REQUEST FOR PROPOSALS

Pop-Up/Drill Down Science
September 23, 2016

Issued by:
Consortium for Ocean Leadership (COL)

Please submit questions, letter of intent, and proposals to:
popup-info@oceanleadership.org

Deadline for Letter of Intent Submission: October 14, 2016, 5:00pm Eastern
Deadline for Question Submission: November 7, 2016 5:00pm Eastern
Deadline for Proposal Submission: November 15, 2016, 5:00pm Eastern

INTRODUCTION AND BACKGROUND

The Consortium for Ocean Leadership (COL) is a Washington, D.C. nonprofit organization that represents the leading public and private ocean research education institutions, aquaria, and industry with the mission to shape the future of ocean science and technology. In addition to its advocacy role as the voice of the ocean research and education community, Ocean Leadership manages a variety of community-wide research and education programs in areas of ocean observing, ocean exploration, and ocean partnerships. For additional information, visit http://oceanleadership.org.

COL requests proposals for the design/build of a set of eight (8) Exhibit Kiosks and a Portable Immersive Experience (PIE), which together serve as the centerpiece of the National Science Foundation (NSF)-funded project, *Pop-Up/Drill Down Science*. The kiosks and associated staff/programming will travel around the country throughout the year to be deployed at festivals, weekend fairs, mall parking lots, and other venues both indoors and outside in a variety of communities, including those that are rural, and underserved by science resources.

Our goals with the Pop-Up/Drill Down Science traveling exhibit are to:

1. Increase access to and awareness of ocean/earth science and careers especially in underprivileged communities (ranging from non-traditional venues like parks, parking lots, block parties, local festivals, and malls to libraries and museums).
2. Creating a sustainable model for STEM learning in informal environments.
3. Increase interest in the scientific drilling and research activities of the *JOIDES Resolution* among the general public (children, teens and adult participants) who attend the Pop-Up Blitzes and Drill Down events.
4. Foster partnerships between educators and scientists that lead to broader dissemination of scientists' research and the larger vision of the NSF.

The objective of this Request for Proposals is to locate a vendor who will work closely with the project staff throughout development in order to provide the best product and best overall value to COL. The project team consists of the lead Principal Investigators (PIs) -- Kristen Yarincik (COL) and Sharon Cooper (Lamont Doherty Earth Observatory, LDEO) and a small group of science, science education, and exhibit advisors who have been closely involved in the development of this project and its predecessors. Submission guidelines are listed below and identify the criteria that will form the basis of our award decision.

PROJECT DESCRIPTION

Much like missions to outer space, the NSF-sponsored ship *JOIDES Resolution's* (*JR*'s) deep ocean drilling expeditions have the potential to ignite the imaginations of a whole generation of Americans—to engage thousands of people in the excitement of exploration, the process of science, and the people and tools required to get there. The *JR* is on a mission of scientific discovery into the unknown. What lies beneath all that water? What secrets about our planet's development and ancient history can be revealed by sediments and rocks below? How can these explorations shed light on topics of great societal relevance, like climate change, the barely understood biosphere beneath the seafloor, and geo-hazards like earthquakes and tsunamis?

As with space exploration, the *JR*'s research program requires extensive scientific collaboration and teams of engineers trying to reach highly inaccessible places in search of discoveries. Unlike many of NASA's missions, the *JR*'s adventures and achievements have largely flown under the radar. The *JR* is one of the largest research vessels in the world and is the flagship vessel for the International Ocean Discovery Program, an international research program dedicated to advancing scientific understanding of the Earth through drilling, coring, and monitoring the sub-seafloor. Unbeknownst to most of the population, this country has invested more than $700 million in scientific ocean drilling over the past 12 years alone and generated key evidence for major scientific theories, such as plate tectonics, extinction of the dinosaurs, and existence of life below the seafloor. Just in the last three years, the *JR* was instrumental in identifying the largest single volcano on Earth.

This project uses the *JR* and her science to intrigue, engage, and inspire informal science audiences across the nation. *The hypothesis of this project is that well-designed and facilitated Pop-Up "blitzes" and Drill Down opportunities at museums and libraries in carefully selected locations will provide an effective mechanism for increasing STEM learning access among underserved minorities, rural populations and girls – and create a broadly applicable model for doing so in other science fields.*

SERVICES TO BE PROVIDED

Scope of Work

The chosen vendor will design and build eight (8) Pop-Up Kiosks and one (1) Portable Immersive Experience in Year 1. In Year 2, based on feedback and input from use, the firm will produce two (2) additional sets of eight (8) Kiosks and one (1) Portable Immersive Experience. Upon completion of the project, there will be a total of three (3) sets available for traveling throughout the country. Vendor will provide a 90-day warranty.

Concept drawing for Pop-Up kiosks and Portable Immersive Experience deployed outside.

Specific Tasks

1. The contractor shall furnish all labor, materials, equipment, and final design documents, to include, but not limited to, operation, training, and maintenance manuals, required to perform the work indicated and specified by bid documents. The company will provide a recommend spare/replacement parts list. Work includes design and fabrication of exhibit components and collaboration on graphics production. Collaborative proposals between design and fabrication firms are acceptable. Fabrication shall be to museum quality with particular attention paid to durability, sturdiness, flexibility, and mobility. As part of the previous pilot work for this project, the content and activities were developed and used in table-top style. For this RFP, the Pop-Up kiosks must be designed to incorporate these activities. Cleverness in their method of popping up should be considered because these units will travel extensively and must be easily assembled by each site's personnel. Each kiosk's design will include 2 levels of engagement: 1) something that can be done quickly during Pop-Up events and 2) opportunities for deeper exploration for use during Drill Down, when they are available at local libraries and museums.
2. The Portable Immersive Experience (PIE) is a central walk-through environment with a multimedia show inside that features the theme of time-traveling back in Earth's history. This element will be a large inflatable structure made from nylon-reinforced, flame-resistant, latex-free industrial-grade fabric. The outer surface must insure opacity even in bright light conditions.

The following links provide examples of our intent with the PIE. It is intended that visitors will walk through this experience while multimedia is playing. Time in the "dome" would be expected to be 10-20 minutes. Note that multimedia inside the PIE will be separately contracted/budgeted. The chosen exhibit vendor should expect to work closely with the media company regarding technical requirements like projection surfaces and power.

- http://www.medicalinflatables.com/exhibits/mega-brain/
- http://www.curbed.com/2016/4/15/11440820/manchester-museum-inflatable

- http://4dimmersive.com/2012/12/14/pop-up-immersive-experiences/

Additional details about kiosks

General kiosk requirements:

- Lightweight /easy to transport, including transportation cases
- Custom graphics that can be removed for periodic updating
- Low-energy lighting and ability to connect to power sources
- Internal storage space for hand-outs or extra parts
- Interactive area in front with space for several participants to gather
- Mounts for interactive components on counter
- Weather proof/easy to clean/sturdy/modular

Kiosk topics and envisioned activities are below. Note again that these activities have been previously developed and tested for informal use but that the chosen exhibit vendor will adapt and design them appropriately for active and professional-level kiosk use. The COL project team will provide text, photos, and illustrations. It is envisioned that graphic design may be shared across the COL and exhibit vendor's resources. (Current titles are internal only.)

1. Seafloor Geology
   Visitors interact with simple models that reflect seafloor topography at plate boundaries, i.e., subduction zones (trenches) and spreading centers, as an introduction to the geology of the seafloor.
2. Engineering and Coring Technology
   Visitors manipulate three (3) different drilling devices (will need to be designed) in order to determine the best method of collecting core samples from simple 3-D models of the seafloor.
3. What is a Core?
   Visitors work through a simplified core archiving procedure by describing and cataloging replica cores recovered from below the seafloor to gain an understanding of the scientific processes that take place on the *JR*.
4. Paleomagnetism
   Visitors use compasses to scan core models with embedded magnets to stimulate measurement of "fossilized" magnetic fields in cores.
5. How We Know What We Know: Microfossils and Climate Change
   Visitors interact with a replica of a core with microfossils in it. They use a sieve and microfossil models to simulate how *JR* scientists identify microfossils from cores. Kiosk will have photos of microfossils from an idealized core, then use field guides to identify them and chart the climate history represented by the core.
6. Dinosaurs: Mass Extinctions
   Visitors manipulate a model of the K/T boundary core, understanding that this is the "smoking gun" evidence of a major extra-terrestrial bolide impact. They look at enlarged photos of before/after organisms and interact with a model of the asteroid impact.
7. Life Below the Seafloor
   Visitors learn about extremophiles that live under the seafloor without light or oxygen. They interact with models of bacteria and explore questions of survival and the limits of life on this planet.
8. Stories from the Cores
   In a single computer station, a choice of brief interactive programs in which visitors explore the evidence contained in ocean sediments for dramatic geological and biological stories.

PROJECT MANAGEMENT

The vendor must establish one person to serve as project manager and liaison to the COL PI.

COL looks to the vendor to inform the needs of the project, maintain a cohesive schedule, and coordinate, oversee, and manage work produced. Therefore the vendor must establish a work plan and schedule for all parties to ensure timely completion of the project; this schedule should include significant dates that will serve as check points along the way.

Regular meetings with the COL project team (either in person or by phone/webinar) are an integral part of the overall process and should be indicated in the project schedule.

COL project staff will be intimately involved in the project and the appropriate people will be available for all necessary meetings and phone calls. The team for this project includes two Principal Investigators, the Pop-Up manager, the Outreach Coordinator, and three advisory committee members.

SUBMISSION GUIDELINES AND REQUIREMENTS

All vendors must provide a complete solution price proposal for **design and build of one set of eight (8) kiosks and one (1) Portable Immersive Experience and an option price for the additional 2 sets**. Interested bidders must submit a brief letter of intent to popup-info@oceanleadership.org no later than 5:00pm Eastern, October 14, 2016. Interested bidders must submit their RFP response to popup-info@oceanleadership.org no later than 5:00pm Eastern, November 15, 2016. The proposal should include:

1. A letter of interest that includes answering: Why do you want to work on this project?
2. A general statement of the vendor's qualifications for the proposed project and company's management and capabilities to include:
    a. Examples of work that have similarities to this project.
    b. Please include a minimum of three (3) references for highlighted portfolio projects.
3. Brief conceptual ideas (no more than one page) for how you might approach the project, including the eight (8) Exhibit Kiosks and a Portable Immersive Experience. Specific sketches will help but are not required. *Note that if a vendor would like to propose a creative modular system that includes fewer than eight (8) kiosks, this will be considered.*
4. A schedule of milestones for deliverables, including a conceptual plan that will be achieved by COL's intended delivery date of October 30, 2017.
5. A brief description of the vendor's process for working with the project team, i.e., how they would foresee working with the team, including: number of meetings, how do you go about familiarizing yourself with the project, what are your communication processes (point person? common digital folders, etc.), and who would be the key personnel on the project. Again, note that the project team will provide the content and pilot activities for each kiosk, the design vendor will work with the team to bring these to the appropriate professional exhibit level and fabricate them. The project team has a graphic designer on staff who will work closely with the chosen vendor. *Please specify whether your vendor will be doing both design and fabrication, submitting a joint proposal, or sub-contracting the fabrication. Either type of proposal is welcomed.*
6. A price proposal that indicates the overall fixed price for the project as well as details of what is included in this price.
7. The vendor will comply with the National Science Foundation's (NSF) Cooperative Agreement-Financial & Administrative Terms and Conditions (CA-FATC), The Proposal and Award Policies and Procedures Guide (PAPPG), OMB Circular 2 CFR 200 and required flow down requirements from the primary award.

RFP AND PROJECT TIMELINES

The anticipated timeline is as follows:

Request for Proposals released	September 23, 2016
Letter of Intent submission deadline	October 14, 2016
Question submission deadline	November 7, 2016
Proposal submission deadline	November 15, 2016
Contact Award / Notification to Unsuccessful Bidders	December 9, 2016

Questions can be submitted until 5:00pm Eastern on November 7, 2016 and answers will be publicly posted on http://joidesresolution.org/node/4634.

Project delivery is targeted for October 30, 2017. Bidders may propose a reasonable date earlier or later, and possibilities will be discussed.

Budget

COL's budget for Year 1 of the project is in the range of $100,000 - $125,000 for **one set of eight (8) Kiosks and one (1) Portable Immersive Experience**. With successful completion of this first set, it is COL's intention to contract with the same vendor to make any necessary tweaks and then produce **two** (**2) additional and identical sets** of eight (8) kiosks and one (1) PIE, and to do periodic maintenance and updating of the units -- for a contract with an additional value of roughly two (2) times this first-year contract. All the funding has been secured.

Evaluation Factors

COL will rate proposals based on the following factors, in order of importance:

1. Relevant qualifications and experience, including creativity and enthusiasm of bid
2. Compliance to requirements outlined in request
3. Samples of work
4. Price

QUESTIONS

Questions regarding this RFP, letters of intent, and proposals should be submitted to: popup-info@oceanleadership.org.

A webinar to discuss the project will be held via Zoom on October 13, 2016.

Additional information and updates can be found at: http://joidesresolution.org/node/4634.