

## **DEVELOPING CYBERINFRASTRUCTURE FOR COASTAL APPLICATIONS: FORMING THE TEAMS AND ADAPTING THE STANDARDS**

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The Web 2.0 has helped globalize the economy and change social interactions, but the full impact on coastal science applications has yet to be realized. In the spirit of the Web 2.0, GoMOOS strives to support partnerships that create open-access virtual organizations engaged in next-generation science and advancing practical applications. GoMOOS has been hosting the Gulf of Maine Ocean Data Partnership ([www.GoMODP.org](http://www.GoMODP.org)) for this reason. We have also been helping to lead a relatively broad and international initiative with the Open Geospatial Consortium, known as the Ocean Science Interoperability Experiment. Outcomes include support of a sensor-web initiative, a coastal modeling testbed, and prototype tools to forecast coastal storm damage ([www.OpenIOOS.org](http://www.OpenIOOS.org) and [www.OOSTethys.org](http://www.OOSTethys.org)). These are powered by an extended partnership at the Southeastern Universities Research Association (SURA).

Based on our experiences, we feel there are three key ingredients for initiatives to have the biggest impact: (1) standards, (2) working prototypes and (3) communities of interest. We strongly endorse the Open Geospatial Consortium – a geospatial analog of the World Wide Web consortium – and other international consensus-standards bodies that engage government, private sector and academic involvement. But these standards are often highly complex, which can be an impediment to their use. We have overcome such hurdles with the second key ingredient: a focused working prototype. The prototype must include guides and resources that make it easy for others to apply, test, and revise the prototype, all without need to understand the standards in their potentially overwhelming complexity. In addition, the prototype should support direct involvement of the third key ingredient: communities of interest that assess functional relevance. We expect that any two of these ingredients alone, without the third, will severely limit applicability and impact of any initiative.