Summary of VRE needs and initial analysis for support on FedCloud

VLIZ - Flanders Marine Institute

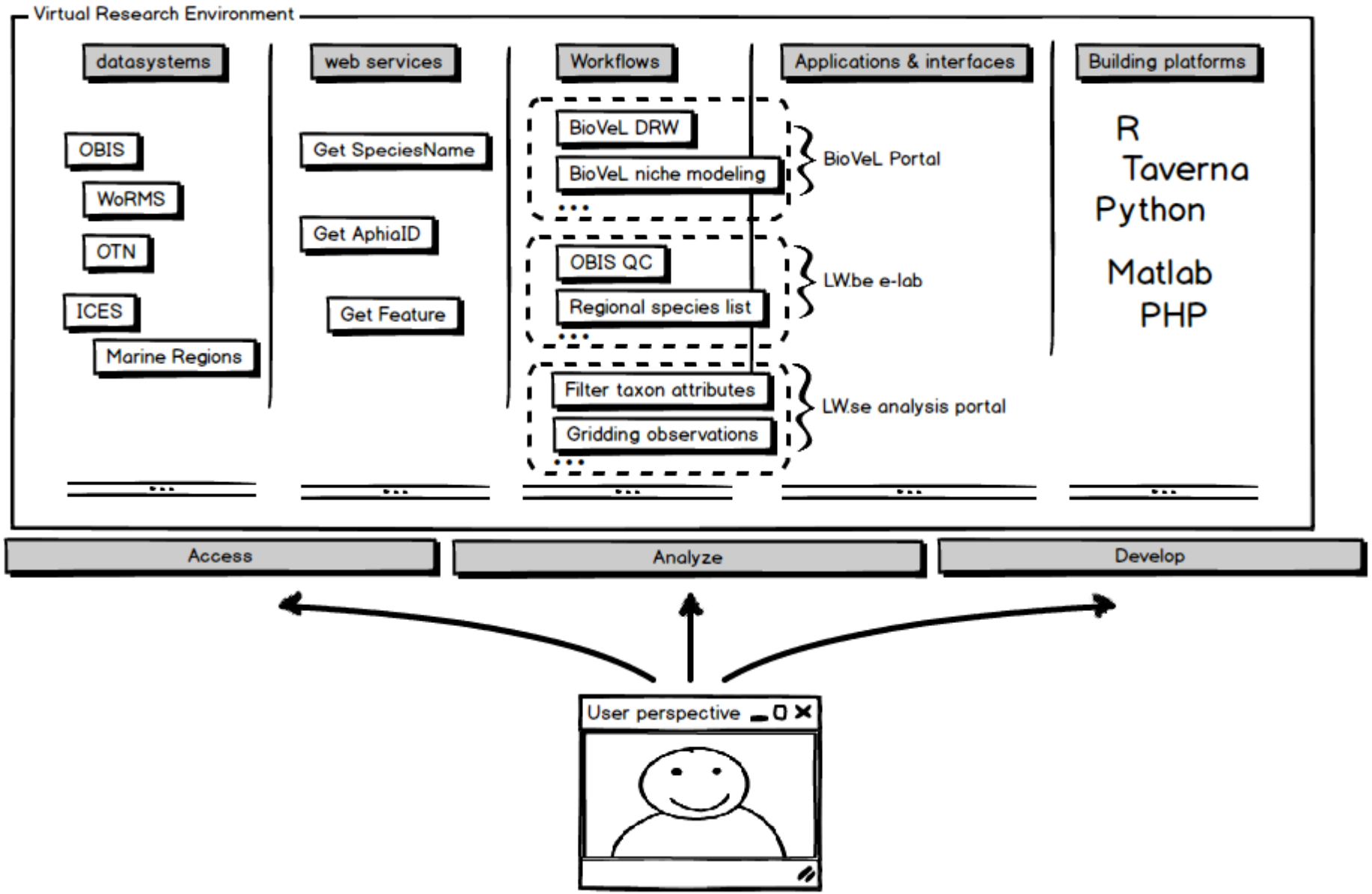
Lifewatch Marine VRE developments

- 2nd LifeWatch e-Infrastructure Construction Operational Meeting (Granada, Feb 2014)
- LifeWatch Marine technical Meeting (Crete, June 2014)
- Plans reported to LifeWatch stakeholders board (June 2014)
- BioVeL Portal integration meeting (September 2014)
- Technical developers workshop BioVeL (October 2014)
- First version marine VRE portal online (November 2014)
- Feedback phase (December 2014)
- Official launch marine VRE (February 2015)
- LifeWatch Virtual Labs working meeting (Amsterdam, March 2015)
- Non-marine VRE meeting (Louvain-la-Neuve, July 2015)

Concept

- LifeWatch bottom-up development **demonstrating possibilities**
- Construction of **light version that can grow** towards a full grown infrastructure conform reference model envisaged under LW
- VRE is a **collection of Virtual Laboratories**
- Building marine virtual research environment based on **existing & operational components :**

  data resources, web services, analysis services and tools.
- **Inventorizing components** that could and should be supported by Lifewatch ICT


Virtual Research Environment
datasystems
web services
Workflows
Applications & interfaces
Building platforms
OBIS
WoRMS
OTN
ICES
Marine Regions
Get SpeciesName
Get AphiaID
Get Feature
BioVeL DRW
BioVeL niche modeling
BioVeL Portal
OBIS QC
Regional species list
LWbe e-lab
Filter taxon attributes
Gridding observations
LWse analysis portal
R
Taverna
Python
Matlab
PHP
Access
Analyze
Develop
User perspective

LIFEWATCH
Marine VRE

http://marine.lifewatch.eu

Access Analyze Develop About

Access

Retrieve and access data resources holding marine biodiversity and ecosystem data. A range of data systems offering data on species names, traits, distribution and genes.

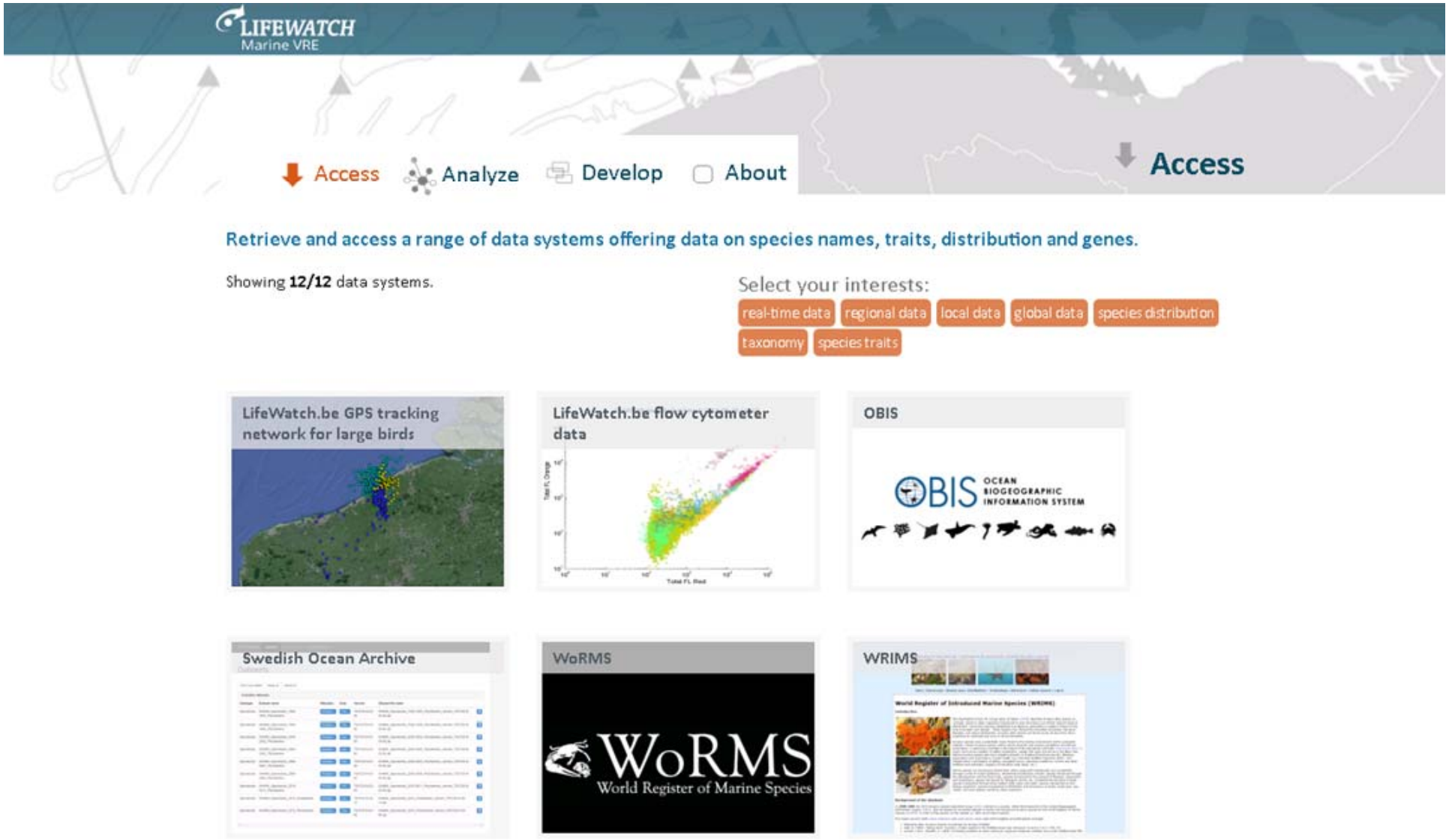
Analyze

Online tools that facilitate data analysis of marine biodiversity and ecosystem data. Analysis is performed on data from known data resources and/or data uploaded by the user.

Develop

Build your own marine virtual lab making use of a range of available web services that access and process data. Service catalogues and 'how to' manuals help you to develop your own system.

LifeWatch Marine VRE



Needs for support on FedCloud

- Access -> Upscale virtual lab components
  - Upgrading performance geospatial web services

    $\Rightarrow$ Load balanced farm of Geoservers

    (room for detailed technical discussion?)
  - Biodiversity catalogue listing and monitoring web services

Needs for support on FedCloud

- Analyse -> Requirements for upscaling virtual labs
  - Performant server running Biovel/Blue portal workflows with multiple simultaneous users
  - Performant server running Vlabs created using R Shiny

Needs for support on FedCloud

- Develop
  - Sandbox environment for development of Vlabs
    - R Studio Server, Gitthub, … (see R Tools session)
    - Taverna Server workflow platform
  - Possibility to publish created Vlabs in Access or Analyse section