

## Executive Summary: *Unseen Oceans* Exhibition Summative Evaluation

In 2018, the American Museum of Natural History opened a new temporary exhibition, *Unseen Oceans*. This exhibition sought to spark excitement about ocean exploration, spotlight the work of scientists, demonstrate the diversity of habitats within a vast ocean, and highlight the impact of human activities. Summative evaluation sought to answer five evaluation questions, in short: 1) How do visitors use the exhibition? 2) What do visitors learn from visiting the exhibition? 3) How do visitors respond affectively to the exhibition? 4) Who visits, why, and what do they like about the exhibition? 5) What parts of the experience do visitors share on social media?

The accompanying report presents complete results from an evaluation conducted by J. Sickler Consulting. The study used four methods and triangulated the results of each to draw larger conclusions about each of the evaluation questions. The study collected timing and tracking observations (n=100), exit interviews and questionnaires (n=117), focused observations and paired interviews at four focal elements (n=140), and coding of public Instagram posts (n=1,049 images). This summary highlights the study's cross-cutting conclusions.

**People were attracted to *Unseen Oceans* due to a general interest in the ocean; once inside, exhibition was highly successful by many metrics.**

Visitors came to the exhibition due to a general interest in oceans, and upon leaving, they responded very positively, with 81% rating their overall experience as "superior" or "excellent," higher than established benchmarks. The exhibition also excelled in terms of visitor use, with visitors spending a long time (average: 24 min.) and stopping at many elements (average: half of all elements). Metrics of use, such as Sweep Rate Index (267 sq-ft/min) and Diligent Visitors (45%), were also higher than field-wide benchmarks, indicating this was a very well-used exhibition.

***Unseen Oceans* was extremely engaging; visitors (families and adults) spent a long time exploring and stopped at many of the exhibit elements.**

As noted, the exhibition was very well-used by visitors, but the overall pattern of use suggested the possibility of "exhibit fatigue," as the most well-used elements were in the first three galleries, and visitors stopped less frequently in the second half of the exhibition. Families and adult groups each comprised about half of visitors in *Unseen Oceans*, and were similar to one another in terms of time spent and number of stops. The key differences were that families spent longer at interactive elements – ROV game, Sand Table, and the Encountering Giants film. Adult groups stopped at these areas at equal rates, but spent less time at each. In contrast, adult groups were more likely to stop at some text-based interpretive elements.

***Unseen Oceans* successfully communicated at least one of its main ideas to 90% visitors, although there was no single, strongest theme.**

The exhibition was successful at conveying its core sense of excitement about exploration. Visitors' top-of-mind learning focused on 1) facts learned about ocean animals, and 2) the idea of how much of the ocean is left to explore and discover. Other themes came up less often, but included human impacts on oceans and the work of scientists. Interestingly, when visitors were asked specifically about ocean zones and ocean exploration, over 60% could identify something specific they had learned on each topic; it was simply that those themes weren't top-of-mind for all visitors.

**Certain exhibit elements did particularly well in supporting visitor learning, including the Journey to the Deep film and ROV interactive game.**

Among the 61% of visitors who indicated that they learned something new about zones of the ocean, responses indicated that a lot of content came from the Journey to the Deep film. Similarly, among the focal elements that were studied in depth, the ROV interactive game was the most successful at supporting visitors in connecting with specific ideas. The study also highlighted that even in memorable and well-liked areas (such as the Secret Lives gallery), there was potential for the main message to get muddled when it was primarily interpreted via text. While some visitors discovered the idea of animal fluorescence, almost half of groups exiting that gallery weren't sure what it was about or actually misunderstood what it was trying to show.

There was great value in the atmospheric experience created; it was an immersive and peaceful space, while still cognitively stimulating.

In exploring the feelings visitors associated with the exhibition, there were both cognitive and affective responses. The ambiance, lighting, and content combined to make most visitors feel peaceful and/or inspired, in addition to feeling curious or informed. Within Encountering Giants, specifically, we saw that the film tended to prompt feelings of awe and amazement. Data also showed that a wide variety of elements were most memorable for visitors; one or two features did not dominate visitors' recall. Several lines of evidence suggested that highly atmospheric, immersive, and/or interactive elements are enjoyed and memorable. On social media, sharing gravitated toward the most "photogenic" elements; while this often aligned with what people recalled as memorable, in the case of the Going Deep gallery or Entry area, it was possible for an experience to be well-shared for visual appeal, but less frequently mentioned as memorable or a point of learning.

Families and adult groups both enjoyed, were engaged by, and learned in *Unseen Oceans*; but their areas of difference reveal trends in the experiences of each group-type.

Interactive and experiential elements were the areas that families used for longer and recalled as most memorable, including the ROV interactive game, the Sand Table, and both films. In Encountering Giants, some family groups (mainly with children under 5) used the film as an interactive, with children "interacting" by chasing, hitting, or jumping at the projection. These were also generally among the least text-based elements in *Unseen Oceans*.

Adult groups, in contrast, were more drawn to information-based elements than families. They were more likely to find Mysterious Drifters, the Fishnado, or Meet the Scientists as memorable, and they were more likely to stop at several text-based elements, including Meet the Scientists areas. Aligned with this, adult groups were significantly more likely to report an on-topic takeaway and to be able to describe specific learning about ocean exploration and research (79% compared to 43% of family groups).

## Implications & Next Steps

Based on the findings and consideration of results with the AMNH team, several insights were gleaned to inform future directions.

- **Consider including fewer elements in an exhibition in order to increase how much the average visitor sees.** Evidence suggests that fewer, more compelling exhibit elements can increase the proportion of "diligent visitors."
- **Open-ended play spaces are attractive for young children; open-ended questions in signage can help direct play.** Focused testing of the Sand Table revealed that simple prompts on signs would not constrain visitors who wanted free play, but could draw out focused conversation among those interested
- **Continue to create opportunities for learning by doing or experiencing, rather than relying on learning through reading.** Evidence indicated that the ROV game and Journey to the Deep film were particularly effective at communicating their key ideas, especially among visitors who spend less time with labels.
- **Consider using formative testing to identify areas of potential misunderstanding of visual elements that are difficult to predict.** There were two unexpected misinterpretations (about the Fishnado and the Styrofoam cups) that would have been difficult to predict. Early testing may help identify these in advance to consider ways to mitigate wrong assumptions.
- **There is value in creating immersive experiences for visitors; they are enjoyable, memorable, and can prompt learning.** This exhibition's blend of lighting, music, design features, interactive games, free play spaces, and media components created a variety of opportunities to be immersed.
- **Consider setting targets about how to define success for any exhibition.** This exhibition achieved its own balance of outcomes in engagement, learning, and affective experience. By establishing targets suited to each exhibition at the outset, it may aid intentional design.