



Integrated Ocean Data Management and Communications

New oceanographic sensors can collect more data in one hour than the historic HMS Challenger expedition of 1872-1876 collected in one year. Emerging technologies for collecting, transporting, managing, and preserving oceanographic data are critical to the success of our government's ocean exploration, research, analysis, and monitoring activities. Today's environment for developing these data management capabilities is one of rapid change; there is conflicting guidance on proprietary data in the midst of an explosion of oceanographic data complexity and quantity. An abundance of commercial information system solutions—bounded by policies of national need, security, and proprietary rights—are attempting to address the challenges of this data environment even as government data managers seek to balance the interests of data owners with society's need for full and open access to the data.

Noblis' proven abilities in integrated ocean data management and communications stem from our unique expertise in oceanographic and telecommunications network science, engineering, and analytical and economic practices, combined with our position of absolute objectivity. Our conflict-free status enables us to openly interact at a detailed level with commercial data management and telecommunication service providers about their confidential company rate structures, new products and services, and technology deployment plans. Year after year, this combination of independence and capability has made it possible for us to achieve a track record of achieving the "best value" for our government clients on large-scale data management and communications initiatives.

Noblis maintains a corporate-funded laboratory that is dedicated to oceanographic science and technology. The resources of this laboratory—including modeling tools and oceanographic sensors—are available to support data management and communications research initiatives for clients developing ocean observation systems. We also sponsor an advanced telecommunications laboratory that examines and assesses various emerging telecommunications technologies to develop prototypes and conduct feasibility analyses. In tandem, our Telecommunications Simulation Facility (TSF) allows us to analytically model and simulate networks to examine performance, reliability, and cost. These laboratory assets help Noblis remain on the leading edge of ocean data management and communications technologies, thus enabling us to serve our government clients effectively and efficiently.

National Coastal Data Development Center

Noblis provides critical support for the developing architecture and growing operations at the National Coastal Data Development Center (NCDDC). The NCDDC provides a central focus for coastal ocean data management because it is responsible for managing the long-term coastal data record. In cooperation with the National Ocean Service, the NCDDC and Noblis work closely with coastal data providers to ensure that Federal Geographic Data Committee (FGDC) guidelines are followed, along with other applicable standards for all data sets delivered through the NCDDC. We support the NCDDC in its use of new distributed, object-computing technologies to provide wide access to distributed oceanographic data. We also provide retrospective analyses and Geographic Information System-based information to help form the basis for environmental analyses and public policy.

Ocean Exploration Data Management

Noblis has provided the government with a comprehensive data management strategy for ocean exploration that has received wide distribution for its comprehensive view of the end-to-end data management process. We are helping to define emerging implementation plans and to develop data management prototype systems to determine how the system will function and interact with institutional partners and stakeholders in the management of the oceanographic data. We also support related initiatives that examine the design and implementation of a centralized digital video data management system that could satisfy government needs while providing a conduit for broad public access.

NOAA Office for Law Enforcement

When the NOAA Office for Law Enforcement (OLE) needed to evaluate its existing technology base in light of emerging requirements and technologies, they called on Noblis to help ensure satisfaction of internal needs and expanded support for homeland security and national counterterrorism initiatives. Noblis provided oversight support for developing and implementing the Law Enforcement Accessible Database System (LEADS), the emerging repository for incident and other agency records. OLE relied on Noblis to provide unbiased systems engineering expertise to verify vendor technical solutions, to act as its designated representative as OLE explores other potential LEADS capabilities, and to conduct analyses and research into technology areas that have an impact on LEADS and other OLE program initiatives. Potential vendors are comfortable sharing their proprietary information and technological innovations with Noblis without risk of compromise or loss of a potential competitive advantage since we do not compete and do not market operational systems.

Integrated Ocean Observing System Data Management

Noblis is making important national contributions in its systems engineering and acquisition support for the data management components of the Integrated Ocean Observing System (IOOS). IOOS will integrate existing and emerging ocean observation data using new data management and communications technologies and will satisfy operational and science requirements with concrete, positive impacts on U.S. citizens. Noblis brings technical depth and breadth to cover the broad spectrum of ocean data management mandates and services for IOOS, as called for in the Report of the U.S. Commission on Ocean Policy and the President's Ocean Action Plan.