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Regional Cabled Array (RCA) Data QA/QC Activities and Priorities

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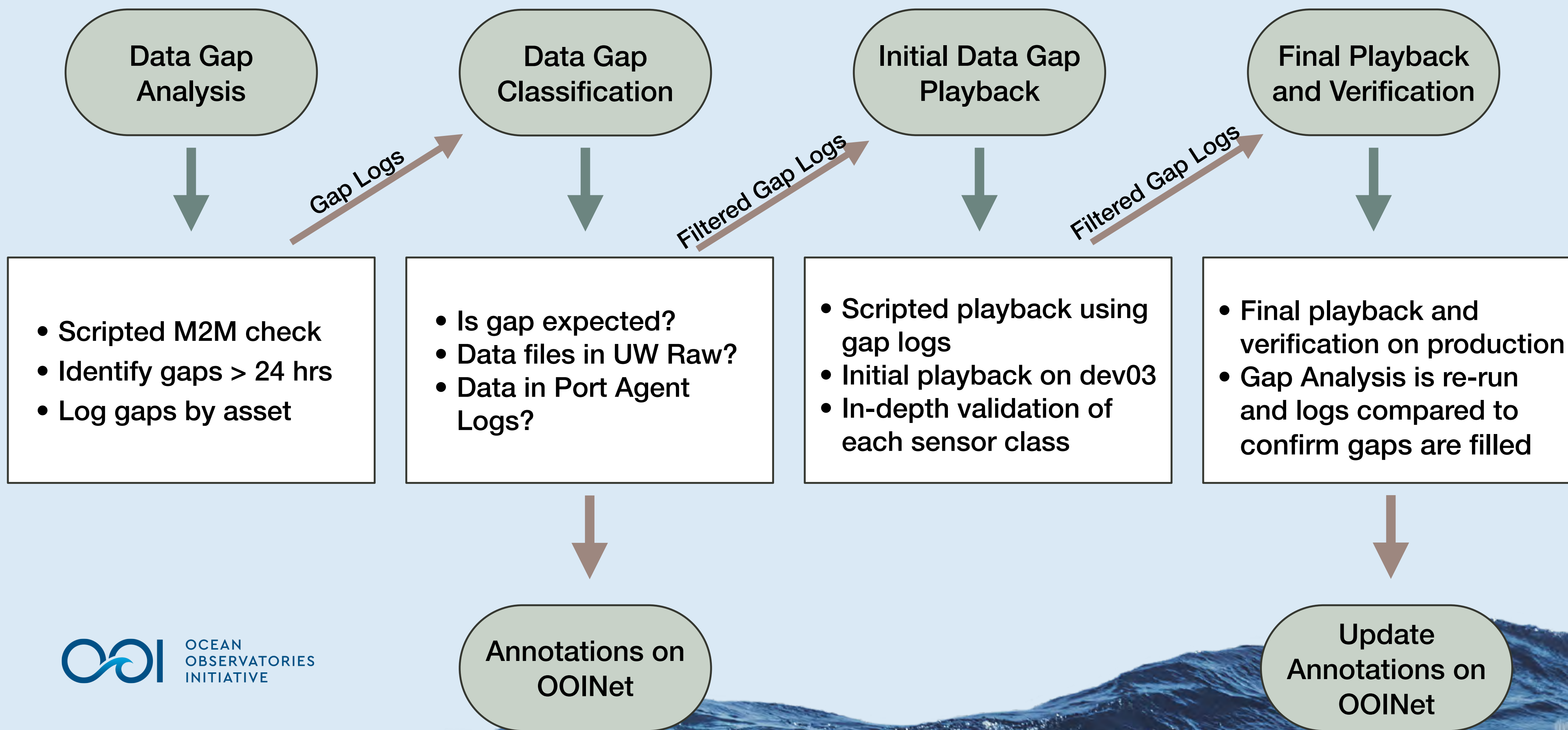
RCA Data QA/QC Completed Activities

- Uploaded RCA Discrete Water Sample Data from 2015 - 2019 to Alfresco
- Assisted with cleanup and reorganization of OOI Raw Data Server
- User communication for audit of historical Critical Metadata
- Identification of pCO₂ blank interpolation and deployment mask issues
- Cross-MIO collaboration to implement 3-beam solution for partially disabled ADCPs
- Updated instrument drivers and parsers for PAR
- Developed workflow and initiated comprehensive data gap analysis for all RCA data
- Initiated playback for RCA data gaps and purging of incorrect reference designators



RCA Data QA/QC Ongoing Activities

Historical RCA data availability check and cabled playback



RCA Data QA/QC Ongoing Activities

- Critical Metadata Audit, Phase 3:
 - ▶ Verification of seismic instrument (TIER 1) Critical Metadata at IRIS
 - ▶ Verification/ingestion of Critical Metadata for RCA Platforms
 - Deep Profiler assignments
 - Engineering deployment assignments data
 - ▶ Verification of non-data affecting deployment parameters (lat, long, depth)
 - ▶ Deployment image database



RCA Data QA/QC Ongoing Activities

- Sensor Specific Deep Dives:
 - ▶ Seafloor sensors:
 - Updates of instrument drivers and parsers for THSPH
 - Compile corrected TMPSF calibration coefficients, probe coordinates, headings
 - ▶ HYDBB
 - Creation of transfer functions and calibration data repository
 - Resolution of HYDBB file fragmentation on raw archive
 - Implementation of additional data formats, capture and playback of diverted raw data
 - ▶ Test and implement Aanderaa oxygen optode cal phase calculation updates
 - ▶ Bioacoustic Sonar (ZPLSC) Data Products working group

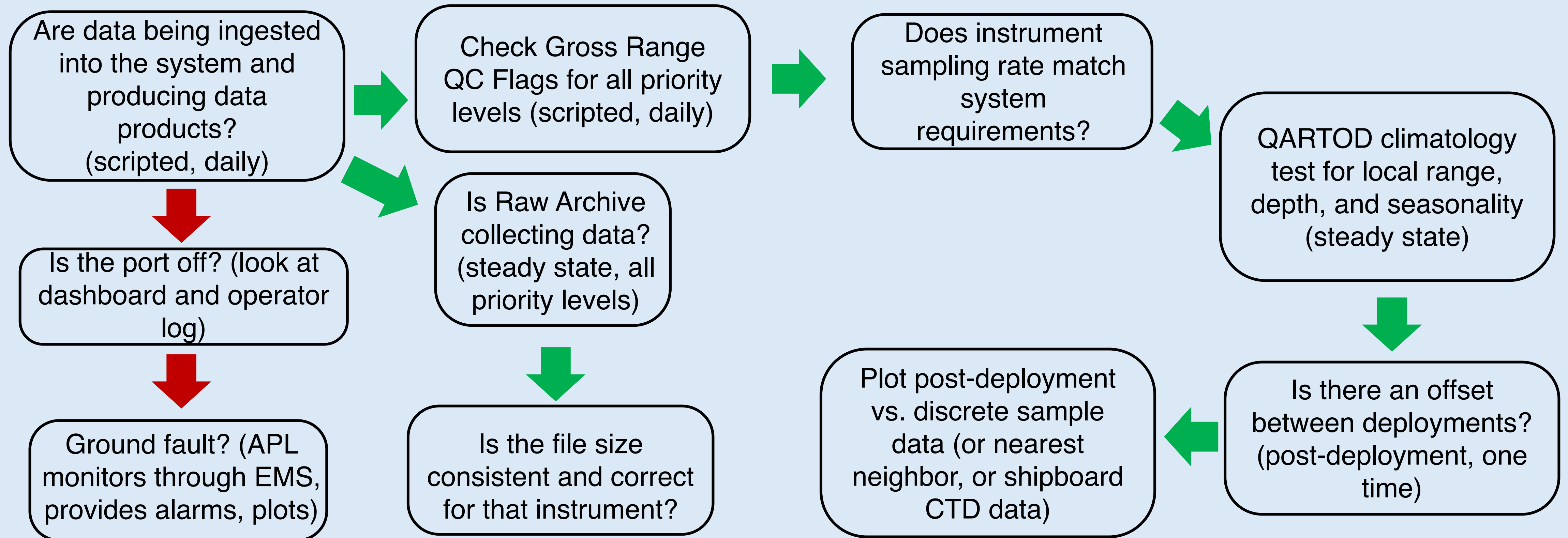




RCA Data QA/QC Ongoing Activities

- Development of Draft RCA-specific HITL data QA/QC Workflow
 - ▶ Instrument Categorization for QC Checks based on user priority
 - **Daily**: CTD, DO, BOTPT, NUTNR, FLOR, pCO2, pH, PAR, SPKIR, ADCP, VELPT
 - **Weekly**: CAMHD, THSPH, TRHPH, TMPST, ZPLSC, OPTAA, PREST, VEL3D, VADCP
 - **Bi-Weekly**: HPIES, CAMDS, HYDLF, HYDBB, OBSBB, OBSSP
 - **Annually**: Physical samples, Core Analytical Data
 - **External QC**: PI instruments

RCA Data QA/QC HITL Workflow (DRAFT)



- If an issue occurs more than once within a 24-hour period, it receives a single annotation
- If an issue occurs more than 24 hours after the first issue occurred, it receives a separate annotation
- If a time period has frequent issues, the entire week/month/deployment receives a single annotation



RCA Data QA/QC Ongoing Activities

- Assisting with design and implementation of QARTOD-based automated QC tests
- Cross-MIO collaboration to update OOI Documentation (e.g. DPS documents)
- Compilation of Core Analytical Data and Metadata products
- Metadata entry and cruise documentation for VISIONS 2020 Cruise
- OOI Data Management Working Group and subgroups: QARTOD, Redmine, Preload, Keryx, RDB, DPS Updates, Sensor-specific
- Monitoring data flow from instruments through network to OOINet and Raw Servers
- Active investigation/resolution of data-related Redmine Tickets, including help desk

RCA Data Team Outreach

- Meetings and conferences
 - ▶ OOI Data Management Working Group meeting at Woods Hole, MA (Jan 7 - 9, 2020)
 - ▶ MIO Instrument Group meeting at Victoria, BC (Feb 24 - 26, 2020)
 - ▶ Ocean Sciences 2020: presentations, OOI Town Hall, staffing OOI booth (Feb 17 - 21, 2020)
- Compiled RCA feedback and requirements for PMO initiatives: Keryx, Trapeze, RDB
- Student engagement (Visions 2019 class, independent study student projects)





RCA Data QA/QC Upcoming Priorities

- Finalization and Implementation of RCA-specific HITL data QA/QC workflow
- Completion of Critical Metadata Audit
- Sensor Deep Dives, as needed
- Completion of RCA historical data availability check, expansion of capabilities (parameter breadth, gap size tolerance)
- Asset management upload and verification for 2020 deployments
- Participation in RCA O&M Cruise (VISIONS 2020)



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Questions?



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