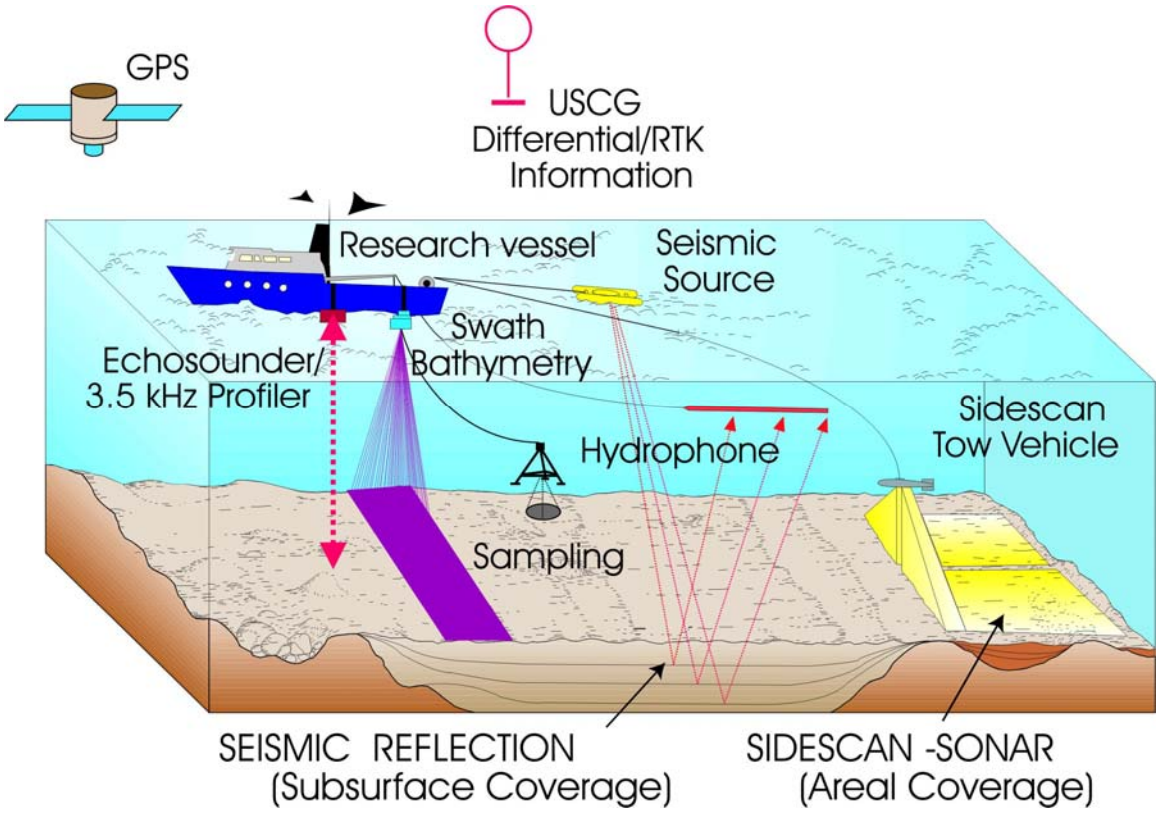

Figure 1_6. Mapping of the sea-floor is accomplished using instruments that measure the intensity of reflected sound waves to image the surface or subsurface layers of the seabed. Swath bathymetry and sidescan sonar provide information about the topography and reflectivity of the sediment surface from which interpretations about sediment types can be made. The sub-bottom profiler uses sound of lower frequency to penetrate the sediment surface enabling interpretation of subsurface stratigraphy. Precise navigation of the ship and towed instruments is determined using the Differential Global Positioning System (DGPS).