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► To cite this version:

Karine Massau, Byte-Sea Consortium, Erwan Corre. BYTE-Sea: the digital infrastructure of ATLASea, the French marine genome sequencing programme. JOBIM 2024 - Journées ouvertes en biologie, informatique et mathématiques, Jun 2024, Toulouse, France. pp.1-1, 2024. hal-04693601

HAL Id: hal-04693601

<https://hal.science/hal-04693601v1>

Submitted on 10 Sep 2024

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BYTE-Sea: the digital infrastructure of ATLASea, the French marine genome sequencing programme

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² BYTE-Sea Consortium : https://gitlab.com/pepr-atlasea/byte-sea_consortium

³ IFB - Institut Français de Bioinformatique, CNRS UAR 3601, France



Priority research programs and equipment (PEPR)

Funded by the France 2030 framework program. Administered by ANR

Led by CNRS and CEA

Associated to the international ERGA and EBP projects

5 academic partners: Ifremer, MNHN, Aix-Marseille University, Paris Sciences & Lettres and Sorbonne University.

3 French infrastructures: France génomique, IFB, EMBRC-Fr

ATLASea Programme - an atlas of marine genomes

genome sequences of 4500 marine organisms along the French coast



Calls for expressions of interest (2026)

Study of metabolic pathways

Study of ecosystems subject to invasions

WHEEL-Sea (CNRS):

improve and support teaching and training in the field of biodiversity.

DIVE-Sea (MNHN):

sampling expeditions along the French mainland and overseas coasts and interactions with marine stations. Banking of samples.

SEQ-Sea (CEA):

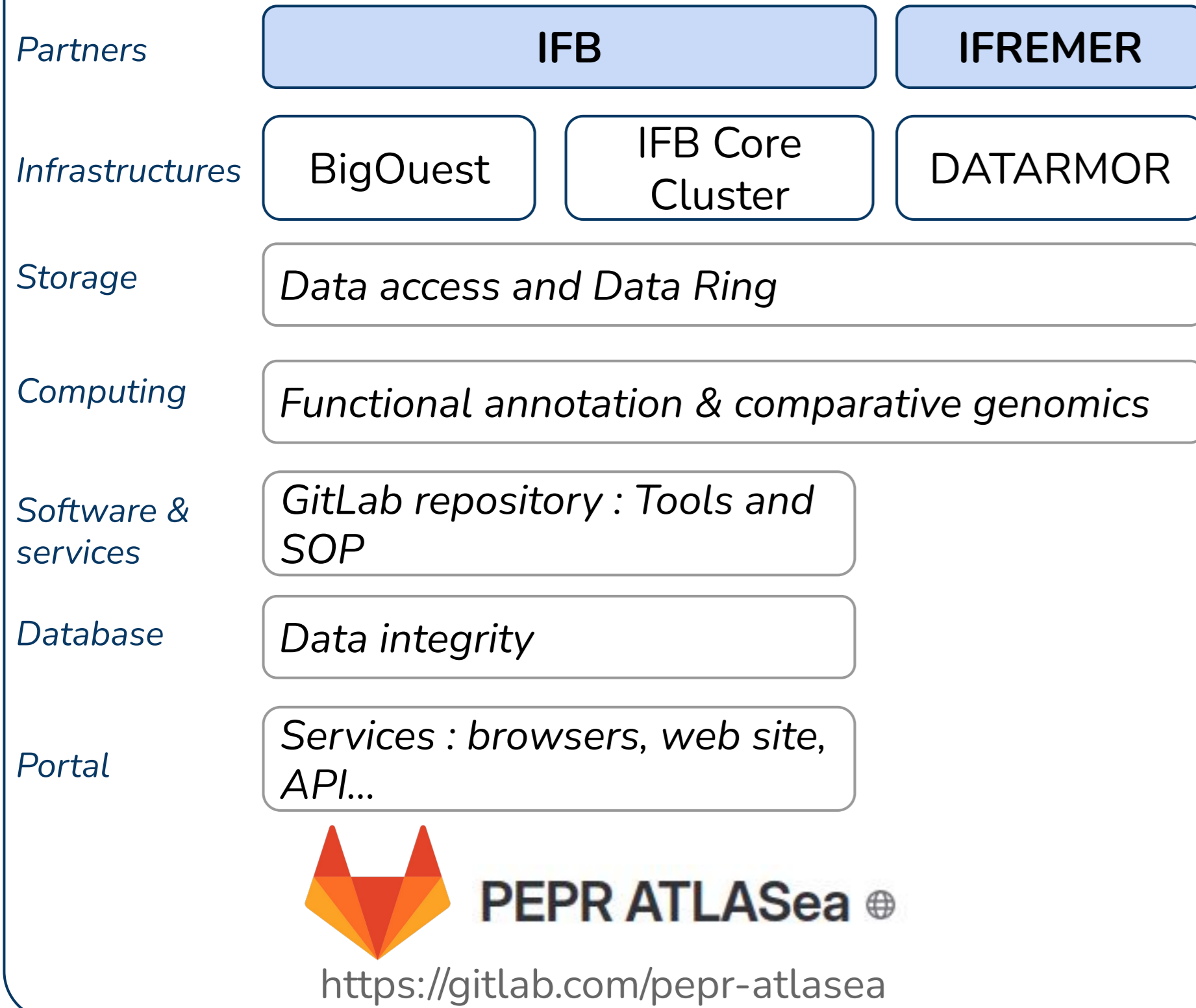
preparation of high quality DNA, sequencing, assembly and annotation of genomes at Genoscope.

BYTE-Sea (IFB):

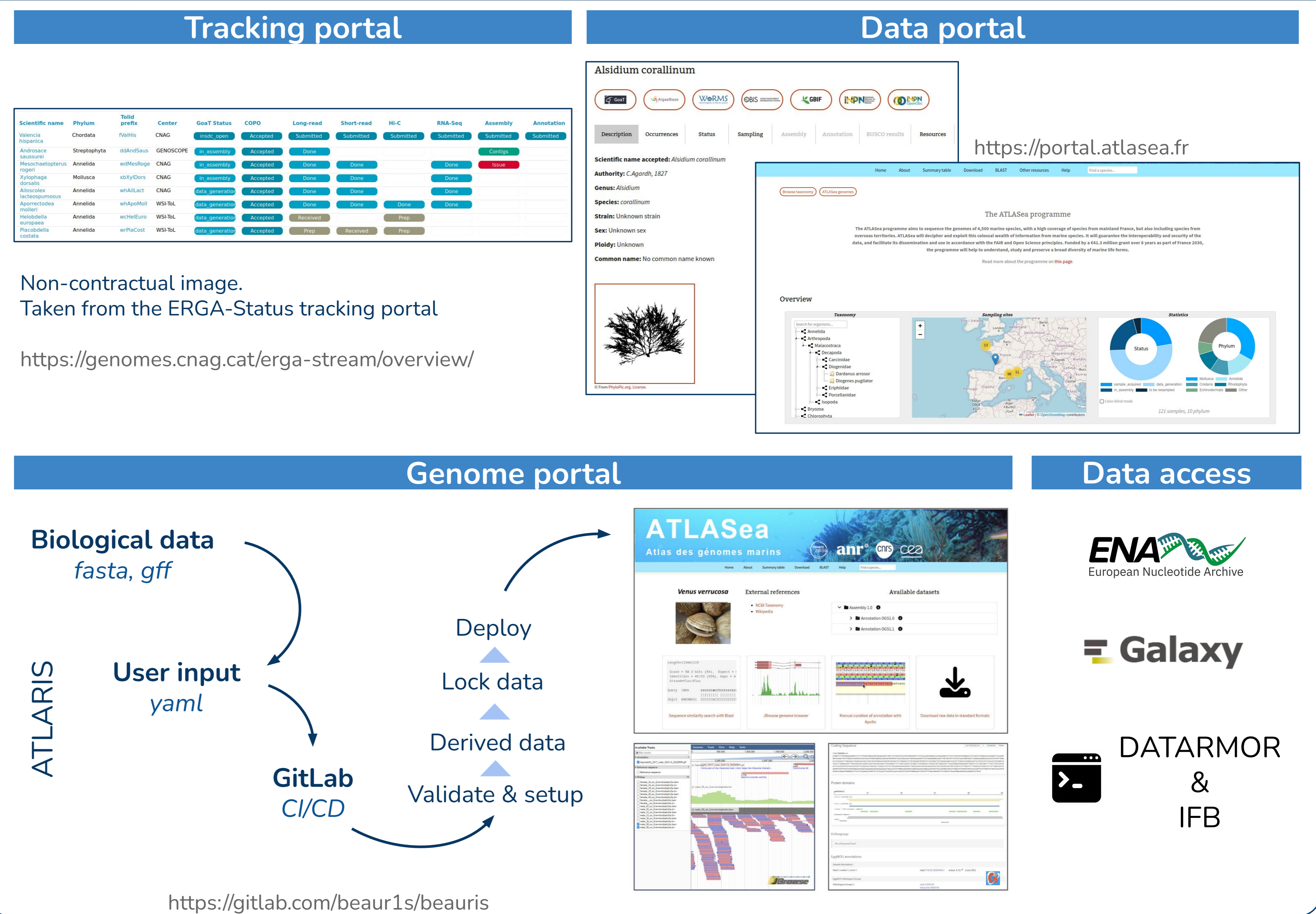
IT infrastructure for data storage, integration, display and sharing. Functional and expert annotation and comparative genomics

BYTE-Sea Work packages (WP)

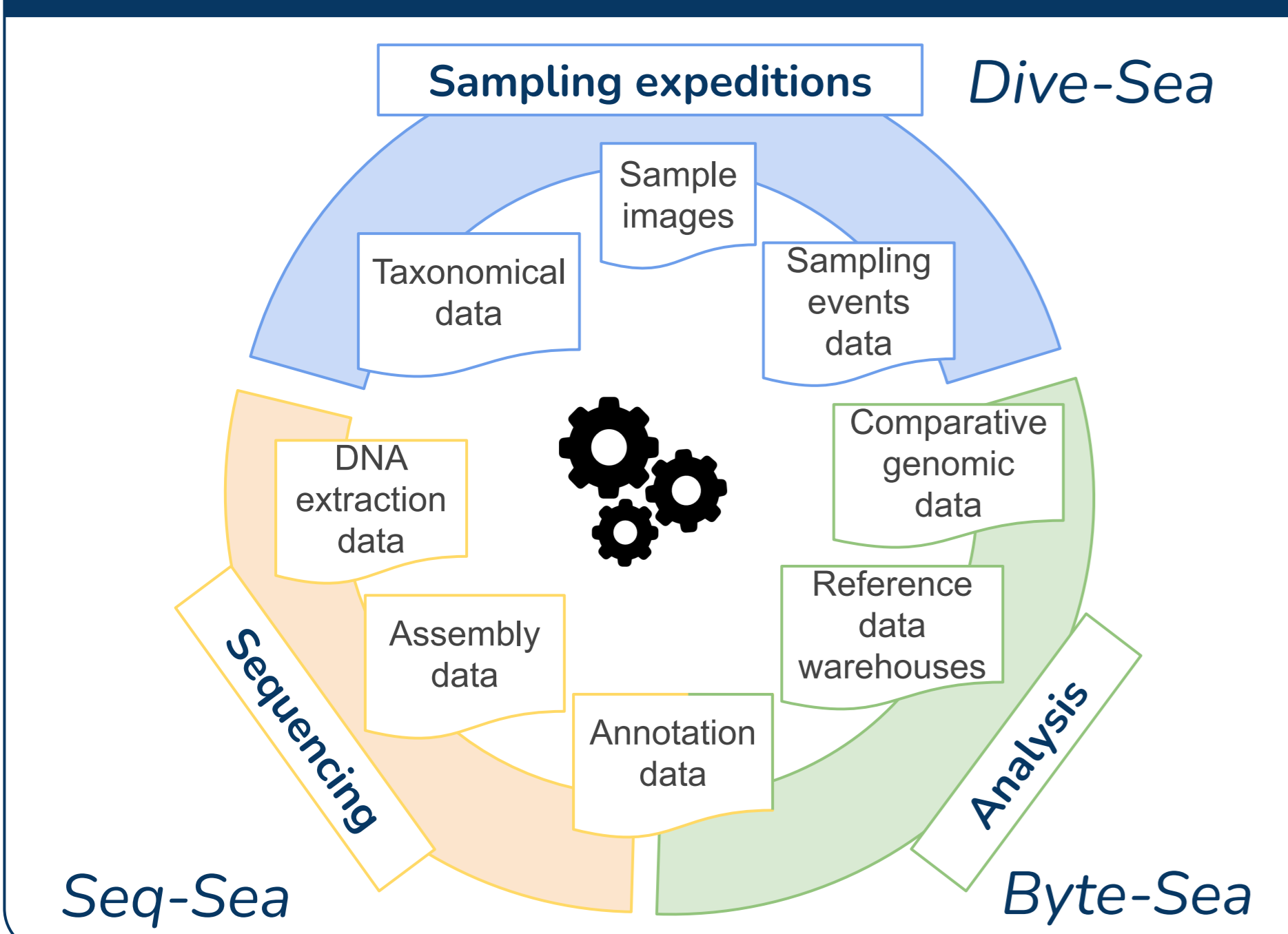
WP1: Infrastructure for storage, computing and software



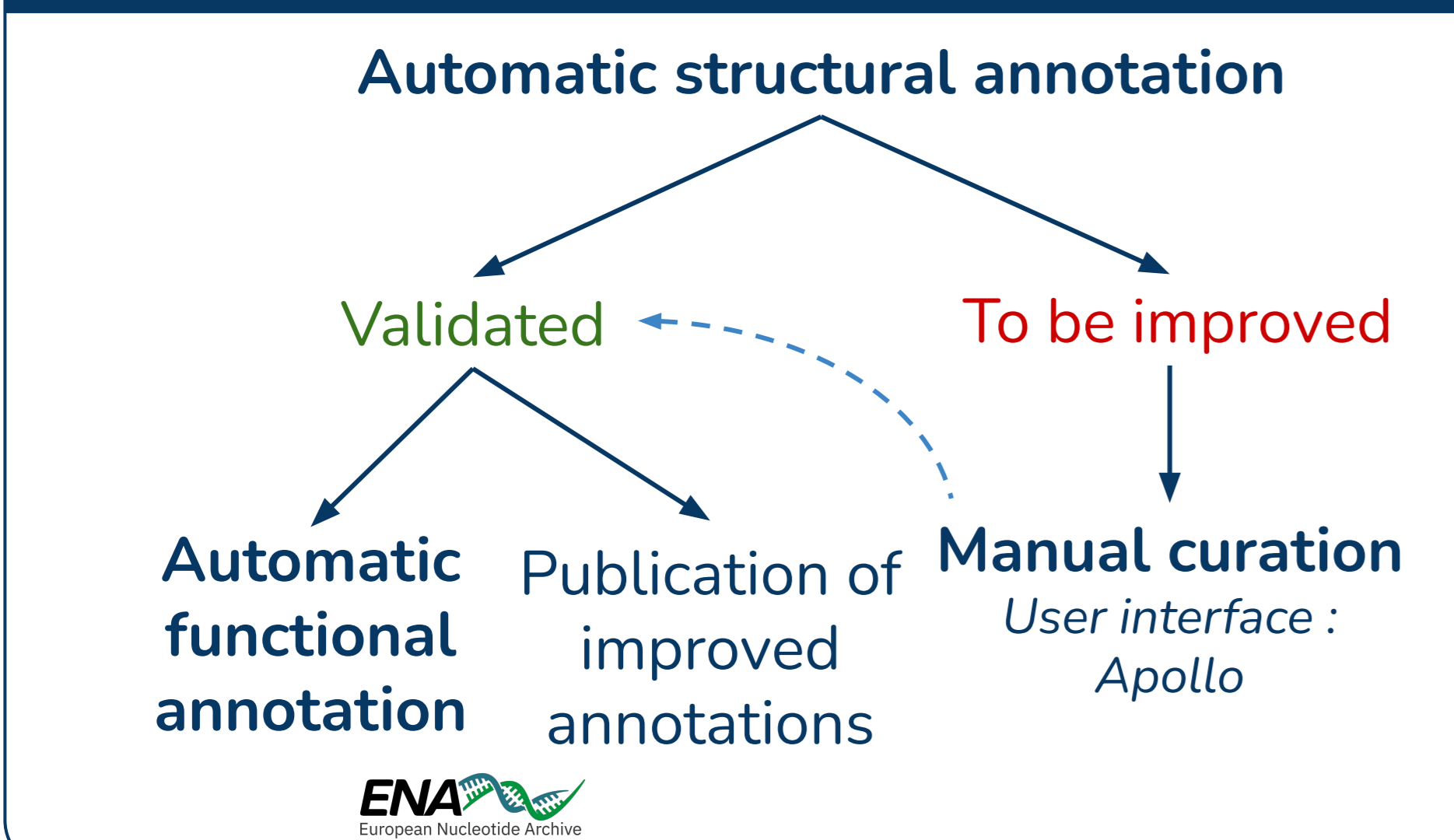
WP3: ATLASea portals for data and analysis tools



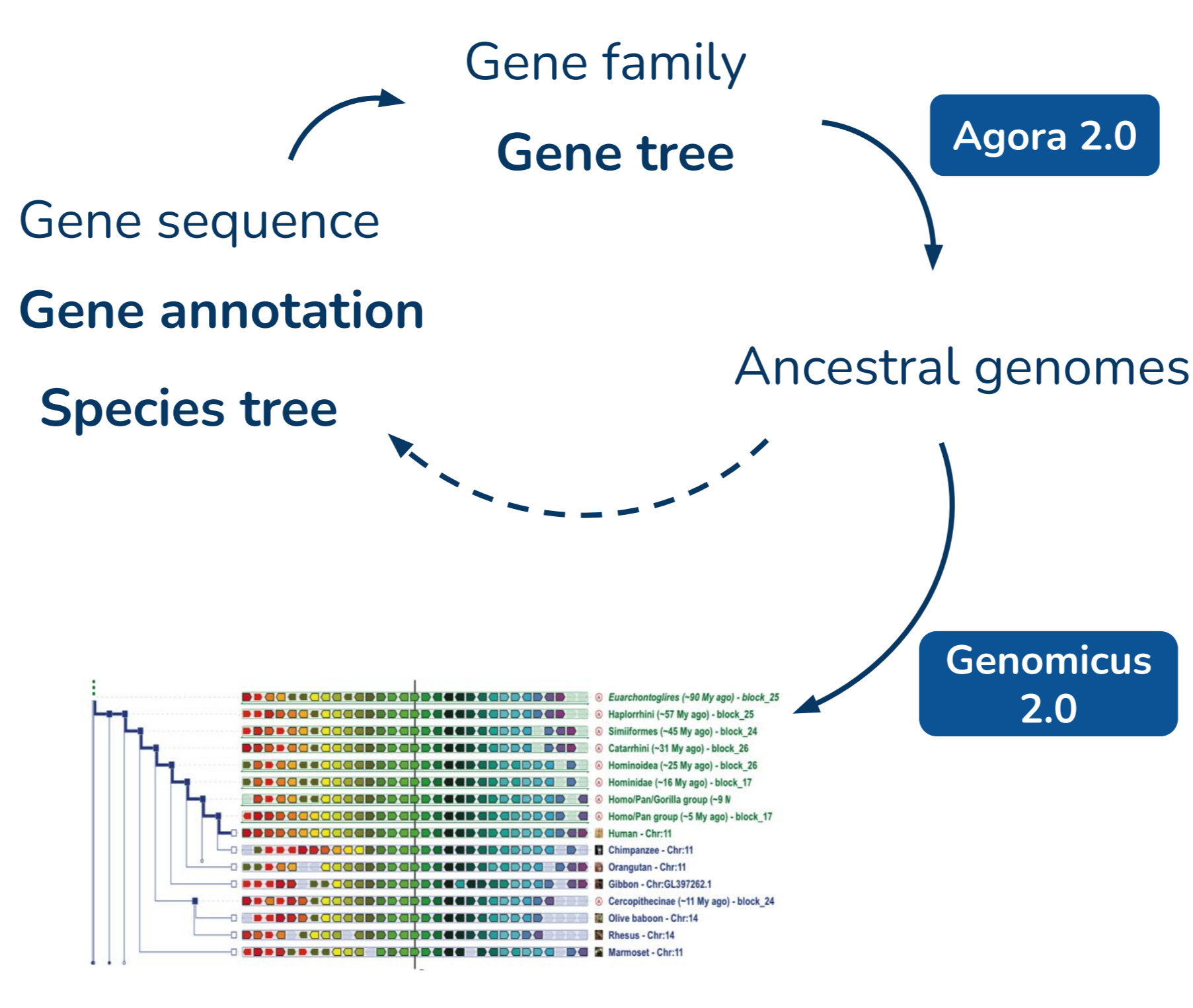
WP2: ATLASea database



WP4: Automatic functional annotation and expert annotation

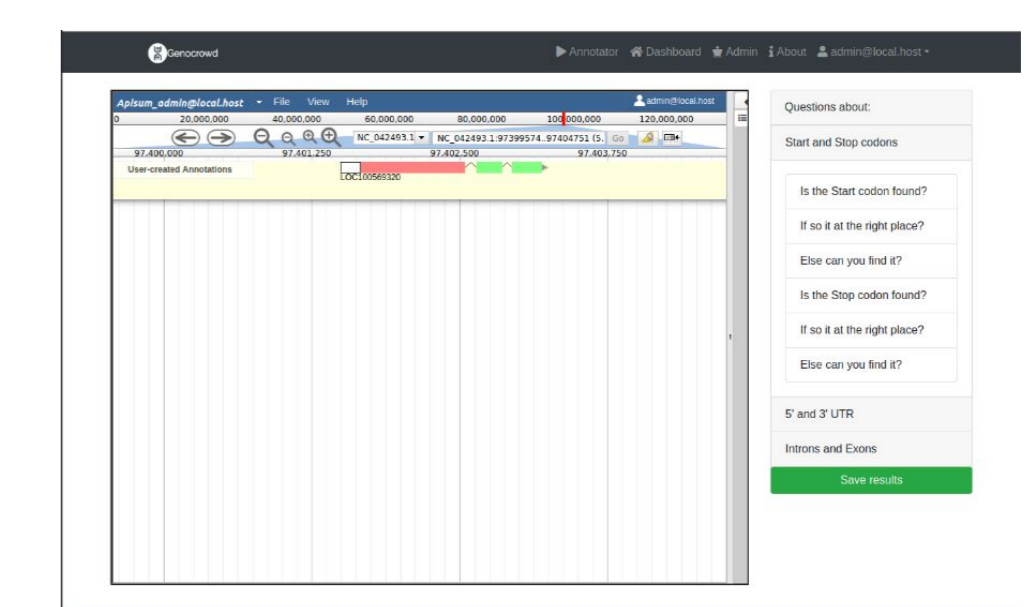


WP5: Comparative Marine Genomics



WP6: Citizen Annotation

Manual curation of genome annotation



Citizens
High school / undergraduate students
Introduction to the world of genomics
Scientific output
Guided and gamified curation web UI
Release of improved gene annotation