

ALASKA OCEAN OBSERVING SYSTEM

AOOS DATA SYSTEM MANAGEMENT CONTRACT WITH AXIOM DATA SCIENCE

EFFECTIVE SEPT 1, 2010 – AUGUST 31, 2018

Rob Bochenek with Axiom Data Science LLC (Axiom) serves as the Data Manager and Data System Management Lead for AOOS. As the technical lead, Rob provides project management expertise and oversees all aspects of the AOOS Data System. He supervises all Axiom staff who work as part of the AOOS data management team. Additionally, he contributes to proposal development and general AOOS data management reporting requirements. His extensive background in developing marine data management systems and the creation of user interface tools has been indispensable in helping reach the objectives of this project. He has been involved in data management for large scale federal and state scientific research efforts for the last 22 years. Rob started Axiom Consulting & Design (now Axiom Data Science) to focus on broader multi-agency efforts with managing scientific data using an end-to-end systems approach.

Axiom is a technology and informatics firm located in Anchorage, Alaska, dedicated to providing data management and informatics support for the scientific sector. The firm was selected for a five-year contract to provide data management services for AOOS following a rigorous open competition in 2010. The AOOS Board voted to extend Axiom's contract for an additional three years (through August 31, 2018). The consulting group has a full-spectrum client base that spans from local nonprofit organizations to state and federal agencies. Axiom specializes in the development of map-based data portals, spatial planning tools and data management frameworks which transfer and ingest data from external systems via interoperability protocols. Axiom employees adhere to user-driven software development techniques to ensure transparency and communication between client and contractor about design requirements and development progress. Axiom supports a data center running production-level databases, web map portals and other web applications for various clients in addition to AOOS (US Fish and Wildlife Service, Alaska Department of Fish and Game, etc.).

The Axiom team includes a broad range of expertise from software engineers and data analysts to data visualization specialists and data librarians. They have wide-ranging backgrounds ranging from a PhD in geophysics to computer science to commercial fisheries biology and data management. The firm's employees are continually researching and employing new technologies to extend the capabilities of digital information and computer analysis systems.

Axiom is responsible for all deliverables in the annual AOOS data management workplan. Working under the direction of the AOOS Executive Director and with the AOOS staff, Axiom designs and deploys a data management system to meet the needs of the AOOS user-base that

provides functional components required by IOOS as described in the 2016 AOOS Data Assembly Center and Data Management Subsystem Plan.

Axiom offers comprehensive technical solutions to AOOS data management needs, underpinned by a scalable, open source system that uses existing and emerging software, high performance computer clusters and interoperability services. This management system provides an environment that increases the access and use of data by all user groups and allows data management staff to rapidly develop new capabilities and tools to meet emerging user needs. Axiom has successfully implemented a data management system that stores AOOS data and other assets and makes those resources available via IOOS standardized interoperability protocols in a secure and functional manner. Axiom builds capacity within regional institutions to serve their own data via interoperability protocols and enable them to more directly participate in AOOS. Axiom has demonstrated they are proficient in developing web based interfaces and tools which use the data management system and meet both the general and specific needs of user groups.