

ALL TOGETHER NOW: USING CROSS-DEPARTMENTAL COLLABORATION TO ARTICULATE, ACHIEVE, AND MEASURE IMPACT AT THE NORTH CAROLINA MUSEUM OF NATURAL SCIENCES

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BACKGROUND

The Nature Research Center (NRC), an 80,000 square foot “public laboratory,” opened at the North Carolina Museum of Natural Sciences (NCMNS) in 2012. This new wing boldly places working research labs in the public space of the museum, separated from visitors only by glass walls. The NRC was designed, staffed, and programmed to connect visitors to the science going on in the museum. In its first year, the NRC attracted 1.2 million visitors, making NCMNS the most visited cultural attraction in North Carolina. In 2015, the museum was awarded an IMLS grant to conduct evaluation and measure the impact of the NRC on its visitors.

Upon being awarded the IMLS grant, the NCMNS found itself wanting to measure the impact of the NRC, but without unity or agreement about what larger impact they were trying to achieve. It wasn’t that the museum lacked specific objectives for visitor experiences. Staff had articulated that the overarching purpose of the NRC was to connect visitors with current science research and scientists, and they had created visitor outcomes and indicators for discrete elements of the NRC, including individual exhibits and programs. An early round of evaluation showed that visitors were taking away key messages from and distinctions about individual exhibits and programs; however, they were having trouble finding one singular idea that connected the various experiences across the NRC, other than they are “about science” (Sickler 2013:17). In short, the individual exhibits and programs had not been designed to communicate any one singular institutional message; museum staff had never articulated what about science they wanted the experiences to convey. In 2016, Randi Korn & Associates (RK&A) was hired to conduct evaluation, and through early planning conversations it became clear that staff across departments needed to work together to articulate a unified vision of the NRC’s intended impact before they could expect to achieve it, much less measure it.

Without a clear notion of what the museum intends, evaluation is a moot point – Randi Korn Intentional Practice for Museums pg. xix

But articulating, and achieving, desired impact is not a simple task. If impact is to be achieved (and demonstrated through evaluation) at an organizational level, articulating what impact means cannot be done by one individual or even one small group of individuals. It takes collective action across an institution. As noted by Peter Senge, who popularized the concept of the learning organization in his book *The Fifth Discipline* (2006), the process of developing a shared vision from within is essential to cultivating commitment, enthusiasm, and a genuine desire to move an organization forward among its staff. Creating a shared vision about impact, or “learning to see the whole together” (Senge, 2006), comes from the process of inviting many voices to the table, listening, and clarifying ideas toward identifying and achieving an organization’s intended impact. Importantly, throughout the participatory process, “...as people talk, the vision grows clearer. As the concepts become clearer, enthusiasm for its benefits grow” (Senge, 2006).

The process of articulating, achieving, and measuring impact is best accomplished when staff convene to discuss these matters, and to allow many voices and professional perspectives to inform the process and work. Remarkably, through such discussions, debates, disagreements, and in-depth conversations, one voice emerges. NCMNS found this to be true as staff came together across departments to systematically articulate impact focused on the overall visitor experience rather than individual initiatives or objectives. Ultimately, the process of collaboratively developing a single impact statement for the NRC allowed the museum to articulate what all staff—old and new, from every different section of NCMNS—agreed to be the intended impact of the NRC. The process also created staff support for using this shared definition of impact and related goals as a guiding framework for future program and exhibit development because it was created by staff across

the museum, rather than passed down from leadership “fait accompli.”

COLLABORATIVELY ARTICULATING IMPACT

When staff first came together to determine next steps around articulating and measuring impact, it was clear that the various museum departments were mostly operating in isolation and that they lacked a unifying purpose for the NRC. Across departments, staff, many of whom had been recently hired specifically to work in the NRC, had their own distinct responsibilities and unique challenges. They were not necessarily working together strategically to solve problems or improve efficiency across the NRC. This phenomenon, often referred to as working in silos, is by no means unique to NCMNS, museums, or any organization. In fact, silos is a word used so often that it has become trite¹.

Developing an institution-wide impact statement that would inspire and guide staff from all disciplines would require buy-in from all staff. NCMNS formed an interdisciplinary core team comprised of five staff that would work together throughout the process. Team members were selected to represent different Museum and NRC functions, including museum leadership, research and collections, exhibitions, digital media, and community engagement. The core team had two jobs: facilitate interdisciplinary collaboration outside of the evaluation workshops and serve as advocates for the project and continued interdisciplinary work.

The work included four planning workshops over 18-months with NCMNS staff, developing a Framework that included an impact statement [see textbox], and identifying target audiences and associated intended visitor experience outcomes for different audiences. A group of about 25 staff, including the core team, participated in all the workshops. The staff represented a range of departments (exhibits, education, research, visitor services) and all staff levels. The workshops infused collaborative work among staff in different departments throughout the process. To that end, the evaluator requested that the core team assign staff into small interdisciplinary working-groups for each workshop. Workshop attendees had assigned seating to ensure that they worked across disciplines and friendships, forming new collaborative relationships with other colleagues they might not otherwise have worked with.

As a result of these workshops, the NRC and evaluator developed a rich, dynamic Impact Framework that reflected the varying perspectives of staff across different departments. NRC staff across the museum felt invested in the work of the museum because they were a part of the

development of the Impact Framework and saw their ideas reflected and prioritized in this document. And, perhaps most importantly for lasting collaboration at an organization, the process of collaborative thinking takes practice, and the structured interdisciplinary workshops served to help staff start a new way of working – collaboratively across disciplines – which museum leadership wanted to foster.

NRC IMPACT STATEMENT

AUDIENCES APPRECIATE THE PROCESS THAT SCIENTISTS USE TO STUDY OUR WORLD—PAST, PRESENT, AND FUTURE—AND CONTEMPLATE THE COUNTLESS WAYS THEY CAN ENGAGE WITH OTHERS IN THE SCIENTIFIC ENTERPRISE.

MEASURING IMPACT USING THE IMPACT FRAMEWORK

After the workshops, with the new Impact Framework in hand, NCMNS was ready for the actual evaluation. Two rounds of evaluation focused on understanding the extent to which the NRC achieved intended outcomes for two key audiences as identified in the Impact Framework—adult learners and middle school aged children. The evaluations used a mix of in-depth interviews, focused observations of walk-in visitors with seven specific exhibits or programs, and exit interviews about the overall visitor experience in the NRC. After collecting and analyzing the data, the evaluator and NCMNS facilitated a reflection workshop to discuss project findings and their implications.

The outcomes and indicators co-created by staff across the NRC in the Impact Framework guided the two rounds for evaluation. Outcome achievement for the programs and exhibits evaluated are presented in the heatmap on page 8 by audience. Evaluation data suggested high achievement of outcomes related to comfort, accessibility, and excitement about science and scientists. For example, both adults and children were visibly excited to observe live animals and ask scientists questions about their work with animals. Other outcomes—for example, seeing the relevance of science to daily life—could continue to be strengthened to help visitors make a deeper connection to why science and scientific research is important and how it affects them.

The NRC has taken the results of the evaluations and begun to apply changes to programming and exhibits across the museum, using the Impact Framework as a guidepost for planning for intended impact. For example, the NRC has actively used the target audiences and outcomes from

NCMNS-NRC IMPACT FRAMEWORK OUTCOME ACHIEVEMENT

Impact statement: Audiences appreciate the process that scientists use to study our world—past, present, and future—and contemplate the countless ways they can engage with others in the scientific enterprise.

EXHIBIT/PROGRAM	OVERALL NRC EXPERIENCE	INTRO TO BIODIVERSITY LAB PROTOTYPE*	LIVE ANIMALS	SKULL CART	DAILY PLANET	PALEO LAB	ASTRONOMY LAB VIDEO	WINDOWS ON RESEARCH
ADULT OUTCOMES								
Feel comfortable with scientists and science content	High	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Not Applicable
See the relevance of science to their daily lives	Moderate	Moderate	Moderate	Low	Moderate	Not Applicable	Low	Not Applicable
Have an increased appreciation for the interdependence of nature and humanity	Moderate	Not Applicable	Moderate	Moderate	High	Not Applicable	Not Applicable	Not Applicable
Develop critical thinking skills to take action and make decisions based on an understanding of scientific evidence	Moderate	Not Applicable	Not Applicable	High	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Participate in opportunities to do science	Not Applicable	High	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
MIDDLE SCHOOL AGE CHILDREN OUTCOMES								
Perceive science and scientists as exciting, fun, and accessible	High	Moderate	Moderate	High	Moderate	High	Moderate	Moderate
Perceive science as a cool way to explore a personal interest in something not known	Moderate	Moderate	Moderate	Moderate	Moderate	Not Applicable	High	Moderate
See the relevance of science to their daily lives	High	Moderate	Moderate	Moderate	Moderate	Not Applicable	Not Applicable	Not Applicable
Appreciate important scientific concepts	Moderate	Not Applicable	Moderate	Moderate	Not Applicable	Moderate	Not Applicable	Moderate
Become aware that a career in science may be relevant to common societal issues / questions	Moderate	Moderate	Moderate	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

*Potential for outcome achievement based on prototype

Key:	 High Achievement	 Moderate Achievement	 Low Achievement	 Not Applicable
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the Impact Framework to support focused, consistent messaging across the entire institution. For example, staff are using the Impact Framework when conceiving, discussing, and building new exhibits and programs. Significantly, staff discussions of “consistent messaging” have led, in part, to rewriting the Museum’s mission statement to be more action- and conservation-oriented.

MAKING THE CASE: COLLABORATIVELY ARTICULATING IMPACT

While there were many high points in the process, there were also challenges to using an interdisciplinary and collaborative approach to achieve impact. True collaboration is a process that takes time, and it can be hard to sustain enthusiasm for a project over the long-term. Staff get busy with other projects between the collaborative workshops, and making time for continuing collaboration may become

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NRC MISSION STATEMENT BEFORE IMPACT STATEMENT

To illuminate the interdependence of nature and humanity

NRC MISSION STATEMENT AFTER IMPACT STATEMENT

To illuminate the natural world and inspire its conservation

less of a priority over time as people resume prior working styles. Moreover, collaboration means that sometimes staff have to participate in conversations that don’t feel immediately relevant to their work. For example, one

research and collections staff pointed out:
There were just parts that weren't directly related to me. It was related to other parts of the NRC, which are great, and I enjoyed participating to some extent, but some of it was irrelevant to me, too.

-Anonymous staff

Stepping away from the busyness of day-to-day responsibilities and devoting time to conversations with colleagues about the larger impacts the museum wants to achieve required a difficult intellectual shift. However, those inclusive conversations were critical for building a vision that reflected the diverse perspectives of staff across departments. Through practice, staff and leadership began to understand and internalize the value of collaboration to achieving institutional impact. As one staff reflected:

Overall the most positive thing for me was the chance to step away from the humdrum of the day and really dive deep into why we're here basically. If I could put it in a nutshell, why are we here and doing what we do? It was really fulfilling to hear so many of my colleagues put their particular spin on it, from their perspective, and then to come to some sort of consensus.

- Anonymous staff

CONCLUSION

Now that the project has ended, NCMNS is working intentionally to ensure that it continues exercising its collaborative muscles. Indeed, the Museum staff have already used this experience as a model for subsequent inclusive discussions related to the formulation of an institutional code of ethics, the enhancement of the total visitor experience, and the process of reaccreditation from the

American Alliance of Museums. The value and necessity of collaborative, cross-sectional discussions have become woven into the fabric of NCMNS such that any considerations of Museum-wide initiatives automatically start with the understanding that a collaborative process will be fundamental. Ultimately, this has created a culture shared among NCMNS staff in which all staff members have a voice in the institution.

FOOTNOTE

1. It is especially a feature of organizations with different highly trained/educated professionals from different professions working on highly specialized work – many museums, especially those that hold collections and house research, are particularly prone to silo-ization because each professional group works under different professional cannons of excellence

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Senge, Peter M. *The Fifth Discipline*. London: Random House Business, 2006.

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Figure 1-3, Left to Right.

1. Visitors talk with paleontologists working in the lab through a two-way microphone. Photo credit Katie Chandler.
2. Visitors watch as scientists perform a procedure in the Windows on Animal Health lab. Photo credit Karen Swain and NCMNS.
3. Evaluator leads workshop about achieving impact with staff from departments across the museum. Photo credit Wendy Lovelady.