

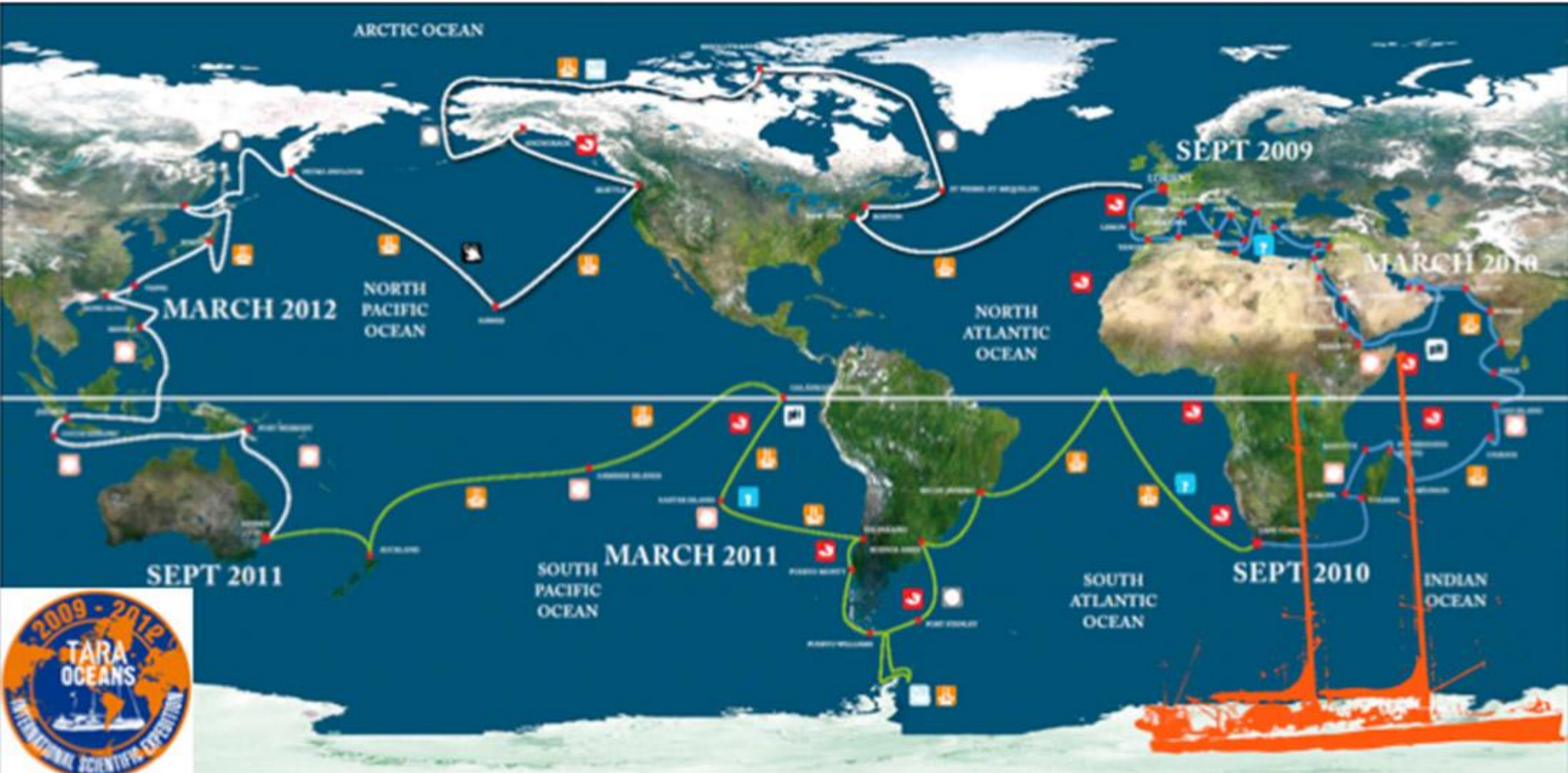
The Ocean Cloud Commons

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University of Arizona



TARA OCEANS

Our Community: Studying Global Oceans Systematically



Integrating viruses, bacteria, archaea, protists, metazoans

Interweaving genomics, optics, physiochemical, satellite

Our Challenges: the Global Study of Microbes

Integrate large-scale –omics, optic, & satellite datasets

Interlink physiochemical and environmental context

Examine temporal & spatial scales across ecosystems

Cooperate among disciplines to harmonize data

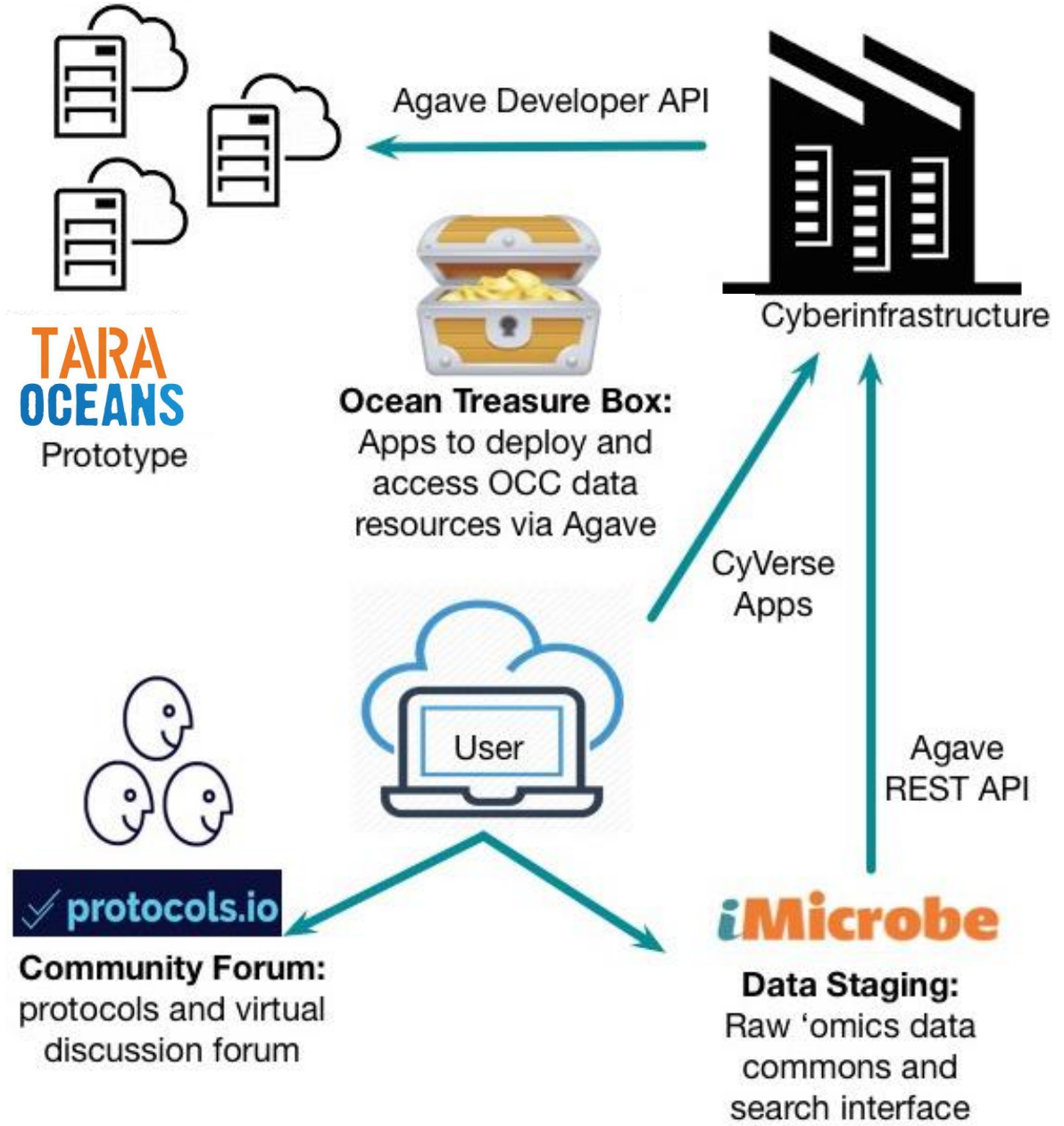
Maintain sampling and analysis protocols & provenance





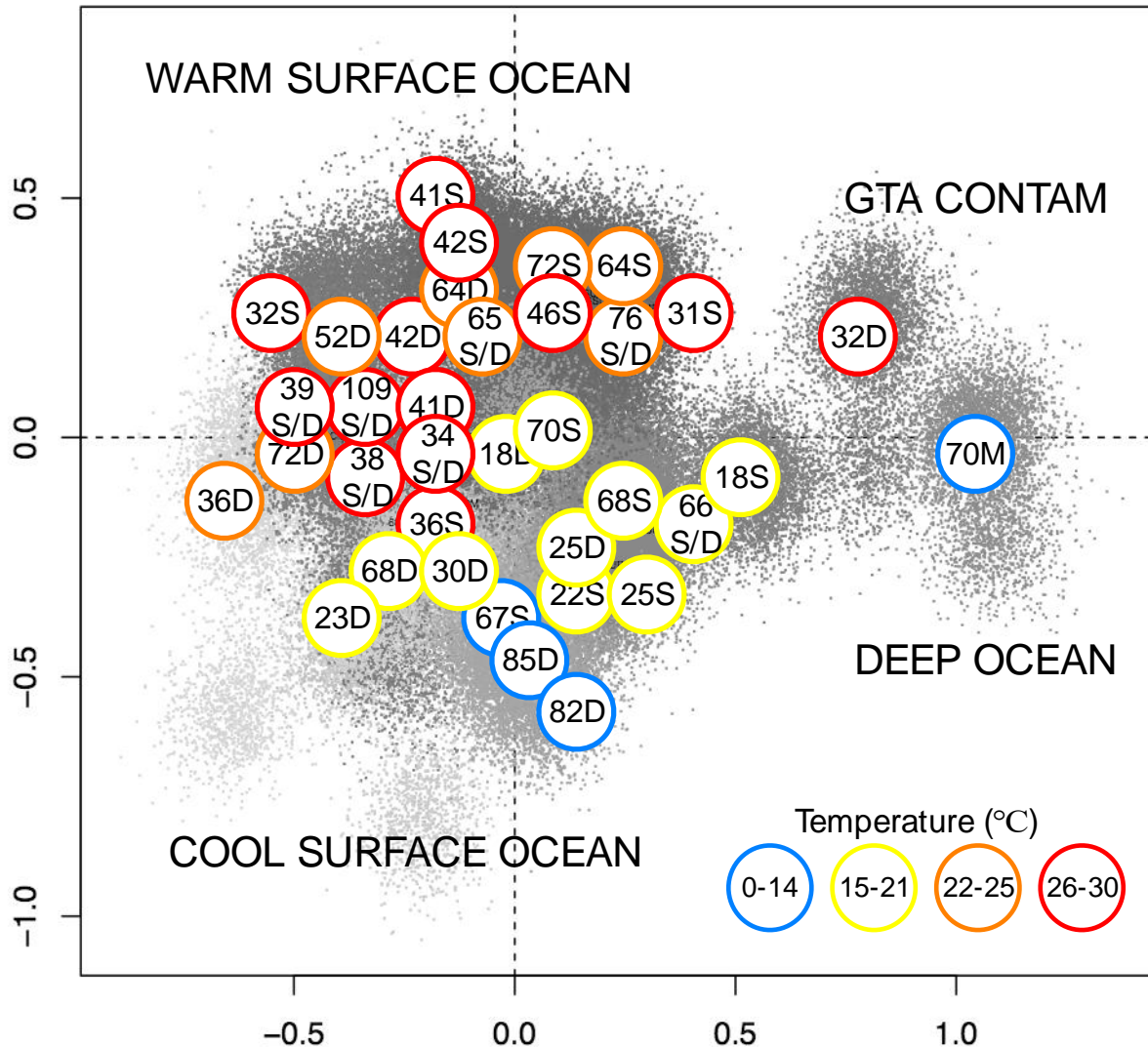
Our Approach:

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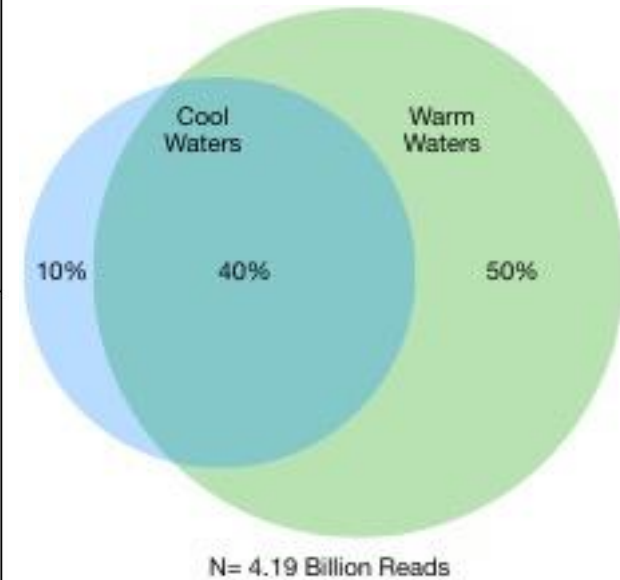


New Capability:

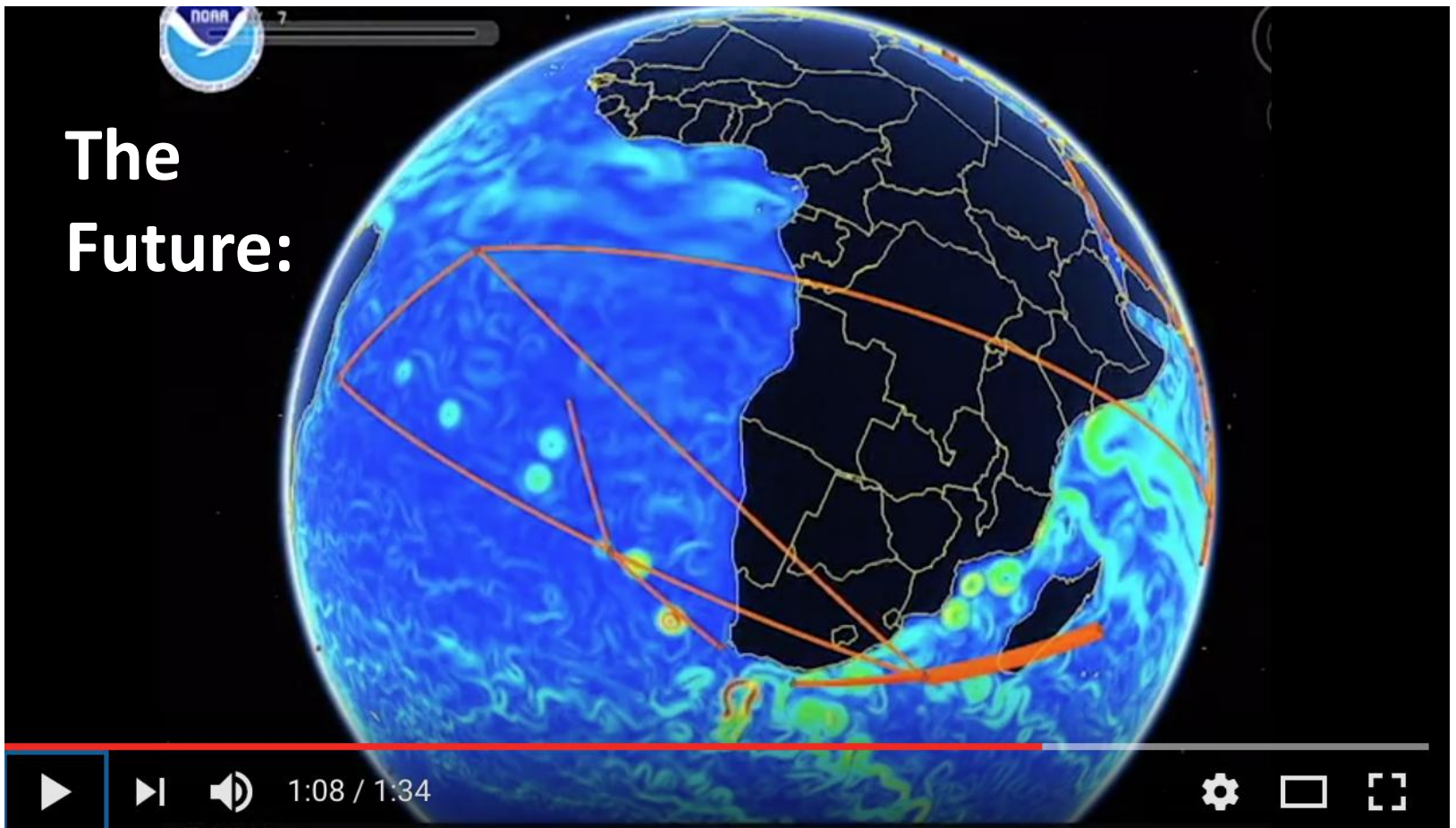
Infrastructure for Scalable Comparison of Global 'Omics Data



Tara Ocean Viromes



Processing time:
1 day; 12 nodes

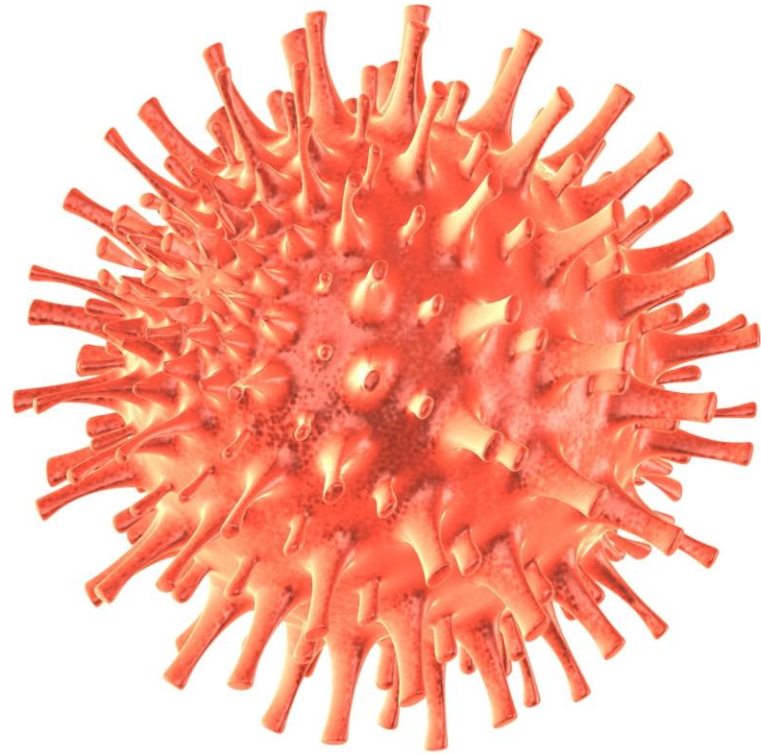


Data Clouds: scalable science

Community Tools & Compute: enhanced reproducibility

Value: global patterns in microbial ecology

Improving our Game



Good news: we are playing the same game



**Infrastructure
Engineer**

**Domain
Scientist**

**Bad news: still on different sides, reacting to
each other's shots**

Couples Tennis Anyone?



**Infrastructure
Engineer**



**Domain
Scientist**



Team 1

Team 2