibits are created [and] you can look at their results without the bias that you have in your own institution." A few respondents also talked about the fact that a culture of prototyping has taken hold at their institutions, in weekly events such as "Try it out Tuesday," or in the use of prototyping in departments as diverse as marketing and education.

- ♦ Many respondents also talked about the peer support system that the collaboration afforded, often reflecting on their personal experiences as well as experiences they had seen between other peers. A few of these respondents talked about how this support extended beyond the Exhibit Lab project work, saying things like, "ECHO and the director at CMTM [talked] about human resources issues at small museums…because small museums do not have H.R. departments to help facilitate discussions or awareness." Additionally, participants were able to support their peers because they were more connected. One respondent reflected, "We've all become each other's feelers into the world, if we see something that pertains to what someone else is working on."

- ♦ Several respondents talked about finding unexpected similarities and gaining a greater understanding of different institutional cultures through the collaboration, saying things like, "The commonalities of institutional size which relates to staffing structures and resources, and influences problem types we encounter, has been a powerful and uniting commonality." Also, this greater understanding allowed partners to "brainstorm ways to get around [budget and staff] challenges [that are shared by the institutions]."

- ♦ A few respondents said that the collaboration offered a safe space in which to take risks and try new things at their museums, saying things like, "[it] provided the culture to experiment." Some of this stemmed from the fact that "others [were] trying things that are challenging [and] sharing honestly about difficulties and failures," which made it easier for other museums to try risky things.

- ♦ A few respondents spoke about idiosyncratic benefits specific to their role or their institution. For example, a partner from EcoTarium said that due to the museum's involvement in the Exhibit Lab collaboration, they have been able to receive additional grant funds from NSF to work with other collaborations. One respondent said that the collaboration has allowed him/her to combine experience in exhibits and programs, saying, "the combination of skills could be invaluable to an institution, but you tend to get classified." One respondent expressed deeper appreciation for the facilities at his/her institution.

APPENDIX B: ENVIRONMENTAL SCANS

Format for Self-Assessment (a.k.a. Environmental Scan)
Post-Project Assessment 2014

Please follow the same format as the first Assessment, with the same staff (individuals and functions) as possible. These were the instructions:

Step One: Key grant personnel from each site should answer the set of Institutional Questions below – just one set of answers per institution. These pertain to assessing the overall exhibits at the institution. We are assuming key personnel have a basic knowledge of the key ideas (family learning, formative evaluation, open ended and phenomena based interactive exhibits) – but we could still supply background info if need be.

Step Two: Each museum holds a meeting that includes any standing exhibit committees, or all people likely to be connected to exhibit and program development, facilitated by the key personnel. Have everyone at the meeting (including the key personnel) fill out the Individual Questions regarding their comfort and use of with family learning, evaluation, prototyping and open-ended investigations.

Step Three: *At the same meeting,* facilitate a discussion using the Discussion Questions below. Record good quotes as verbatim as possible so we can potentially use them in the grant. Use the results from your first assessment discussion to help the group discuss the impact or lack thereof of the project. How did this project help address – or not address – the barriers that the group identified in the first assessment?