Inspiring Planet-Savvy Citizens

Evaluation as a Tool for Organizational and Social Change
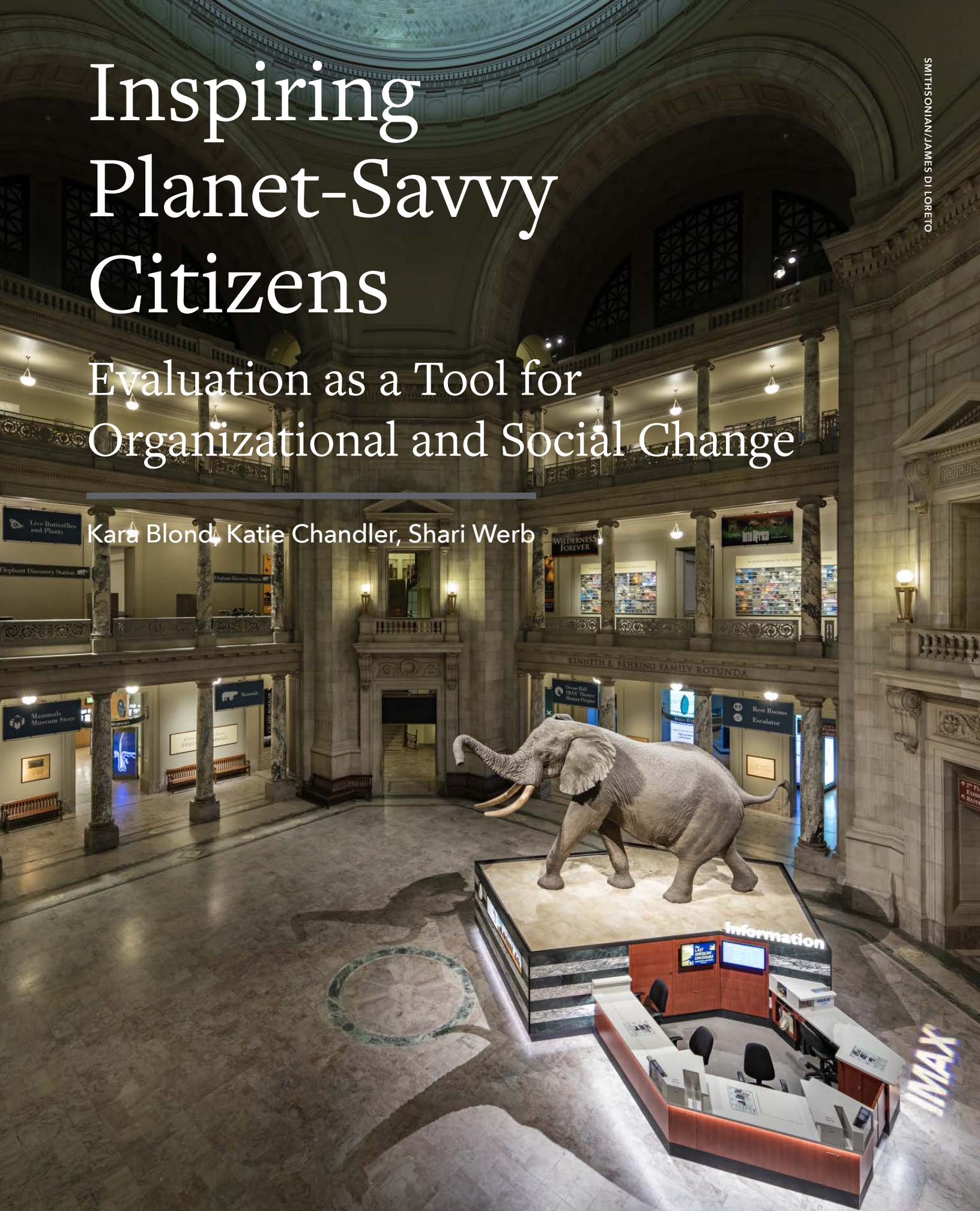
Kara Blond, Katie Chandler, Shari Werb

fig. 1. (left)

Interior view of the Smithsonian's National Museum of Natural History, showing the iconic African Elephant featured in the Rotunda.

fig. 2. (right)

Exterior view of the Smithsonian's National Museum of Natural History.

Exhibitions and public experiences at the Smithsonian's National Museum of Natural History (NMNH) are designed to help our visitors celebrate and explore the natural world – with the goal of fostering more curious and savvy citizens of the planet.

For natural history museums, communicating about the causes and effects of our changing Earth is deeply central to our mission, and our offerings increasingly focus on the interplay between people and the environment. To that end, we actively work to convey complex and sometimes controversial ideas about climate change, ocean sustainability, shifting baselines, and personal stewardship. Our organization is committed to constantly improving how we present and interpret the science of these challenging issues to make them relevant and actionable for our visitors.

As part of our most recent strategic planning process, we reflected on how to become a dynamic natural history museum for 21st-century audiences – not only inviting visitors to explore the wonders of the natural and cultural world, but also establishing an active learning environment to help visitors engage with science and grapple with the global challenges of our time. To do this effectively means that the museum must operate as a learning organization[1] – conducting ongoing research and evaluation to better understand our visitors; sharing information, approaches, and practices across departments; and encouraging conversation and participation to inform future projects.

The National Museum of Natural History occupies a unique place among museums. It is part of the Smithsonian Institution, a massive museum and research complex located in the heart of the nation's capital. Our main building on the National Mall (figs. 1 & 2) is the size of 18 football fields, and houses a complex staffing ecosystem of over 1,000 staff with expertise across biology, geology and the cultural sciences, collections management, public engagement and museum operations.

1   We apply systems scientist Peter Senge's definition of a "learning organization" as "organizations where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together." Peter M. Senge, *The Fifth Discipline: The Art & Practice of the Learning Organization* (New York: Doubleday, 1990), 3.

Over the years, evaluation has played a key role at the NMNH. We've used evaluation to understand how visitors experience, understand, and connect (or do not connect) with the complex concepts and themes we present and how visitors relate these concepts to pressing contemporary issues. While our evaluation reports provide useful feedback about individual exhibitions or experiences, our team realized that we were not able to easily compare findings across projects or understand whether those findings tied to broader institutional goals.

For natural history museums, communicating about the causes and effects of our changing Earth is deeply central to our mission....

In 2016, the museum's public engagement team partnered with Randi Korn & Associates (RK&A), a firm specializing in museum planning and evaluation, to analyze a suite of evaluation reports from the past decade. Our joint goal was clear: create a pathway toward becoming a learning organization by using data to build the institution's accumulated knowledge base and ultimately strengthen visitor engagement. We believe that what we learned will be relevant to any institution, but particularly those who, like us, are seeking to understand how to convey important contemporary issues most effectively in order to inspire more enlightened and engaged stewards of our planet.

Background

This project built on an integrated "Evaluation Framework for Public Offerings," an internal set of guidelines developed in partnership with museum consultant Mary Ellen Munley in 2009 that established key areas for evaluation across exhibitions, programs, and websites. At the time, our goal was to build a culture of evaluation and prepare to measure the museum's public value by looking at four basic indicators of impact: scale, trust, engagement, and influence.[2] In an effort to deepen our understanding of visitors' experiences in exhibitions over the past 10 years, we examined past evaluation reports across these categories. We wanted to identify common themes and gaps in our knowledge.

The meta-analysis focused on 16 exhibition evaluation studies and three audience research studies, including responses from thousands of visitors to NMNH over the past decade. As we reviewed these studies, we quickly realized that our evaluation approaches were inconsistent; some studies were more rigorous than others and few explained whether findings supported the organization's higher-level goals. So, we set out to compare project results where feasible, distill key findings across reports, and contextualize findings with broader institutional goals – all in an effort to synthesize our learning and apply it to future public offerings, particularly around the themes of our changing planet.

In addition to the meta-analysis, we wanted to develop an evaluation-reporting tool to streamline our analyses in the future. This reporting tool would define standardized metrics to be gathered by future evaluators, track new evaluation findings, allow for

2   *Scale* refers to NMNH's ability to reach broad local, national, and global audiences through its education offerings. *Trust* refers to the extent to which visitors in NMNH's education offerings consider the museum to be a trustworthy source of information. *Engagement* refers to NMNH's ability to engage visitors in understanding the world and their place in it through dynamic offerings. *Influence* refers to NMNH's ability to affect change in visitors (e.g., feeling more connected to the natural world and its cultural diversity).

comparisons across projects, and contextualize findings within NMNH's larger goals. It would also enable the museum to consistently measure results of critical exhibition content and explore its impact on visitor attitudes and engagement over time.

Steps for Analysis

Our approach to the meta-analysis focused on three central steps, as described here. We hope others find our thinking and strategy applicable to their own projects. If your organization aspires to build a culture of evaluation, these three steps will help you lay the groundwork for success. In particular, pay close attention to the first step, as without clearly articulating the intended visitor experience, evaluation and the remaining two points will be moot. Planning and evaluation are linked, and focused planning with clarity about what you want to achieve vis-à-vis the visitor experience will provide a starting point for any evaluation that might follow.[3]

1. Carefully consider and articulate the visitor experience goals for the project and use them to inform decision-making and evaluate impact. As with any large undertaking, individual stakeholders (e.g. the executive board, department heads, department staff, etc.) may have different ideas about project goals. We develop a "Statement of Purpose" document at the start of every exhibition project that lays out target audiences, experience goals and learning outcomes, and key messages. That provides a guidepost during development, and creates the targets against which we can evaluate our success. For the meta-analysis, clarifying project goals with a core team of stakeholders

3   For information about how to conduct evaluations, see: Judy Diamond, Michael Horn, and David Uttal, *Practical Evaluation Guide: Tools for Museums and Other Informal Education Settings* (New York: AltaMira Press, 2009).

from across the museum was essential to focus and prioritize efforts and improve future usability. The framework for analyzing the evaluation reports evolved over time as we revisited the goals of the project and continued to clarify what we wanted to learn from the process and study.

2. Identify criteria to vet the evaluations and build broad credibility. In addition to creating a framework for understanding past evaluations and building institutional knowledge, an underlying goal for the meta-analysis was to demonstrate to all of NMNH (beyond the exhibits and education departments) that evaluation is a useful, scientific, and rigorous tool that can inform our future public-oriented work. Therefore, we identified baseline criteria to help us select only evaluation reports that met our requirements for rigor. We would apply these criteria to plan for more consistent, rigorous studies in the future. For example:

- Evaluations must have employed systematic and professionally recognized sampling, evaluation, and research protocols that are clearly explained in the written report.

- Small-scale or casual "explorations" of an exhibition or exhibit component were excluded (e.g., casual conversations with a small sample of visitors), as were reports where methodological descriptions, though present, were unclear. While exploratory studies can be useful to answer very specific questions, they lacked the rigor to support the larger goals of this project.

3. Create a framework to guide analysis based on key institutional goals. We situated our meta-analysis within the context of the existing "Evaluation Framework for Public

Offerings" and the museum's strategic plan and core messages. These documents served as a starting point to clarify and refine the ideas and visitor experience outcomes that were most important to the museum. From there, we developed a new framework that would become our analytic lens, centered on four main categories – Audience, Content, Components, and Influence. We placed the most emphasis on the Influence category because it focuses on identifying intended visitor experience outcomes for exhibitions or programs at NMNH, some of which include:

- Audiences have a deeper understanding of themselves, their place in time, and the relevance of natural history to their everyday lives.

- Audiences consider a new perspective or question their views about the ideas and information presented.

- Audiences become more involved in, and share ideas about, preserving and sustaining the diverse natural and cultural world.

- Audiences say they will change their behavior after their visit.

With our outcomes in mind, we developed a template to summarize each evaluation report to capture key information and outcomes. The template also laid the groundwork for the updatable reporting tool for use in future evaluations.

Key Findings About Exhibitions

The exhibitions and public experiences we evaluated explore a range of topics intended to help visitors interpret our world and become stewards of our planet's future. Our analysis explored how particular subjects and

Visitors may be more likely to remember conservation messages when they identify specific actions they can take to make a difference.

presentation strategies connected with visitors' lives and inspired their curiosity. While these findings emerged from a review of NMNH evaluation reports, they may also apply to other museums:

- **Visitors seek museum experiences that tell a human story and help them make a personal connection.** Visitors need this "human" narrative to understand how natural history relates to environmental and social issues. For example, a photography exhibition about people displaced by natural disasters and the effects of climate change helped visitors realize the interrelationship of humans and the environment.

- **Visitors may be more likely to remember conservation messages when they identify specific actions they can take to make a difference.** The museum redesigned a gallery in its Ocean Hall and improved volunteer training to strengthen ocean conservation messages and focus on answering the questions "Why should I care?" and "What can I do?" A 2014 study found over two-thirds of visitors remembered at least one conservation message they saw or heard in the gallery, compared to just over one-half in an earlier study that took place before the redesign.

- **Many visitors say science is relevant to their daily lives, but they need help to find personal relevance in some exhibitions and programs.** Eighty percent of our visitors report that science is "very" or "extremely" relevant to their lives, but when asked a similar question during evaluations of specific exhibitions – for example, to what extent was this exhibition about the human genome relevant to you? – the percentage is far lower (50 percent or less). This indicates a need to provide visitors more guidance in how to connect complex or challenging science ideas to their own lived experiences.

Key Findings about the Evaluation Process

The meta-analysis also revealed important findings about NMNH evaluation methods and reporting – including gaps, inconsistencies, and areas for growth. The following findings were critical in shaping our approach to future evaluation. They are also relevant considerations for those who are just beginning to incorporate evaluation into their institution.

- **Align evaluation questions with museum-wide intended visitor experience outcomes.** We had hoped to analyze past evaluation reports in the context of outcomes that support high-level institutional goals, but discovered that past evaluations were most often guided by project-specific goals. Future NMNH evaluations will include questions that align with these museum-wide goals.

- **Clearly describe the exhibition's main messages and intended visitor experience outcomes in the evaluation report.** Listing an exhibition's goal(s) for intended visitor experience outcomes provides a clear gauge of success for the evaluator. It also provides important context about a project's intent to those outside the project and serves as a reminder to those who were involved in a project when reviewing a report several years later. Clearly presenting main messages and intended outcomes also makes it easier to identify common messages and goals across projects and to apply lessons learned to new projects.

- **Standardize data collection and reporting.** We found that many reports used slightly (and sometimes significantly) different categories to report demographic information and other common questions (such as measuring satisfaction, curiosity, behavior change or other impacts). Consistency is required to compare data across evaluations or examine demographic changes over time.

So What?

Each museum has its own challenges and opportunities given its unique organizational assets, culture, size, budget, and mission. By taking the opportunity to conduct a broad and deep analysis of findings from past evaluations and develop a framework for evaluating future public offerings, we have begun to look beyond individual exhibitions and programming to understand how we tell the fuller story of NMNH's core messages. For us, identifying our museum's largest-scale goals pushed us to measure each project against one or more of those goals, enabling us to see the ways in which we are moving the institution forward. Consider these opportunities for your own organization:

1. Position yourself as a learning organization by using evidence from evaluations as the platform for open conversations with colleagues about new projects. Ask questions, invite others to do the same, and build in reflection time to assess professional and organizational learning. If your evaluation data are lying dormant, explore what you might need to do to increase their relevance.

2. Provide outside evaluators (and internal evaluators) with tools and guidelines to create a consistent evaluation process across the whole institution, while leaving space for ingenuity and imagination for each situation.

3. Use evaluation metrics that align with overarching institutional themes to build a deep data set about exhibitions and associated programming that can inform new projects and enable comparative analysis across efforts.

4. Use the findings from your meta-analysis to provide context to exhibition team members at the start of projects, socializing your learning and developing shared responsibility for delivering information in audience-focused ways.

As museum professionals, we work to affect our audiences and inspire meaningful conversations about issues in the world today. We are serious about improving our processes and believe that intentionally and explicitly addressing our learning goals will increase the effectiveness of visitors' experiences. We look forward to using future evaluations to help us strengthen the clarity and urgency of our messaging – and increase our impact and capacity to motivate curious and planet-savvy citizens. ▮

Kara Blond is Assistant Director for Exhibitions, National Museum of Natural History, Washington, DC. kblond@gmail.com
Katie Chandler is Research Associate, Randi Korn & Associates, Alexandria, Virginia. chandler@randikorn.com
Shari Werb is Assistant Director for Education and Outreach, National Museum of Natural History. werbs@si.edu