

# IGC2

28 March  
2019

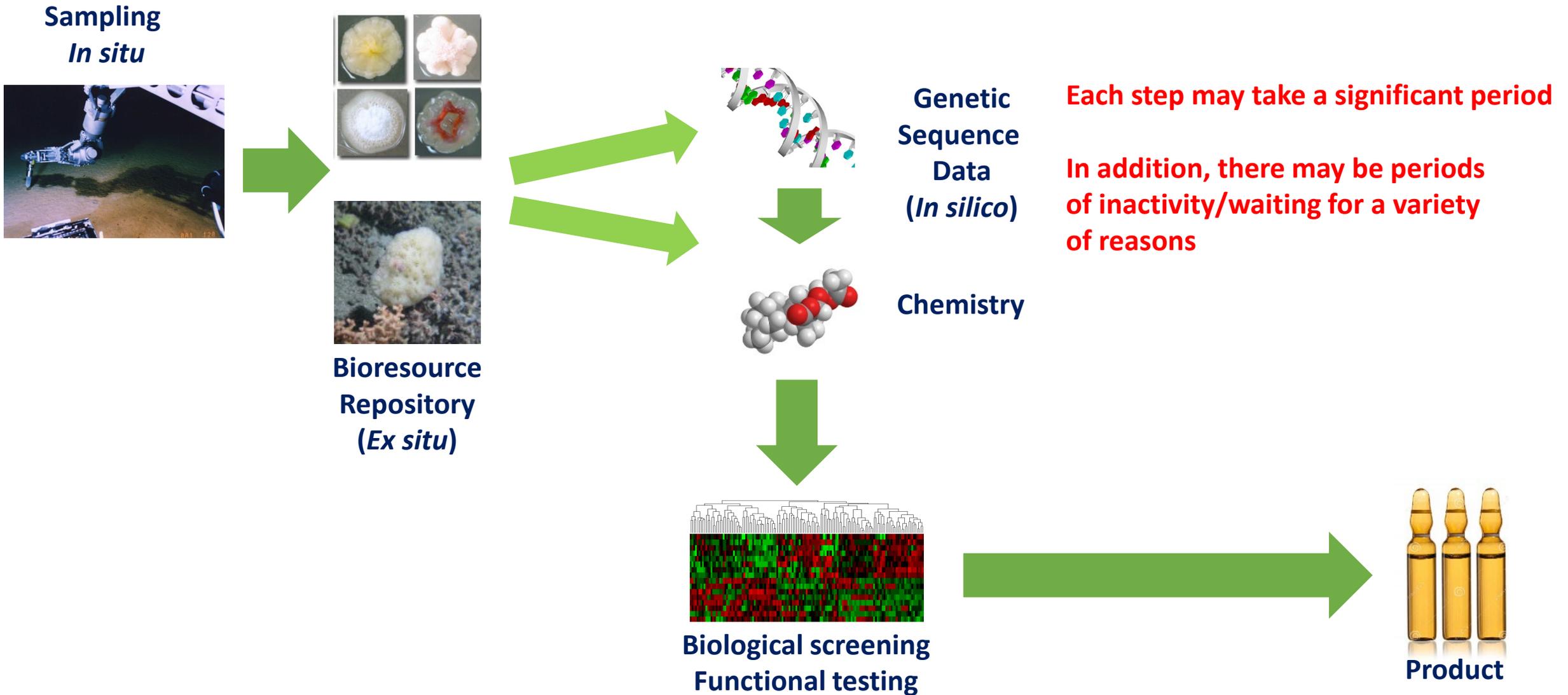
- ACCESS AND BENEFIT SHARING
- MANAGEMENT TOOLS
- ENVIRONMENTAL IMPACT ASSESSMENTS
- TECHNOLOGY TRANSFER
- CROSS CUTTING

Side Event  
Conference Room 12  
1.15-2.30

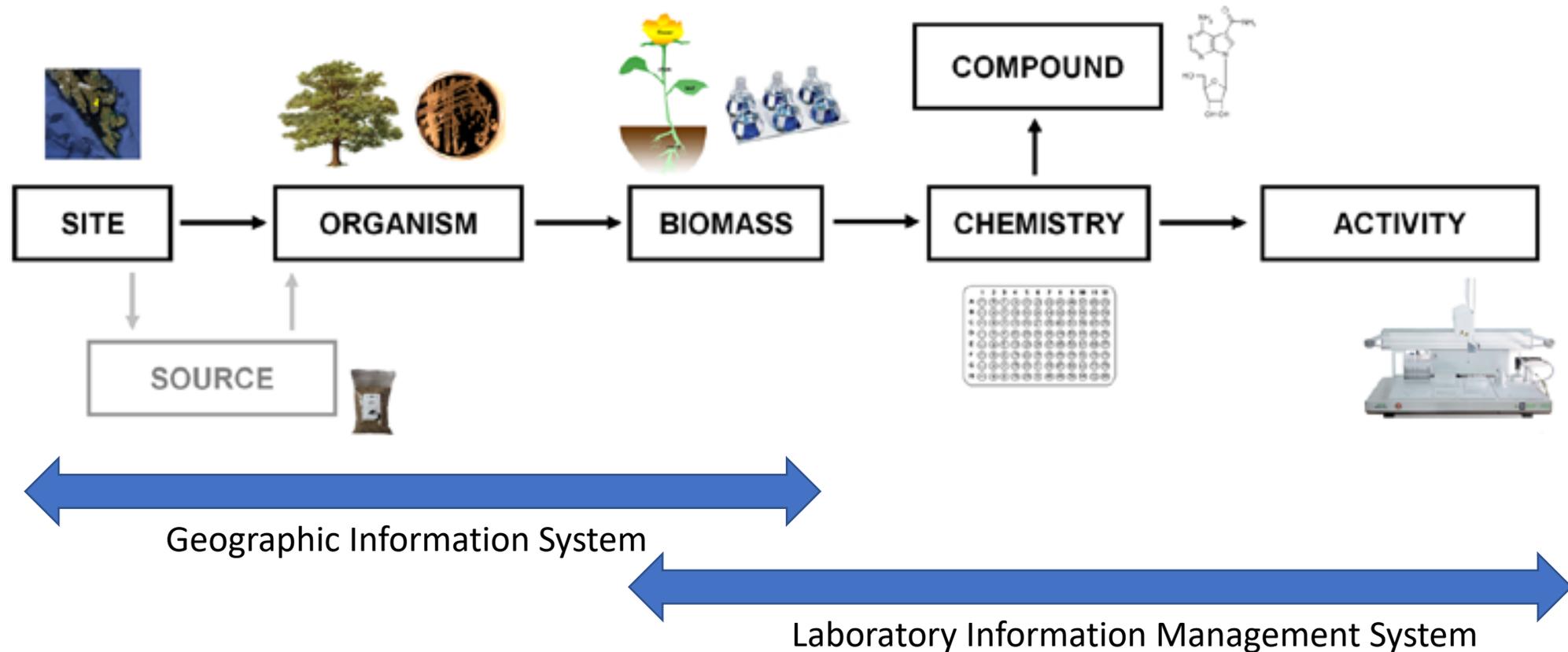
Mare Geneticum and an  
EcoSystem Approach:  
Power, Openness and Sharing



# The Biodiscovery Pipeline is Discontinuous



# Sample and Data Management

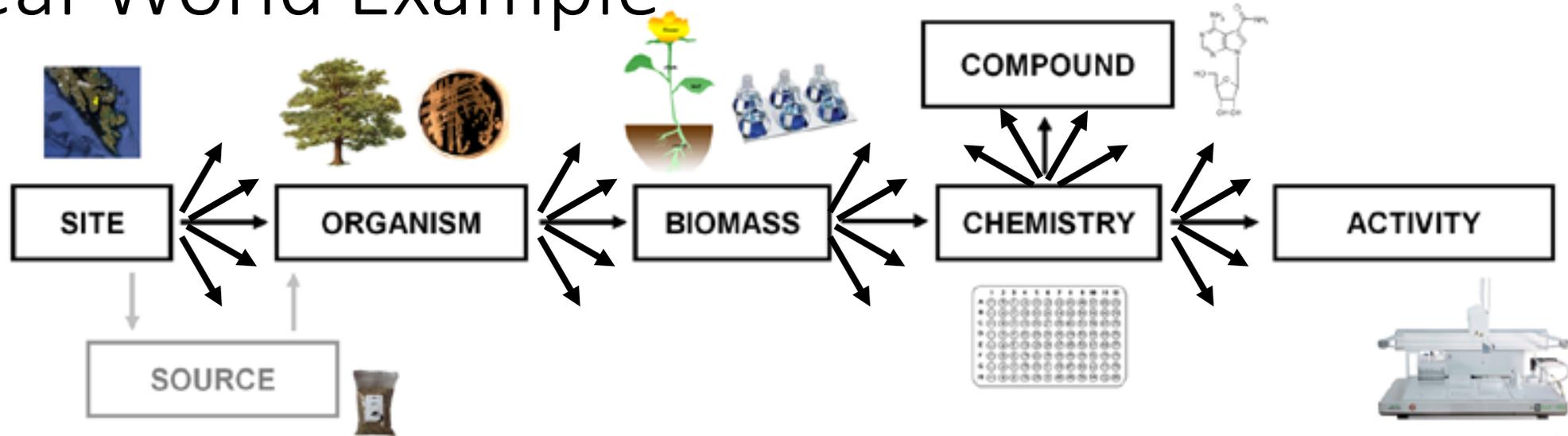


**Sample and data management from origin to exploitation is possible**

**Already part of good scientific practice but needs standards & improved data infrastructure**

# Real World Example

**25 Compounds**



Example

1 sample  
of sediment

100 new microbes  
(10 used)

Each microbe  
grown in 4  
different media

Each one  
gives 8 fractions

Each fraction  
tested in 10  
assays

**1**

**10**

**40**

**320**

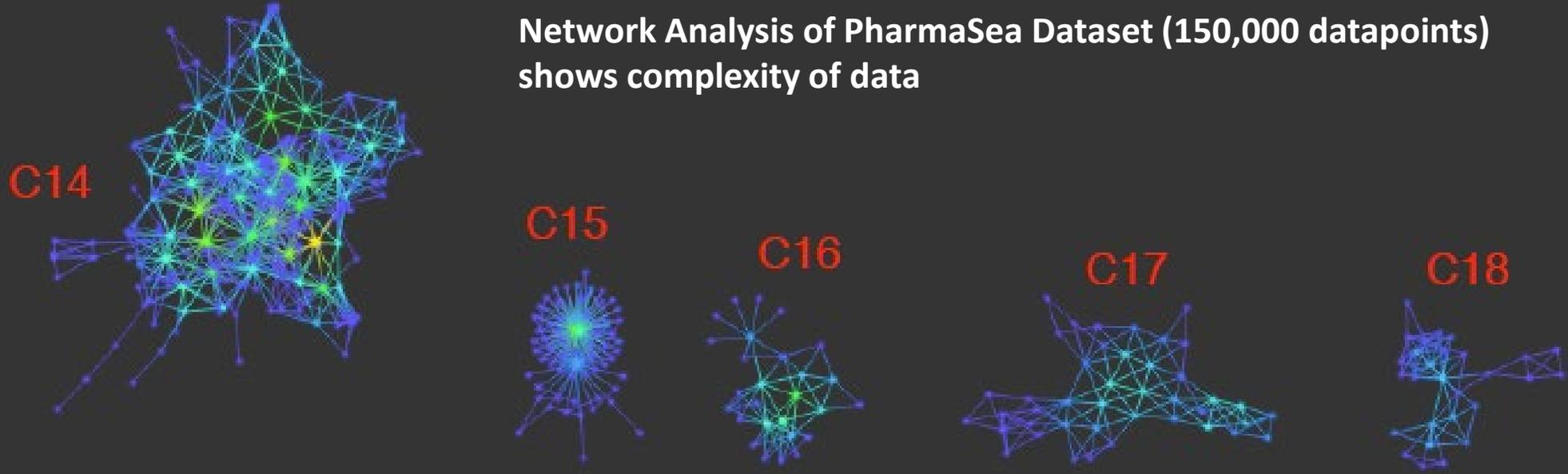
**3200**

**Total 3596 datapoints – for 1 sample  
& Genetic Sequence Data**

C19  C20 

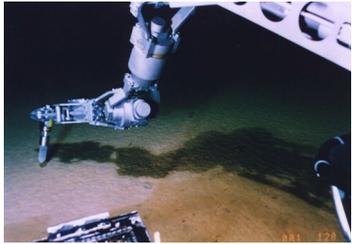


**Network Analysis of PharmaSea Dataset (150,000 datapoints)  
shows complexity of data**



# Obligatory Prior Electronic Notification (OPEN)

Sampling  
*In situ*



Submit OPEN

Obtain Unique Identifier



Bioresource  
Repository  
*(Ex situ)*

Update OPEN

(Location, metadata, species etc)

Share Materials

Researchers accessing material  
provided with Unique Identifier

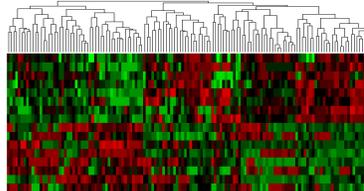


Genetic  
Sequence  
Data  
*(In silico)*

Share  
Data



Chemistry



Biological screening  
Functional testing

Unique  
Identifier  
Needed for  
Publication/IP



Product