Long Term In situ Oxygen Monitoring (LIOM)

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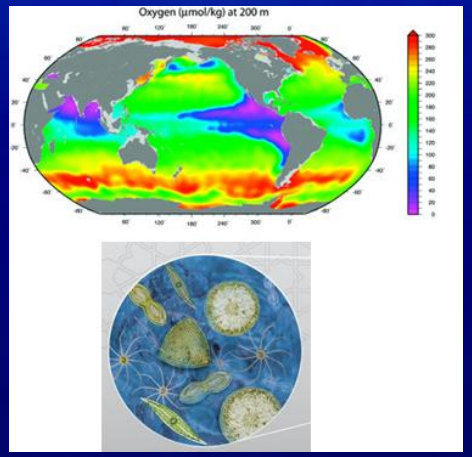
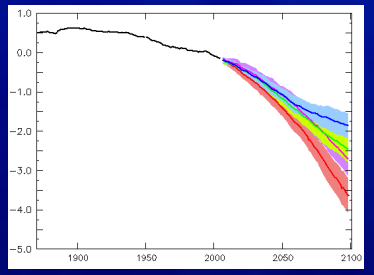
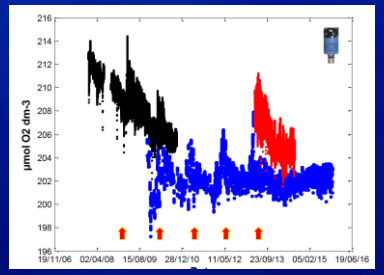
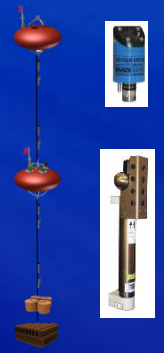


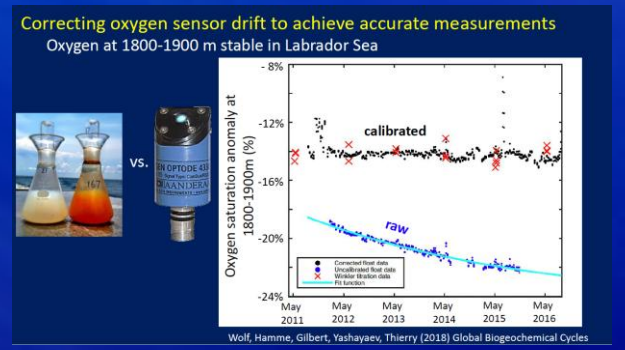
Monitoring Oxygen in the ocean is crucial for the status of the Ocean health and the fate of their diverse ecosystems.
Decrease of oceanic O2 content will impact Biodiversity and ecosystem services.





Observation and models show increasing decline in the O2 oceanic content





Existing observation are relying on sensor « high » frequency observation or very low frequency in situ measurements
Either in situ « correction » or lab sensor calibration are not allowing precision better than 2-3 µM.

The main LIOM objective : Automatisation of the Winkler titration (1888)

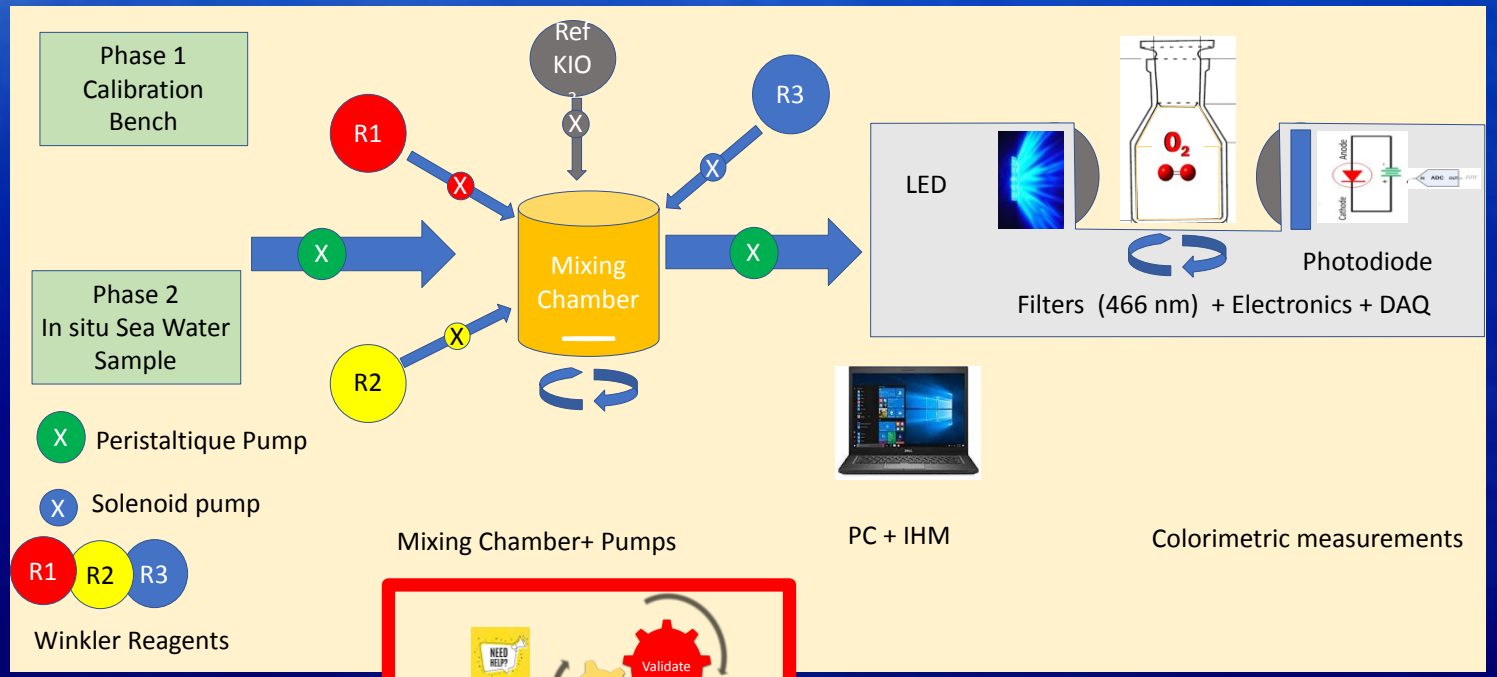
Why do we need to improve our time series data quality ?

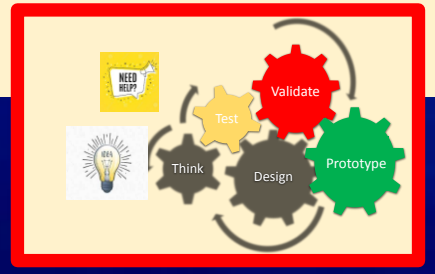
To assess in situ dynamics a 1µM accuracy is required and decipher processes.

NCP, respiration, ventilation, physical drivers, OMZ dynamics and TRENDS !

Laboratory calibration

Improve capabilties To serve the community METROCEAN





In situ sensor monitoring

Oceansites moorings