The Integrated Marine Observing System (IMOS, www.imos.org.au), is now delivering data for ocean and continental shelf research. With a focus on boundary currents, multi-platform multi-parameter data streams are being integrated to provide ‘whole of picture’ views of the physical and biological response of coastal and shelf seas around Australia. A combination of near real-time and delayed mode data are made available publicly through the IMOS ocean portal (http://imos.aodn.org.au). These data are delivered through an information infrastructure built on opensource software and employing national and international data standards. This robust working infrastructure for end-to-end data management, search, discovery and access to IMOS data is constructed from 3 main components: 1) A distributed data storage network; 2) A Geonetwork metadata catalog holding ISO 19115/19139 standard records utilising the Marine Community Profile, a subset schema to the full ISO 19115 standard; 3) An ocean portal for map-view access to the data. Through the portal a user can search for data by querying the catalogue, which returns metadata records and all associated datafiles and documents. The portal view is map-centric so users can geographically select a region or a specific data stream and access a range of data products and the data itself. Interoperable systems, based on accepted and recognised standards, provide an efficient mechanism for data discovery. The opportunity is now being taken to establish a ‘one-stop shop’ for Australia-wide marine data based on these systems, see the Australian Ocean Data Network (www.aodn.org.au).