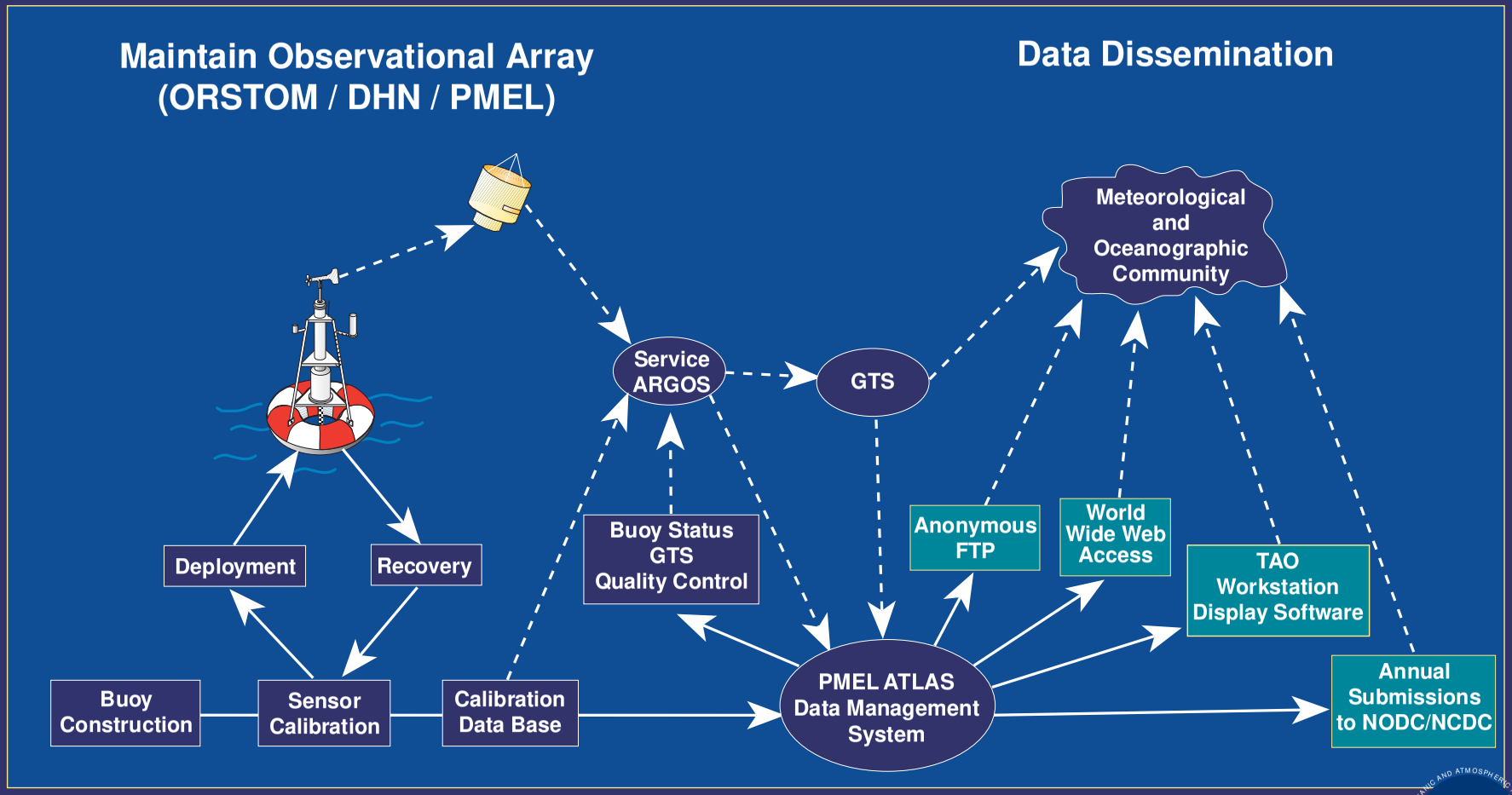PIRATA System Overview