

iImagine: imaging data and services for aquatic science

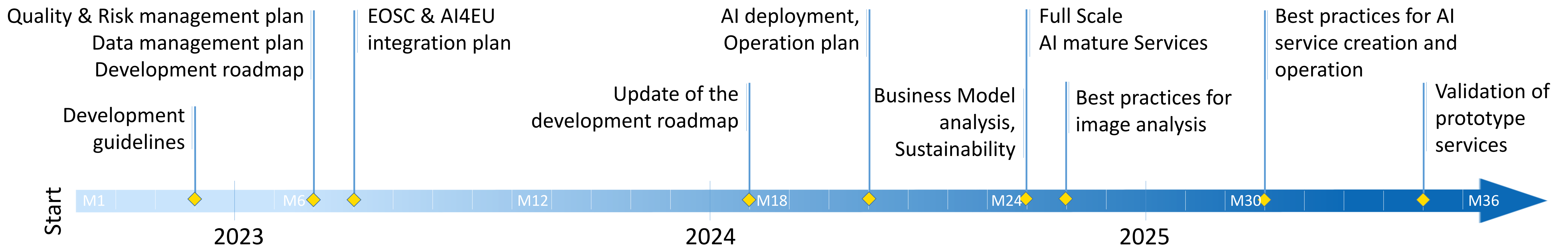


Presenter: [V. Kozlov](#) (KIT) for the iImagine Consortium

Project Coordinator: G. Sipos (EGI), Scientific Coordinator: D. Schaap (MARIS), AI Platform Coordinator: A. López García (CSIC)

OVERALL OBJECTIVE: To deploy, operate, validate, and promote a dedicated **iImagine AI framework and platform**, connected to **EOSC** and **AI4EU**, giving researchers in aquatic sciences **open access to a diverse portfolio of AI based image analysis services and image repositories** from multiple Research Infrastructures, working on and of relevance to the overarching theme of **'Healthy oceans, seas, coastal and inland waters'**.

Roadmap



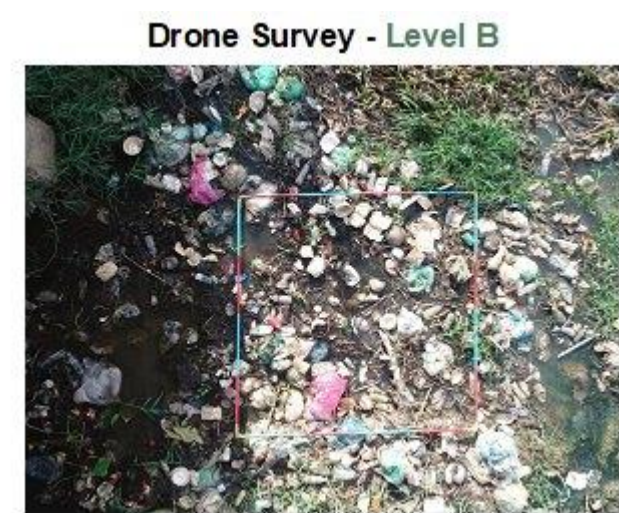
Use cases

Five operational and **three prototype** AI based image analysis services with image repositories for providing open access and exploitation by researchers and for demonstrating value and foster further uptake by a large community of target users and beneficiaries.

Aquatic Litter Drones (DFKI, MARIS, OGS):

Monitoring system for Aquatic Litter Pollution

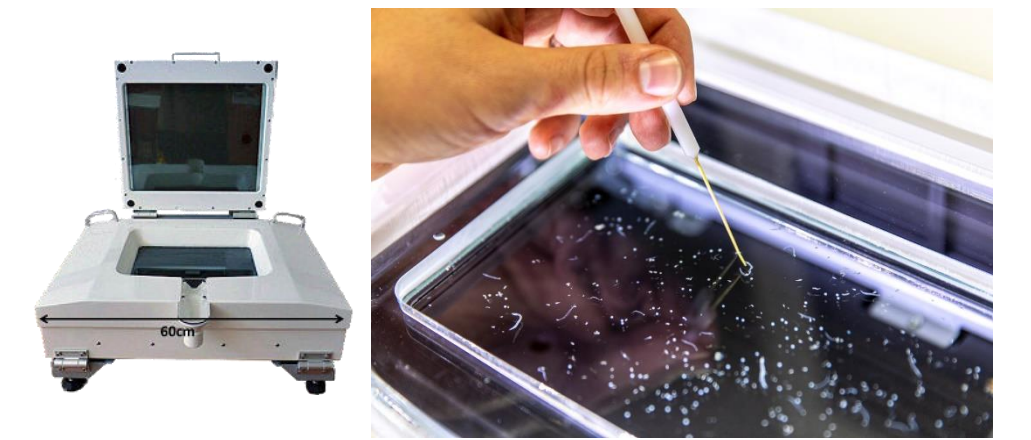
Target users: NGO's, Monitoring agencies, Researches, Environmental managers, MSFD and WFD communities



Zooscan – EcoTaxa pipeline (Sorbonne Université):

Taxonomic identification of zooplankton using Zooscan

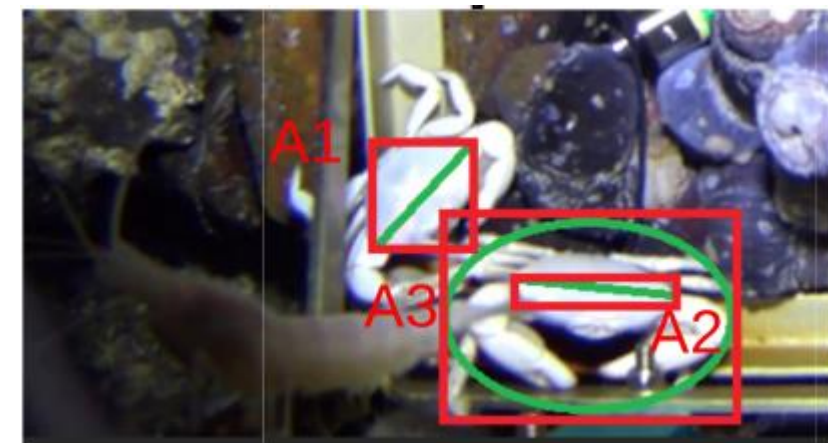
Target users: All zooscan users worldwide, the Hydroptics company



Marine Ecosystem Monitoring (EMSO ERIC, UPC, IFREMER, MI):

Ecosystem Monitoring by means of video imagery from cameras at EMSO sites

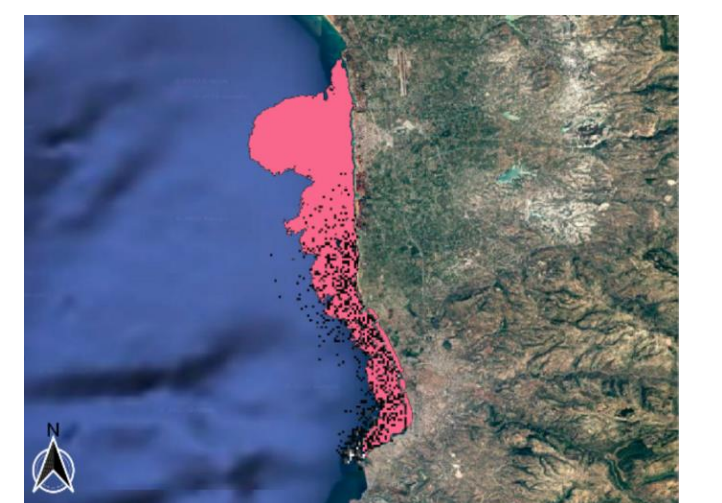
Target users: Environmental managers, EMSO Data managers, Researchers, Citizens



Oil Spill Detection (CMCC, OrbitalEOS, UNITN):

Oil spill detection from satellite images

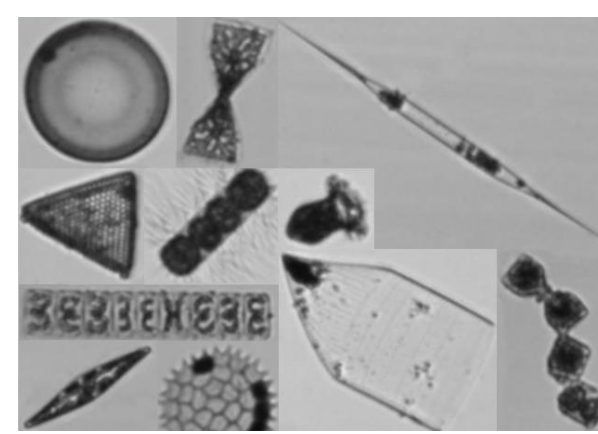
Target users: Maritime authorities, Environmental authorities, Oil spill response companies



Flowcam phytoplankton identification (VLIZ):

Taxonomic identification of phytoplankton using FlowCAM images

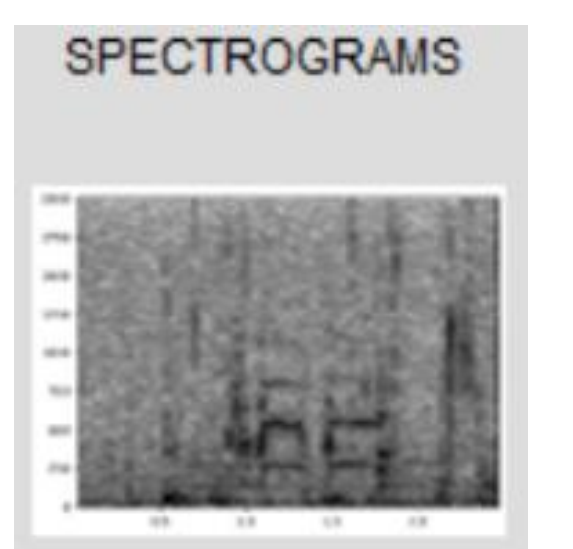
Target users: Researchers, Environmental managers



Underwater noise identification (VLIZ):

Identification of sound events from acoustic recordings using spectrograms

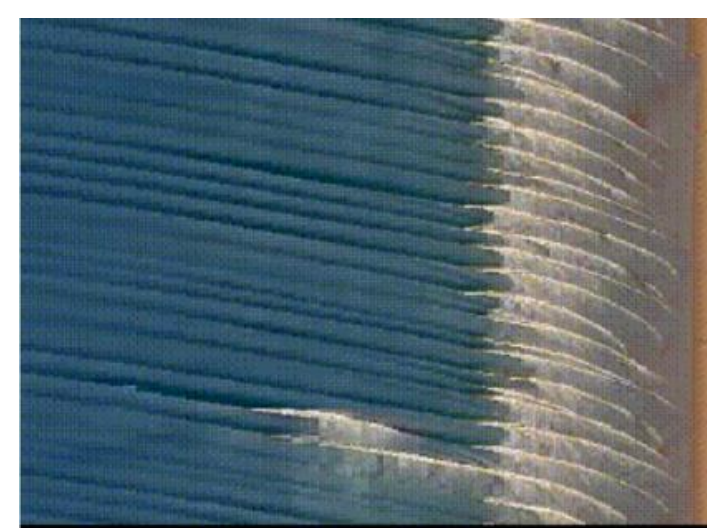
Target users: Researchers, Environmental Agencies



Beach monitoring (SOCIB):

Posidonia oceanica berms and rip-currents detection from beach monitoring systems

Target users: Researchers, Environmental Agencies, Beach Safety Authorities, Lifeguards, Government Institutions



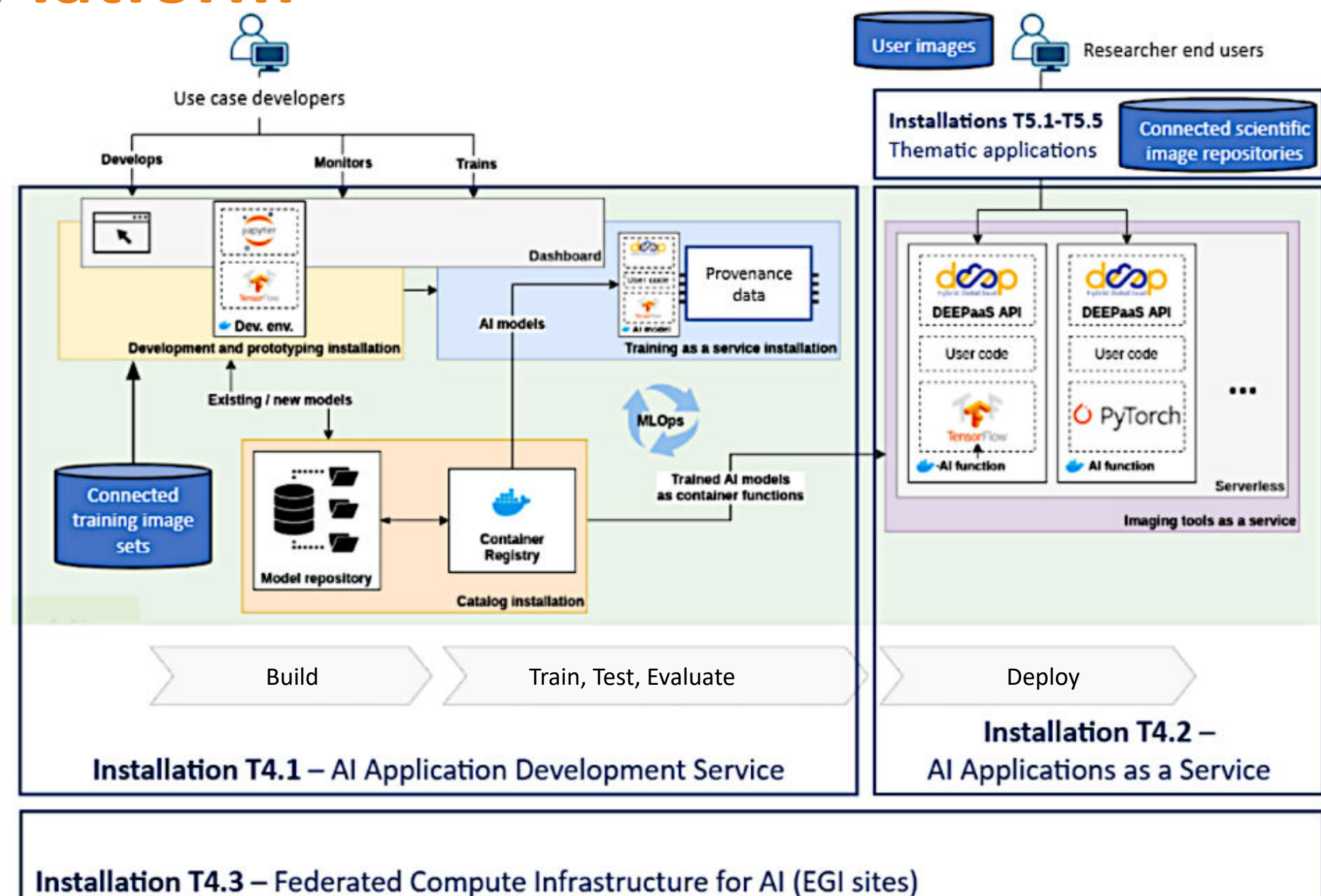
Freshwater diatoms identification (UL-LIEC):

Diatom-based bioidentification using automatic pattern recognition on microscope images

Target users: Researchers, Environmental managers, Teachers



AI Platform



The platform is based on



Further developed in



Key figures

Project time: 9.2022 – 8.2025 (36 months)

24 partners from 11 countries: Belgium, France, Germany, Greece, Ireland, Italy, Netherlands, Portugal, Slovakia, Spain, Turkey



Communication:

