

# Connecting ESFRIs: Collaboration between Research Infrastructures

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# European Strategy Forum on Research Infrastructures

a strategic instrument to develop the scientific integration of Europe and to strengthen its international outreach

# ESFRI clusters

- Energy
- Environment
- Health & Food
- Physical Sciences & Engineering
- Social & Cultural Innovation
- Data, Computing and Digital Research Infrastructures



# EUROPEAN OPEN SCIENCE CLOUD

- Virtual environment
- Seamless integration of services
  - Data storage
  - Data management
  - Data analysis
  - Re-use of data
  - Seamless integration of services
- Across scientific disciplines and borders
- ESFRI Forum: domain specific implementation

# Environmental & Life Sciences



# International Research Infrastructures in Flanders

The Science Commission (FWO) identified a number research infrastructures in Flanders that include data platforms and that would benefit from closer coordination with each other



# Implementing EOSC: ESFRI driven Open Science

*This project will build **experience and knowledge** and expedite **adoption of the VSC cloud resources** by other scientific domains. This will allow the ESFRIs to provide services to their communities within the context of the **European Open Science Cloud (EOSC)**. This project brings together two institutes (VIB and VLIZ) coordinating ESFRIs that have not yet collaborated on Flemish level. This project will **explore synergy in development of research infrastructure** and explore related collaborations within Flanders.*

EWI-funded project

Original scope: ELIXIR + Lifewatch

Expanded to ESFRIs in Flanders  
(Environment and Health & Food)



# Main Goals

- Build expertise and knowledge across ESFRIs
- Expedite adoption of the VSC cloud resources by other scientific domains
- Explore **synergy** in development of research infrastructure
- Explore **future collaborations** within Flanders
- To allow ESFRIs to provide services to their communities within the context of the European Open Science Cloud (EOSC)



# ESFRIs in Flanders: Environment



e-Infrastructure for Biodiversity and Ecosystem Research



Distributed System of Scientific Collections



Integrated Carbon Observation System

# ESFRIs in Flanders: Health & Food



A distributed infrastructure for life-science information



Infrastructure for Analysis and Experimentation on Ecosystems



European Research Infrastructure for Imaging



European Marine Biological Resource Centre



Integrated Structural Biology Infrastructure

# Aspects of responsible Research Data Management

- Data management plans
- Describing data
- Tools for data management
- Integrating data management and data analysis
- Involving all stakeholders

# Action plan

- Data Management Tools
- Cloud applications and integrations
- Open Science Communication

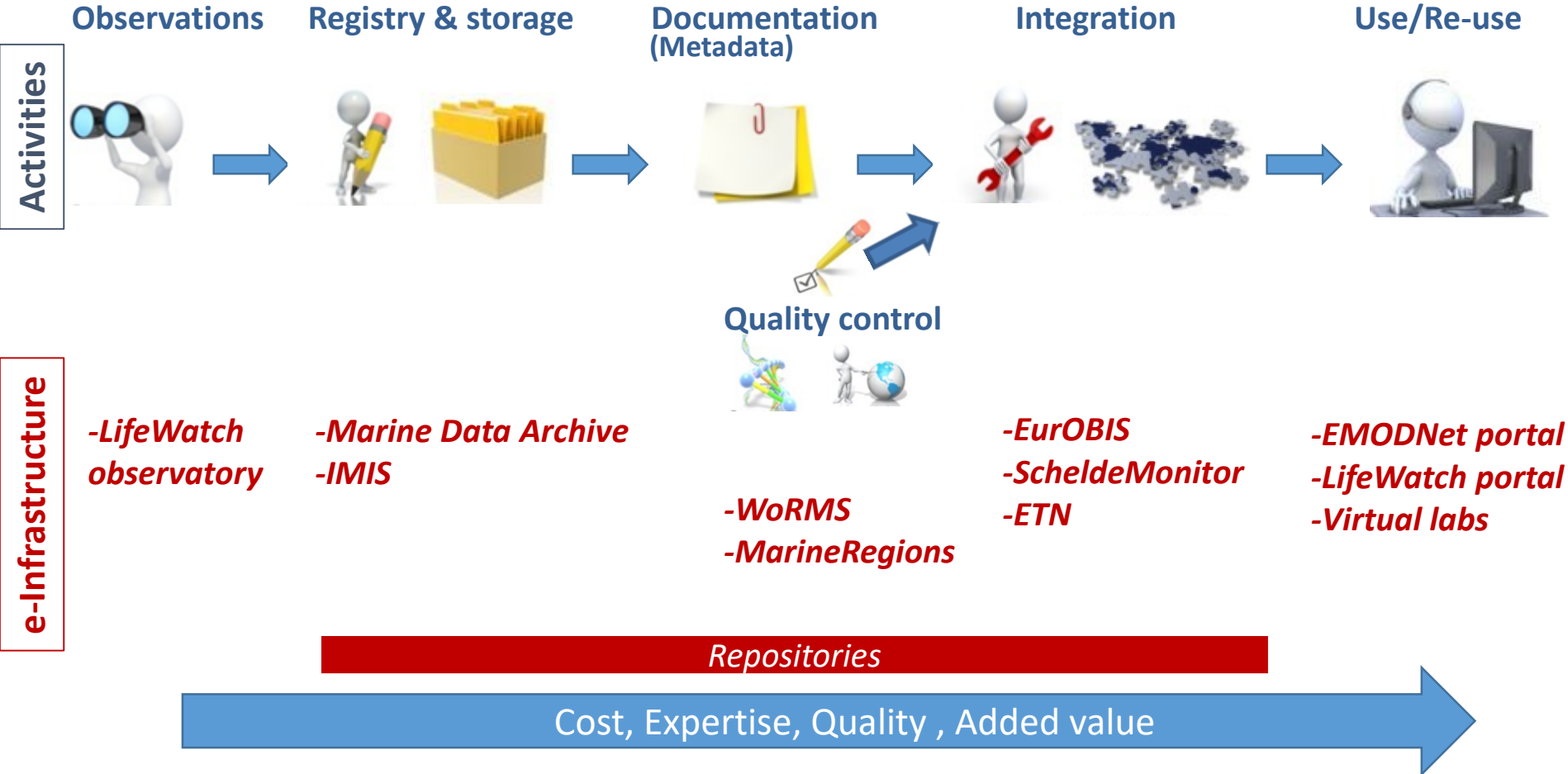
# Activities and results

- Interviews with representatives from 5 ESFRIs Belgian nodes:
  - DiSSCo: 30 august 2019
  - EMBRC: 19 september 2019
  - ICOS + AnaEE: 22 october 2019
  - LifeWatch: 5 november 2019
  - Euro Bioimaging: 14 november 2019

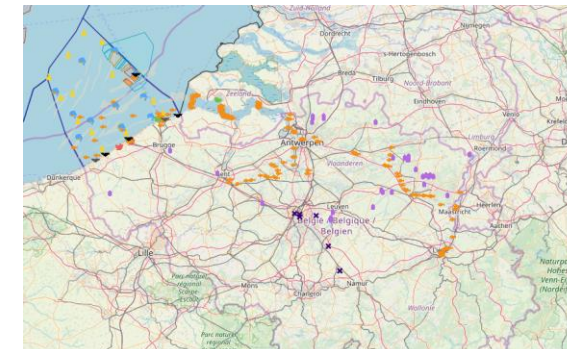
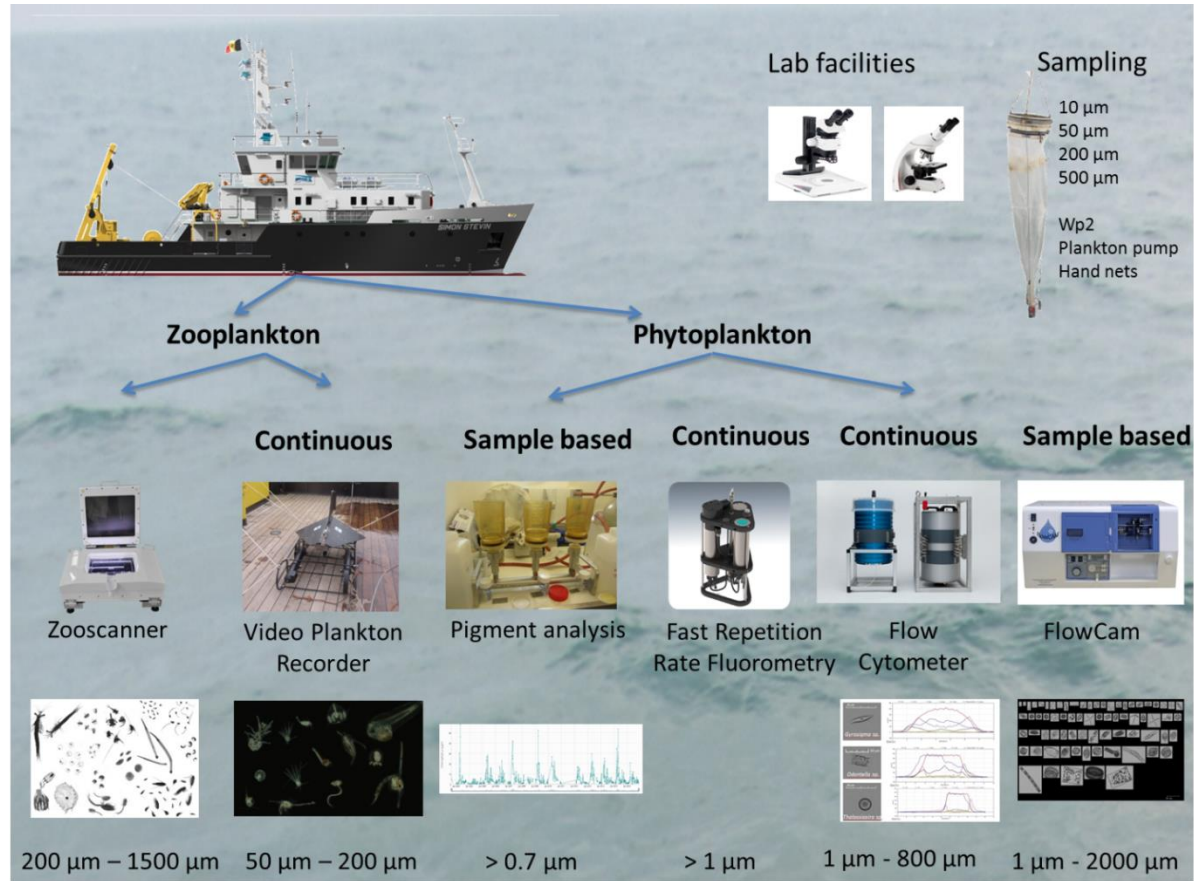
# Result

- Draft report first week March 2020 will be sent to the ESFRIs
  - Gives overview of data, data analysis platforms, data challenges and opportunities
  - Common data types, data mgmt tools, data analysis tools detected
  - Common needs detected
  - Network visualisations

# Towards FAIR and OPEN data management

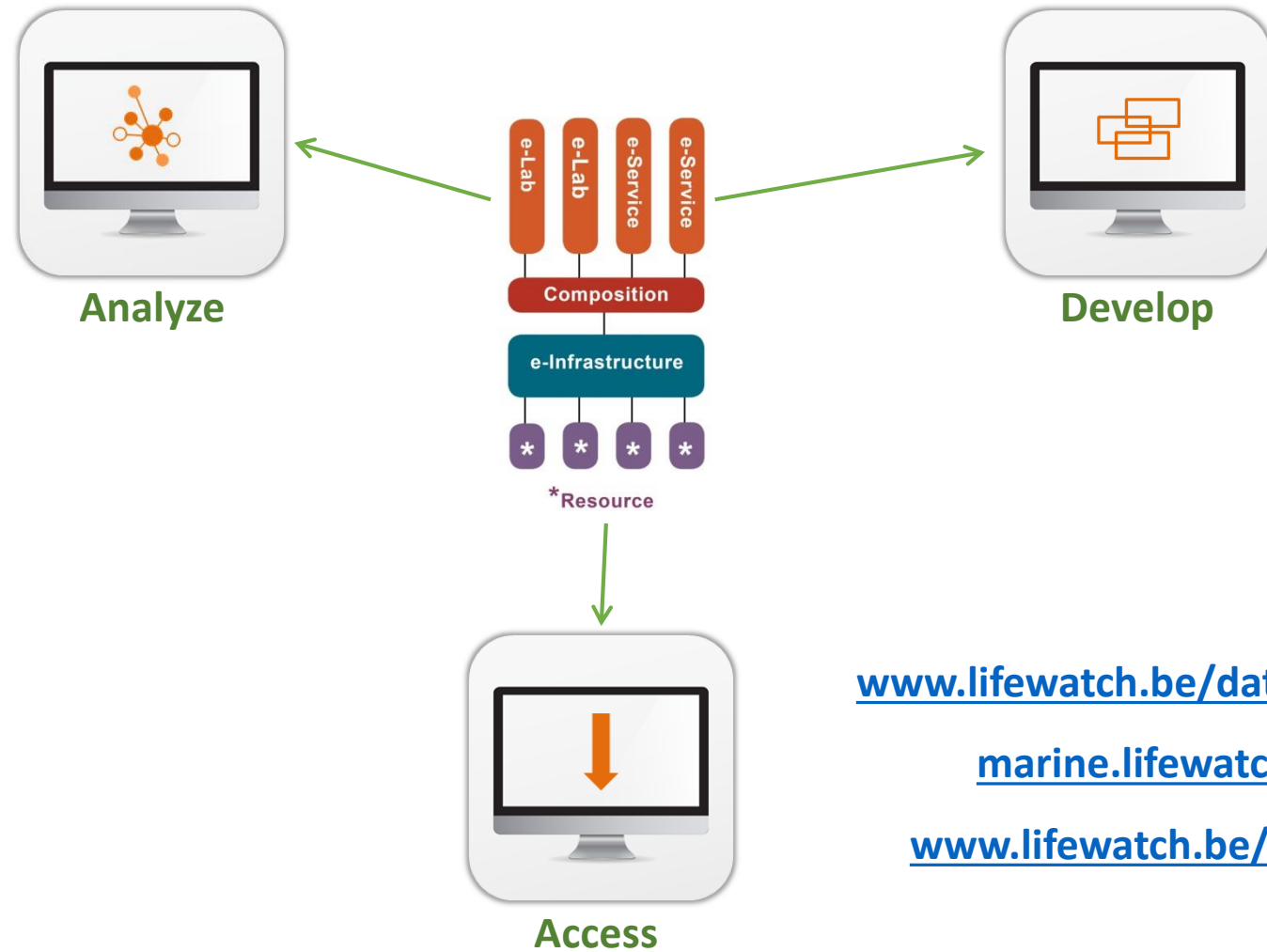


# Observatories





# Virtual Research Environments



[www.lifewatch.be/data-services/](http://www.lifewatch.be/data-services/)

[marine.lifewatch.eu](http://marine.lifewatch.eu)

[www.lifewatch.be/en/e-lab](http://www.lifewatch.be/en/e-lab)

# Species information backbone

