



# SeaDataCloud

WP10 – Virtual Research Environment –

Progress of VRE development

WP10 team @ GA Brest

# Outline

1. SDC VRE – progress summary
2. Demo of individual components
3. Outlook and discussion

# 1. VRE – Progress summary

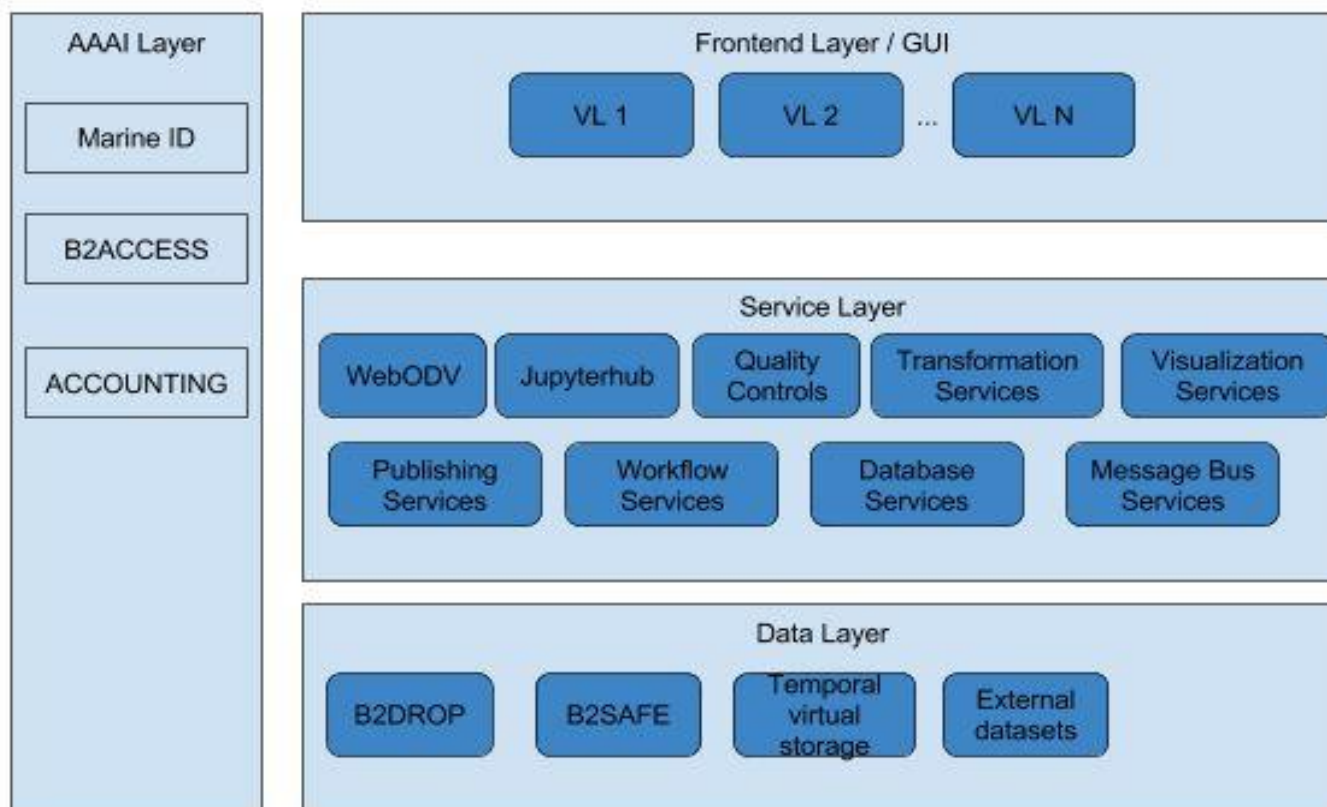
# VRE aim is to support 5 versatile use cases:

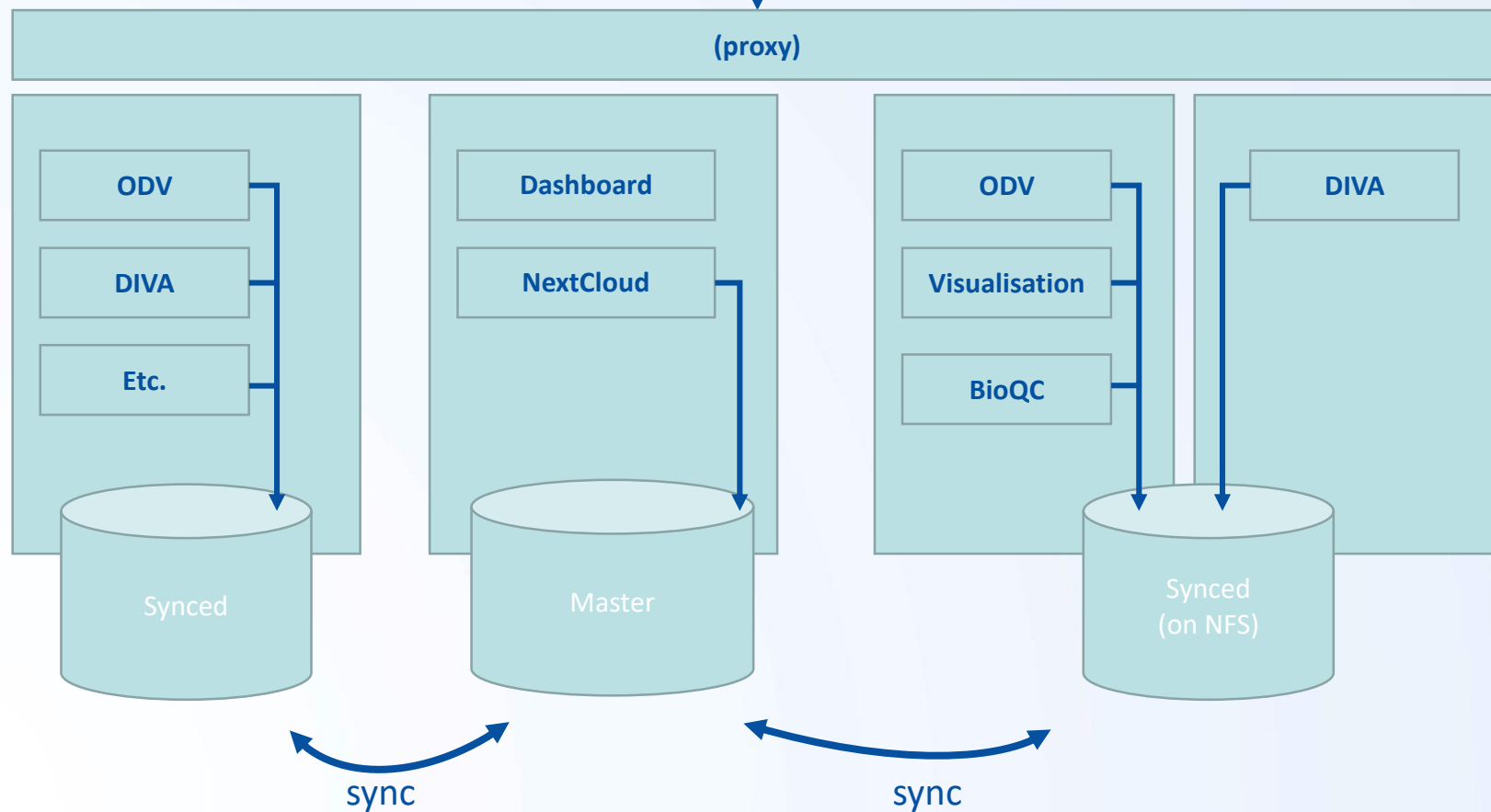
1. **SeaDataNet Temperature and Salinity** water column analysis
2. **EMODNET - Chemistry**, same for bio-geo-chemistry
3. **SeaDataNet Biology Quality Assessment**
4. **EMODNET - HRSM**, DTM processing
5. **Processing and visualising data sets**

# First functions targeted of T/S (narrow abstract of total use case!)

log in with single sign on	B2ACCESS + Marine-ID
integration GUI development	Javascript library
apply water column obs quality control with friendly data editor and save result,	webODV
advise data centre of the regional quality control	
be advised of quality control result (email of log of changes/anomalies sorted per DC)	email
configure DIVA interpolation	Jupyter + DIVA library
apply DIVA interpolation, send notification (email) when processing is completed	
visualize interpolation result together with original observations of other observations	
extract and view profiles, time series, hovmuller out of the interpolation result	
publish dataset results (metadata and data), get a DOI	oceanBrowser+oceanotron+sextant-dataCite

# SDC VRE Architecture – level 1





## Deployment status

- Prototype version running on Orca- DKRZ  
<https://vre.seadata.org>
- In progress: Deployment at GRNET and STFC
- Successful user tests done in training sessions  
Oostende June/July 2019
- Focus on the internal user sofar but with one eye  
on the later use by wider Scientific user!



## 2. Progress per component

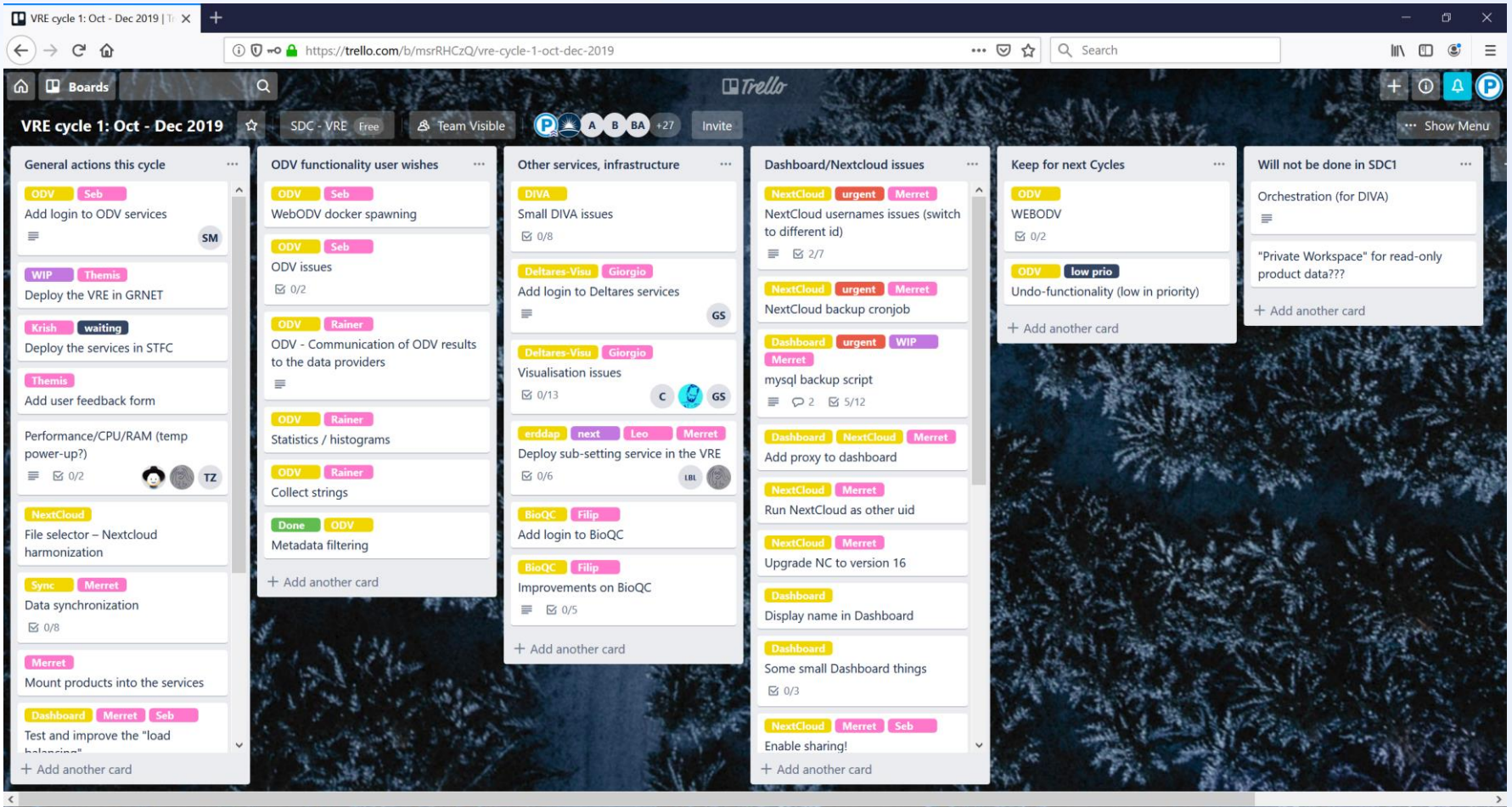
Demo and highlights

## 3. VRE outlook and discussion

## Where are we now?

- Components have been integrated in first prototype
- Open for tests with the internal users
  - WP11 data product group
  - Other internal users
  - Feedback will be used to improve the VRE in 3 development cycles in final year
- Ideas for user consultation with scientific users outside of SDC 2020

# Overview Cycle 1 on Trello board



The screenshot shows a Trello board titled "VRE cycle 1: Oct - Dec 2019" with a URL of <https://trello.com/b/msrRHCzQ/vre-cycle-1-oct-dec-2019>. The board is organized into several columns, each representing a different category of tasks:

- General actions this cycle:**
  - ODV, Seb: Add login to ODV services (SM)
  - WIP, Themis: Deploy the VRE in GRNET
  - Krish, waiting: Deploy the services in STFC
  - Themis: Add user feedback form
  - Performance/CPU/RAM (temp power-up?): 0/2 (TZ)
  - NextCloud: File selector - Nextcloud harmonization
  - Sync, Merret: Data synchronization (0/8)
  - Merret: Mount products into the services
  - Dashboard, Merret, Seb: Test and improve the "load balancing"
- ODV functionality user wishes:**
  - ODV, Seb: WebODV docker spawning
  - ODV, Seb: ODV issues (0/2)
  - ODV, Rainer: ODV - Communication of ODV results to the data providers
  - ODV, Rainer: Statistics / histograms
  - ODV, Rainer: Collect strings
  - Done, ODV: Metadata filtering
- Other services, infrastructure:**
  - DIVA: Small DIVA issues (0/8)
  - Deltareo-Visu, Giorgio: Add login to Deltareo services (GS)
  - Deltareo-Visu, Giorgio: Visualisation issues (0/13) (C, GS)
  - endrap, next, Leo, Merret: Deploy sub-setting service in the VRE (0/6) (LBL)
  - BioQC, Filip: Add login to BioQC
  - BioQC, Filip: Improvements on BioQC (0/5)
- Dashboard/Nextcloud issues:**
  - NextCloud, urgent, Merret: NextCloud usernames issues (switch to different id) (2/7)
  - NextCloud, urgent, Merret: NextCloud backup cronjob
  - Dashboard, urgent, WIP, Merret: mysql backup script (2, 5/12)
  - Dashboard, NextCloud, Merret: Add proxy to dashboard
  - NextCloud, Merret: Run NextCloud as other uid
  - NextCloud, Merret: Upgrade NC to version 16
  - Dashboard: Display name in Dashboard
  - Dashboard: Some small Dashboard things (0/3)
  - NextCloud, Merret, Seb: Enable sharing!
- Keep for next Cycles:**
  - ODV: WEBODV (0/2)
  - ODV, low prio: Undo-functionality (low in priority)
- Will not be done in SDC1:**
  - Orchestration (for DIVA)
  - "Private Workspace" for read-only product data???

# Deliverable deadlines

Project month	Component	remark
PM12	VRE specification document	This document
PM15	Start actual developments VRE	Kickoff to be decided
PM18	D10.3: Specification of sub-setting application and development plan	Led by IFREMER
PM18	D10.5: Specification of Ocean Data View online and development plan	Led by AWI
PM18	D10.7: Specification of DIVA online and development plan	Led by ULiege
PM18	D10.9: Specification of Biology Data QC online and development plan	Led by VLIZ
PM18	D10.13: Specification of visualisation services and development plan	Led by Deltares
PM18	D10.19: Specification of MySeaDataCloud and development plan	Led by EUDAT
PM24	D10.10: Phase 1 of Biology Data QC online operational	Led by VLIZ
PM24	D10.17: Specification of SOS viewing services and development plan	Led by 52N
PM26	D10.15: Specification of Oceanotron services and development plan	Led by IFREMER
PM30 => 34	<i>D10.2 First version Virtual Research Environment (VRE) in the cloud operational</i>	<i>For internal users, related to selected use cases</i>
PM30 => 34	<i>D10.4: Sub-setting application operational in VRE</i>	<i>Led by IFREMER</i>
PM30 => 34	<i>D10.6: Ocean Data View online operational in VRE</i>	<i>Led by AWI</i>
PM30 => 34	<i>D10.8: DIVA online operational in VRE</i>	<i>Led by ULiege</i>
PM30 => 34	<i>D10.14: Visualisation services operational in VRE</i>	<i>Led by Deltares</i>
PM30 => 34	D10.20: MySeaDataCloud operational	Led by EUDAT
PM31	D10.18: SOS viewing services for data streams operational	Led by 52N
PM36	D10.11: Phase 2 of Biology Data QC online operational	Led by VLIZ
PM40	D10.16: Upgraded Oceanotron services operational for SeaDataNet WP11 data products	Led by IFREMER
PM42	D10.12: Phase 3 of Biology Data QC online operational	Led by VLIZ
PM42	VRE operational for internal (and some public?) users	New: No official deliverable

# Questions, or suggestions?