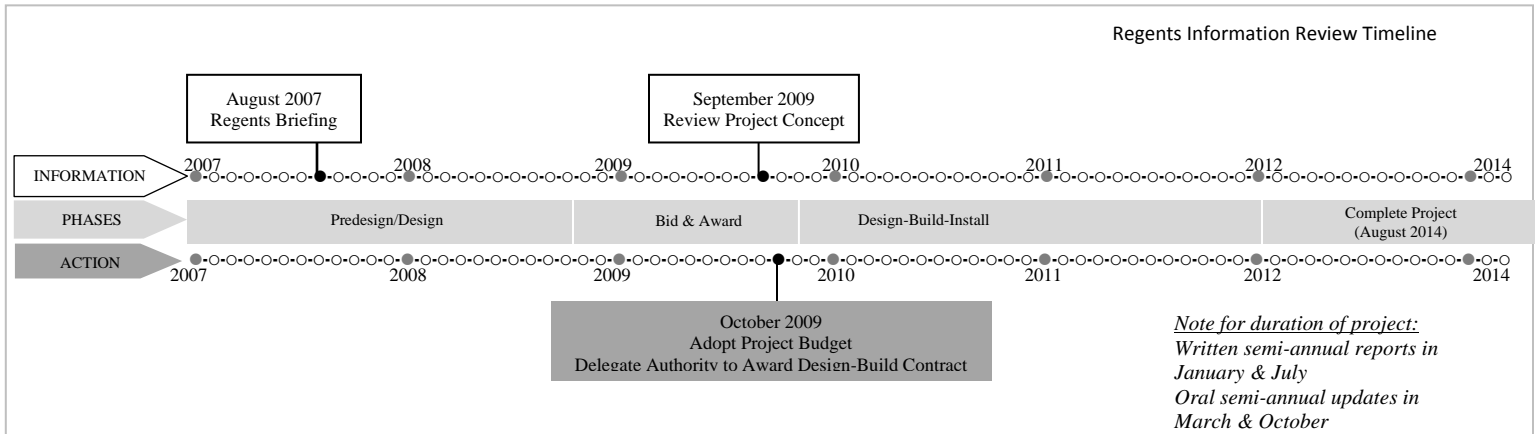


VII. STANDING COMMITTEES

B. Finance, Audit and Facilities Committee

Ocean Observatory Initiative Regional Scale Nodes Primary Infrastructure –  
Review Project Concept



INFORMATION:

The purpose of this presentation is to provide background information about the University’s role in the Ocean Observatory Initiative Regional Scale Nodes (RSN) Primary Infrastructure project. We will return in October 2009 to present the final project budget and funding plan and request authority to award a Design-Build contract for the design and construction of the RSN project.

BACKGROUND:

For over ten years, Dr. John Delaney of the University’s School of Oceanography has advocated construction of a cabled ocean observatory in the northeast Pacific Ocean, which could be used to conduct transformational, multidisciplinary ocean science. Funded by the National Science Foundation (NSF) and under the direction of the Consortium for Ocean Leadership (OL), Dr. Delaney’s vision will become reality as the Regional Scale Nodes project, part of a broader Ocean Observatories Initiative (OOI). In March 2007, the University of Washington was named by OL as the Implementing Organization (IO) for the RSN project. As the RSN IO, the University will develop, design and construct the RSN primary infrastructure.

NSF will fund the planned facility through its Major Research Equipment and Facilities Construction (MREFC) account. The OOI is an outgrowth of scientific planning efforts by the national and international ocean research communities over the past two decades and is motivated in part by rapidly expanding

## VII. STANDING COMMITTEES

### B. Finance, Audit and Facilities Committee

#### Ocean Observatory Initiative Regional Scale Nodes Primary Infrastructure – Review Project Concept (continued p. 2)

development of computational, robotic, communications, and sensor capabilities. The OOI program is managed through the OOI Program Office housed within OL in Washington, D.C. OL is a not-for-profit corporation of member institutions, organizations, and governmental entities involved in oceanographic sciences or related fields. OL will implement the OOI by sub-contracting to the IOs, as shown at Attachment 1. Together, the IOs will develop, construct, and operate the OOI. There is one IO for the coastal and global nodes, another for the regional nodes (UW), and one for the cyberinfrastructure that connects the nodes together into an integrated observatory. A fourth IO for building related education and public engagement infrastructure will be identified through a competitive procurement process after project initiation.

The RSN will instrument two areas of the Juan de Fuca tectonic plate in the Northeast Pacific Ocean. The Canadian government's NEPTUNE (Northeast Pacific Time-series Undersea Networked Experiments) array is currently being installed on the northern third of the same plate. Together these two systems will monitor the Juan de Fuca plate to allow the science community to conduct experiments. Permanent electro-optical seafloor cables will connect seafloor nodes at two locations and will provide power and high bandwidth for sensors, instruments, and underwater vehicles. This high power and bandwidth capability will allow experimental access from below, on the seafloor, within the water column, and across the air-sea interface.

Over the course of the last 2½ years, the University has developed a comprehensive construction plan addressing the science requirements of this innovative observatory system. The major component of the construction efforts will be the RSN Primary Infrastructure contract. The Primary Infrastructure consists of the cable, power feed, communications, and seafloor distribution nodes. As an integrated ocean network it was important to get a "turnkey" solution from a single provider encompassing transmission of both electrical power and communications bandwidth, particularly with a system design life of 30 years. Based on this key factor, the decision was made to use the Alternative Public Works Design-Build contracting methodology. Following appropriate state guidelines, a Request for Qualifications was issued and five qualified bidders proceeded to the next stage of the selection process. As a result of the selection process, the University's RSN project team has entered into negotiations with the firm of L-3 Communications MariPro, Inc. as the potential supplier. L-3 Communications MariPro, Inc. is a subsidiary of L-3 Communications Corporation, a Fortune 500 company with a diverse product portfolio used across aerospace and defense platforms in support of the Department of Defense, Department of Homeland Security and the intelligence community. L-3 Communications MariPro has specific expertise in complex cable sensor systems

## VII. STANDING COMMITTEES

### B. Finance, Audit and Facilities Committee

#### Ocean Observatory Initiative Regional Scale Nodes Primary Infrastructure – Review Project Concept (continued p. 3)

design and marine installations worldwide, including involvement in the NEPTUNE Canada project mentioned above.

Contract negotiations with L-3 Communications MariPro are ongoing. The University's contract negotiating team has included representatives from the Attorney General's Office, the Capital Projects Office, the Tax Office, the Risk Management Office, the Applied Physics Laboratory and the RSN Project Office. It is expected that the negotiations will be successfully concluded and that the BOR will be presented with the results, along with a request for authority to award the RSN Primary Infrastructure contract at its October 2009 meeting.

#### PROJECT SCHEDULE:

Mar 2007	UW selected as Regional Implementing Organization for OOI
May 2008	UW commenced OOI RSN Primary Infrastructure procurement process
Sep 2009	UW signs OOI RSN construction sub-contract with OL
Oct 2009	RSN Primary Infrastructure Design-Build Contract award
Sep 2011	Commence manufacturing
Nov 2012	Commence marine installation
Jun 2013	Primary Infrastructure construction completion
Aug 2014	Overall project completion

#### PROJECT BUDGET & FUNDING:

The total project budget for the RSN project is \$169.6M, as shown in the table below. As approved by NSF, the University will receive direct funding of \$131.0M to cover the RSN budgeted costs and OL will retain the contingency funds of \$38.6M, for release as necessary.

<b>Regional Scale Nodes Budget/Funding Breakdown</b>			
Category	Cost	Contingency	Total
1. Project Management	\$14.2M	\$0.8M	\$15.0M
2. System Engineering	\$4.3M	\$0.2M	\$4.5M
3. Sub-System Development	\$17.2M	\$4.0M	\$21.2M
4. Implementation	\$95.3M	\$33.6M	\$128.9M
<b>TOTAL</b>	<b>\$131.0M</b>	<b>\$38.6M</b>	<b>\$169.6M</b>

Within the Implementation category of the above table, the Primary Infrastructure contract represents a total of \$82M of the combined cost and contingency budget.

## VII. STANDING COMMITTEES

### B. Finance, Audit and Facilities Committee

#### Ocean Observatory Initiative Regional Scale Nodes Primary Infrastructure – Review Project Concept (continued p. 4)

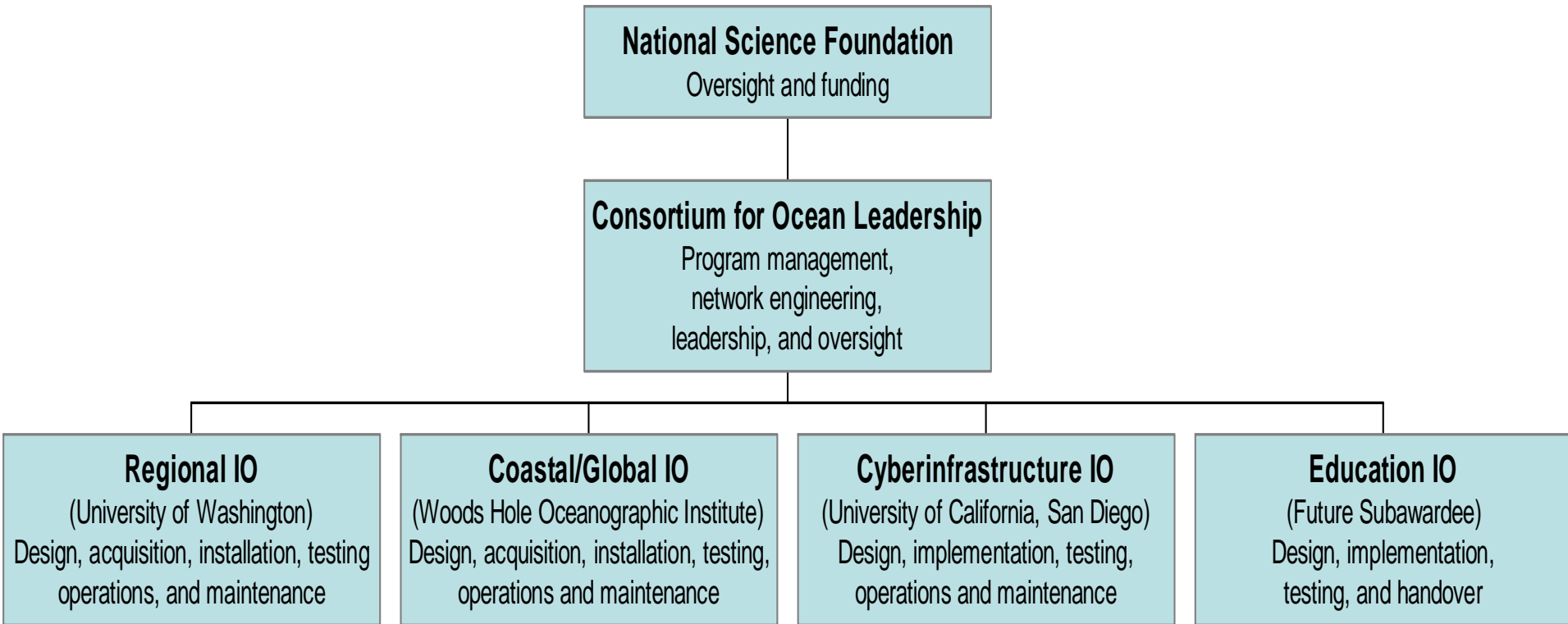
Current negotiations with the proposed contractor, L-3 Communications MariPro, have the contract valued at approximately \$76M.

#### PROJECT RISKS:

Risk assessment and mitigation has been a significant area of focus in the development of the RSN program. The Primary Infrastructure contract is a fixed price contract, with the exception of any cable armor protection up-scope required as a result of the cable route survey and any weather delays that exceed the contracted working capabilities of the specific ships. Risk associated with armor protection will be resolved within the first year of the program as a result of the cable route survey. Weather delays will remain a risk until the end of the construction program. The RSN Project Office holds a contingency within the RSN total project budget that is sufficient to cover these risks. Project risks and mitigation measures will be discussed further in the presentation to the BOR.

#### *Attachments*

Ocean Observatories Initiative Organization Structure



Attachment 1