

Branding the Ocean: How Innovative Collaborations Can Enhance Public Engagement and Ocean Exploration

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Vision Statement

By 2032, ocean exploration will inspire the public through a variety of mediums, to communicate a cohesive value proposition that increases visibility and support for the ocean exploration community.

Introduction

The last decade has brought tremendous change to all aspects of human life. Science and technology have advanced our ability to explore, communicate, and learn in new ways. Today's youth exemplify this pivot toward engaged and empowered citizens, using new tools to connect to the broader world, amplifying their message to make their voices heard. This is a promising shift towards an informed society, one that is more passionate about creating a just and sustainable Earth. The ocean plays a growing role in this activism and its impact on what our future looks like.

The *National Ocean Exploration Forums (NOEFs)*¹ have brought together diverse cohorts of experts over the past nine years to address investigation of the deep-sea and determine where national priorities should lie. For example, the 2018 *All Hands on Deck Forum*² focused on engaging audiences in the deep-sea through imagination, play, immersion, arts, and connections of all kinds. We can now reexamine those insights to develop a specific roadmap for achieving engagement with sectors/stakeholders not traditionally involved in the ocean.

Ocean science, and specifically deep-sea exploration, does not need to stay within a narrow environment category, but instead can broaden as a transdisciplinary endeavor that addresses many stakeholders. The U.S. ocean exploration community should engage with storytellers of all types and forms, inspiring collaborations that connect the public. Increasingly sophisticated and high-resolution virtual and artificial reality technologies allow broader audiences to experience the ocean in ways previously seen only in science fiction movies. Underwater camera systems are improving rapidly, providing 3D and ultra-high-definition abilities to explore and clarify images showing the breathtaking aquatic world below. With wide information channels, technology, and the natural beauty and intrigue of the deep-sea, ocean exploration can align itself with the broader population, including different industries and cultural sectors, through three important mechanisms:

1. Leveraging popular culture,
2. Focusing on youth by making early connections, and
3. Creating unique collaborations that exist outside and beyond traditional ocean science partnerships.

1 oceanexplorer.noaa.gov/national-forum/welcome.html

2 www.allhandsondeck.community/

Leveraging Popular Culture

A quick internet search shows that the global ocean system has already permeated our popular culture, exemplified by tattoos and memes, but the links between our fascination and appropriate actions, like engaging more with the scientific community or taking on ocean advocacy, have not yet been made. Popular culture infuses our lives, through commerce and entertainment; the more culturally relevant a topic is, the more it grabs the public's attention, especially youth. Our goal is to make public connections with the deep-sea, and in the process enhance its relevance to people's daily lives by making it relatable and building long-standing, productive, and symbiotic relationships. The U.S. ocean exploration community can align with the producers of pop culture, like artists, fashion designers, and musicians, to draw on their expertise and make the ocean relevant to a wider audience.

Here is an example. In July 2021, Nekton and Schmidt Ocean Institute held a [virtual workshop](#)³ as part of the United Nations (UN) Decade of Ocean Science for Sustainable Development - [Decade Lab Series: An Inspiring and Engaging Ocean](#)⁴. The virtual workshop brought 165 people together to discuss how to increase engagement with the ocean through popular culture and inspire the public in substantive and meaningful ways. Experts from eight industries, including arts, food, fashion, sports, social media, news, literature, and gaming, came together to guide a conversation with participants on ways to convey the story of the ocean and weave key messages into everyday culture. A [virtual report](#)⁵, which shares insights, examples, and suggested projects, provides a good jumping off point for the ocean community to begin with.

Leveraging mass media with ocean stories can create a more informed public - weaving key messages about the ocean into peoples' minds using emotions and unexpected connections. [Laffoley et al.](#)⁶ emphasize this point, saying that it is not enough for people to understand - they need to feel connected and to discern how deeply 'embedded' we are in the systems that sustain life on Earth. The U.S. ocean exploration community can create lessons about the ocean for the public, particularly by re-focusing activism and marketing the deep-sea to youth. The first step is to create a unifying campaign that brings together ocean organizations and causes with culturally relevant companies to reach younger audiences. We can see examples of this with [Lego's ocean exploration sets](#)⁷, the National Oceanic and Atmospheric Administration's (NOAA) collaboration with the [popular kids program Octonauts](#)⁸, and [Adidas shoes made with ocean plastic](#)⁹.

The public increasingly cares about social movements and takes advocacy seriously. We can benefit from this shift by placing the need to understand our ocean and connect people with deep-sea discoveries as a top priority. Social media has and will continue to put ocean exploration on the pop movements' map. Yet, we must evolve with changing platforms and styles to make the ocean a trending topic, for example, by including platforms like TikTok and merging ocean exploration themes into [trending challenges](#)¹⁰ like the sea shanty or #learnontiktok challenges.

Groups, brands, and organizations, such as sports teams, soft drinks, and airlines that have had no historical connection with the ocean, need to be targeted. For example, the use of unique deep-sea species images could inspire incredible product lines with U.S. designers - think Ralph Lauren or Tommy Hilfiger nautical collections focused on the deep-sea. Another unique example was the [recent display of a ctenophore](#)¹¹ on the side of the UN building in New York City as part of the 2021 World Climate Week. Perhaps these images could grace chip bags, the tops of skateboards, or the next Stella McCartney fall runway? [Parley](#)¹² has done

3 www.youtube.com/watch?v=3af32ichsGY/

4 www.oceandecade-conference.com/en/an-inspiring-and-engaging-ocean.html

5 schmidtocean.org/wp-content/uploads/Ocean-Rising-UN-Decade-Workshop-Results-CLEAN.pdf

6 onlinelibrary.wiley.com/doi/10.1002/aqc.3182/

7 www.lego.com/en-us/product/ocean-exploration-ship-60266/

8 oceanexplorer.noaa.gov/octonauts/

9 www.adidas.com/us/sustainability-parley-ocean-plastic/

10 www.complex.com/life/best-tiktok-trends-challenges-right-now/sea-shanty-challenge/

11 www.nytimes.com/2021/09/14/arts/design/video-united-nations-climate-week.html

12 www.parley.tv/#fortheoceans/

a commendable job of this for their [ocean plastic program](#)¹³, working with celebrity pledges and material designers aligned with commercial products. The value here is utilizing complementary capabilities and expertise traditionally “outside” of the ocean sector, creating mutually beneficial outcomes. Even when initially defined as project-based, successful and ongoing collaborations can lead to future alliances and inclusion in a community of practice.

Making Early Connections

Ocean stories populate our culture from a very early age; fairy tales, myths, and legends about sea monsters bring animals into the human narrative and are passed from generation to generation. Many popular youth narratives have grown the ocean into our culture, including icons like [Baby Shark](#)¹⁴, which has 9.8 billion views on YouTube; Disney’s popular [Nemo](#)¹⁵ and [Dory](#)¹⁶ characters that made [box office records](#)¹⁷; and the rise and fall of the SeaWorld [Shamu show](#)¹⁸. These characters may not make a population shift to ocean advocacy or instill blue economy careers in our youth. Still, they do create early connections to the ocean and may deliver a foundation for the next generation who will make ocean issues a top priority. The British television series, [Octonauts](#)¹⁹, has done a stellar job of walking the “edutainment” line, introducing at-sea careers, conservation, and knowledge of the deep-sea.

The [Deep Ocean Education Project](#)²⁰ is a great example of several U.S. ocean exploration organizations ([NOAA Ocean Exploration](#)²¹, [Ocean Exploration Trust](#)²², and [Schmidt Ocean Institute](#)²³) working together to bring the deep-sea to the public in a new way. This platform serves as a resource hub centered on developing new ocean exploration education materials that are easily accessible and support exploration-based learning for anyone interested in knowing more.

As technology evolves, students are learning faster than ever before, using new tools for connectivity like participation platform apps such as [the Hive](#)²⁴ and [light-field display technology](#)²⁵ for mixed reality headsets. Novel platforms that engage youth with the ocean through augmented, virtual and mixed reality, artificial intelligence, and machine learning can serve as tools to stay connected and build student-driven networks on a national scale. They can also create learning opportunities for understanding data and navigating evidence-based science, allowing for constant engagement. Extended reality, as described by [Cortesi et al.](#)²⁶ at the Berkman Klein Center for Internet and Society at Harvard University, has the capability of merging the physical with a virtual world that offers new ways to engage the public with visuals that only scientists have previously been able to experience. Extended reality technologies are becoming increasingly pervasive in the lives of young people today, entering homes, classrooms, and museums. Cortesi et al. describe how these immersive technologies hold great promise for learning. The U.S. ocean exploration community should utilize this multimodal technology to create new opportunities and crowd-source science.

13 www.parley.tv/oceanplastic#join-the-movement-1/

14 www.youtube.com/watch?v=XqZsoesa55w/

15 en.wikipedia.org/wiki/Finding_Nemo

16 en.wikipedia.org/wiki/Finding_Dory

17 www.bbc.com/news/entertainment-arts-36571691/

18 [en.wikipedia.org/wiki/Shamu_\(SeaWorld_show\)](https://en.wikipedia.org/wiki/Shamu_(SeaWorld_show))

19 en.wikipedia.org/wiki/Octonauts

20 deepoceaneducation.org/

21 oceanexplorer.noaa.gov/

22 nautiluslive.org/

23 schmidtocean.org/

24 the-hive.com.au/

25 www.techradar.com/news/this-futuristic-vr-tech-could-be-a-game-changer-for-virtual-reality-headsets/

26 cyber.harvard.edu/publication/2021/youth-and-extended-reality/

Unique Collaborations

Enhancing public consciousness to enlarge its contribution to deep-sea exploration can be heightened by early engagement and experience from popular culture experts. Oceana has achieved this by bringing on [celebrity supporters](#)²⁷, as has the [Ocean Elders](#)²⁸ program. Such informal partnerships are an excellent way to source these talents and innovate in new and mutually beneficial ways. Through such collaborations, the U.S. ocean exploration community can initiate national changes and lift new career pathways within the blue economy, creating not just jobs that link to the ocean, but those that will make it both sustainable and indispensable. Collaborations with taste makers, industry, and artists can create novel courses for ocean exploration and merge those who have not worked together before.

Uniting unlikely organizations in different industries may have an enormous impact on spreading awareness about the deep-sea but does not have to be limited to industry icons in popular culture. The U.S. ocean exploration community should consider how to leverage existing partners. For example, the National Aeronautics and Space Administration (NASA) has done an outstanding job of engaging the public in space exploration. Perhaps NASA and NOAA could work together – joining space and ocean in a large-scale communications campaign. The two organizations already work together on many exploration projects, such as [using satellites in space for ocean observing](#)²⁹ and testing equipment in the deep sea for future exploration on [ocean worlds](#)³⁰.

Looking to the Future: A Blueprint for 2032

The U.S. ocean exploration community will come together in March 2022 as part of the next National Ocean Exploration Forum to strategize for the next decade. This group should consider how they can brand the deep ocean and enhance public engagement in ocean exploration. Based on the recommendations presented in this white paper, the [Ocean Rising white paper](#)³¹, and those of the 2018 [All Hands on Deck Forum](#)³², below are some overarching targets or guidelines of consideration for a 10-year timeline.

Leveraging Popular Culture

- To connect people to the deep sea, we need to attach popular culture to the ocean; the focus should be on permeating our culture with ocean exploration subject matter. This calls for **developing plans in specific pop industries and in collaboration with trendy brands, businesses, and experts who have experience with given industries**. Suggested areas to start could include news media, social media, sports, fashion, food, gaming, travel, and the arts.
- The ocean can serve as a unifying conduit. Create compelling stories to capture the imagination of new audiences by working with content production and streaming services. **Diversify storytellers by bringing ocean exploration stories to writers, producers, and content creators across different genres.**
- Engagement efforts should be **rooted in culture and relevance that includes humor, adventure, and imagination** to connect with (particularly young) audiences.
- The **audience should be made to be part of the story**, creating material that makes them the center of improving ocean health and sustainability.

27 oceana.org/celebrity-supporters/

28 www.oceanelders.org/ocean-elders/

29 www.nesdis.noaa.gov/news/nasa-noaa-and-partners-name-ocean-studying-satellite-noted-earth-scientist/

30 oceanexplorer.noaa.gov/oceanos/explorations/ex2102/features/oceanworlds/oceanworlds.html

31 schmidtocean.org/wp-content/uploads/OceanRising.pdf

32 www.allhandsondeck.community/

Making Early Connections

- ▼ Early engagement in ocean exploration will help to form the next generation who will shape the blue economy. **Diversity and inclusion are critical to broadening the workforce pipeline.** A first step is reviewing extant education programs to ensure inclusion and appeal to underrepresented segments of the U.S. population. Ocean literacy materials should be reformatted to appeal to diverse cultures, combining ocean learning experiences with outdoor exploration, and made available in multiple languages.
- ▼ Develop **participatory experiences that create early engagement** with ocean exploration across the entire United States, especially those communities with little to no access to the ocean. This may be achieved with water sports, such as swimming, sailing, and surfing, to ensure lifelong connections with the water. Collaborate with local and national sporting associations that target a broad number of communities, such as the YMCA. A successful example of early engagement in underwater robotics is the [*MATE ROV Competition*](#)³³.
- ▼ Many early aquatic experiences stem from zoos and aquariums. Stronger partnerships with these institutions can be made, with **interactive exhibits focused on the deep sea that link to live missions, using new technologies for interactions.** Recent examples include the upcoming deep-sea exhibit [*Into the Deep*](#)³⁴ at the Monterey Bay Aquarium, as well as the Schmidt Ocean Institute-sponsored exhibit [*One Ocean*](#)³⁵ at the Australian National Maritime Museum. Using immersive technology to communicate about the ocean can bring a more inclusive experience to the public. Commercialization of consumer-level software has made it easy to create content. Bringing together gaming, technology, and ocean experts can allow for new applications of data visualization, crowdsourcing of content, and new ways of exhibiting science stories.
- ▼ Develop **intergenerational learning** that appeals to all ages and encourages family learning models. Focus on increased collaboration and create supportive environments, particularly for newcomers to ocean exploration.

Unique Collaborations

- ▼ Using the arts to inform about deep-sea science has been an important component of some ocean exploration programs; however, these efforts should be expanded and integrated into the broader ocean community. The arts play an essential role in ocean storytelling and can make complex ocean science topics more approachable, serving as an important tool for advocacy. The U.S. ocean exploration community should come together to **unify artist-at-sea programs, exhibits, and competitions to gain global coverage and work with diverse artists from community-based to internationally-renowned specialists.**
- ▼ **Partnerships with professional sports teams, especially those that have ocean-related mascots or content such as the Tampa Bay Rays or Seattle Krakens,** is a great way to reach a wide audience. Large arena screens can provide space for increasing awareness of ocean issues in between plays, periods, quarters, etc., and can be a unique way to draw attention to the deep sea. This applies to ocean-related sports as well.
- ▼ The **gaming industry can serve to merge technology and deep-sea content with mission-oriented challenges** that address a broad public that may not be tapped into ocean exploration. This can help to stimulate interest in ocean careers. Successful examples have been demonstrated in gaming, such as [*Beyond Blue*](#)³⁶, though more commonly in space settings.

33 www.materovcompetition.org/

34 www.montereybayaquarium.org/visit/exhibits/into-the-deep/

35 www.sea.museum/whats-on/exhibitions/one-ocean-our-future/

36 www.beyondbluegame.com/

- ▼ The U.S. ocean exploration community has an opportunity to **collaborate with communications experts and should seek their help**. Media fragmentation and fewer media members to pitch have made it more difficult to reach broad audiences. Content marketing and social experts are trained to address this challenge and obtain impactful results. [Forbes](#)³⁷ estimates that there are more than 120,000 marketing and communications firms in the United States, which include ad agencies, design studios, and research companies. Working with experts to bring ocean stories to the masses will help to popularize deep-sea exploration. Strategic communications, research, and creativity are essential, as well as unifying the ocean community through campaign development and social integration.
- ▼ The U.S. ocean exploration community should approach commercial ocean industry to align strategic education and partnership programs. **Industries such as tourism, technology development, and shipping would make great partners to support ocean science, conservation, and education, with consumer engagement at the center of these models.**

Conclusion

The current decadal planning for the U.S. ocean exploration community aligns with the [UN Decade of Ocean Science for Sustainable Development](#)³⁸, [30x30](#)³⁹, and the [Seabed 2030 Project](#)⁴⁰. The U.S. ocean exploration community should work collaboratively with these initiatives in reaching the shared goal of better understanding and protecting our ocean, whether that be through mapping, biodiversity studies, or capacity building. There are finite resources available, so creative collaborations, unique public engagement, and popular culture mashups are a way to bring new life, support, and finance into the ocean exploration community. Never in history has the ocean been more accessible to global audiences – and more threatened. The ocean community both in the U.S. and globally need to unite in strengthening our communal culture to the ocean.

As we aim to build back better, there will be a hunger to reconnect the natural world with positive stories that lead people to explore all frontiers. The U.S. ocean exploration community has an opportunity to reframe the ocean as exciting and interesting by re-engaging with storytellers of all types and focusing on effective and inspiring collaborations. The ocean community needs to enthuse the public in substantive and meaningful ways by targeting stakeholders not often considered in ocean science communication. If the U.S. ocean exploration community wants an engaged public, then they need to percolate the ocean through all reaches of society and increase activation of ocean storytelling.

37 www.forbes.com/sites/forbescommunicationscouncil/2017/07/21/why-public-relations-agencies-are-evolving/

38 www.oceandecade.org/

39 www.campaignfornature.org/road-to-china-2020/

40 seabed2030.org/