

ESA Datalabs

Digital Innovation in Space Science

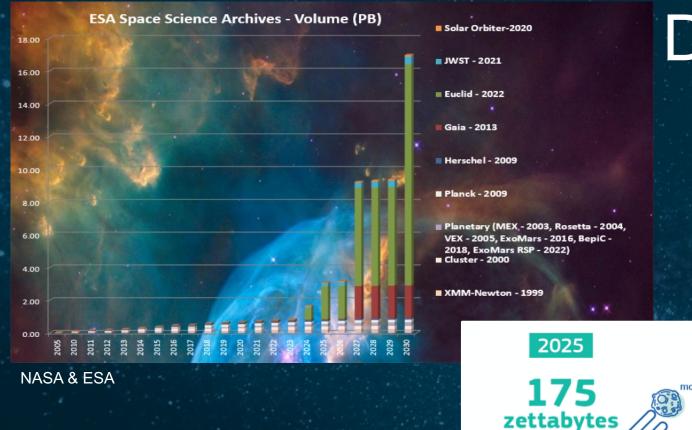
Software Product Assurance Workshop 2023, 27.09.2023, ESAC / Virtual

Vicente Navarro



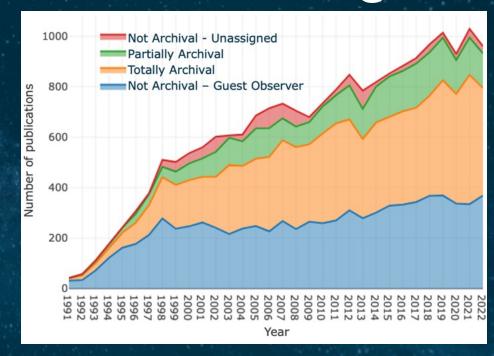
Data Driven Science for a Data Informed World





Stored on 512 GB tablets, it would form five towers reaching the moon

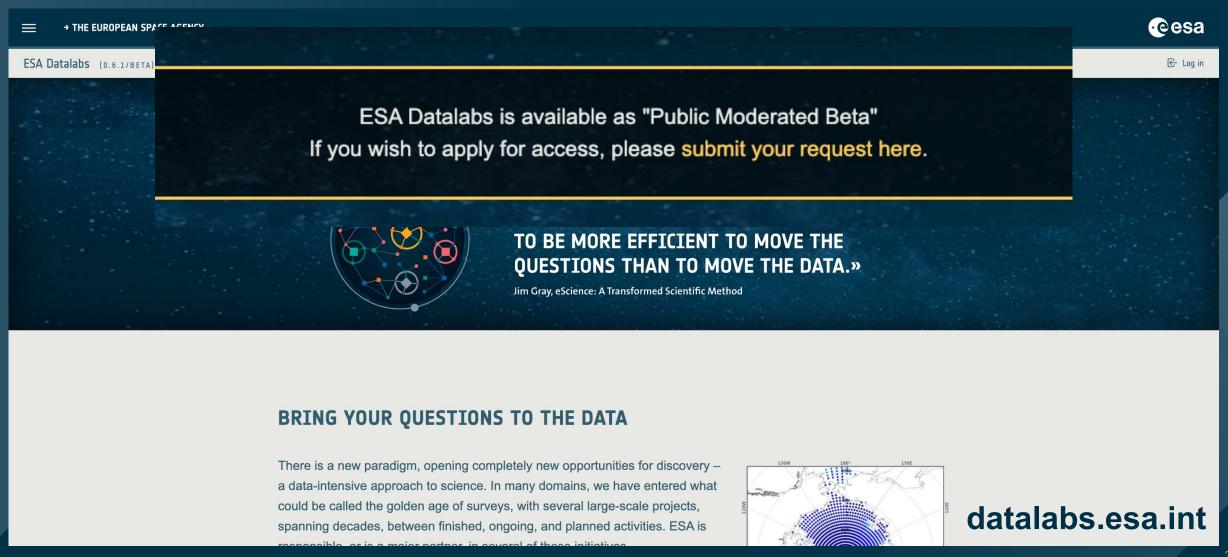
Data Insights



ESAC Science Data Center

ESA Space Science Proposal – ESA Datalabs

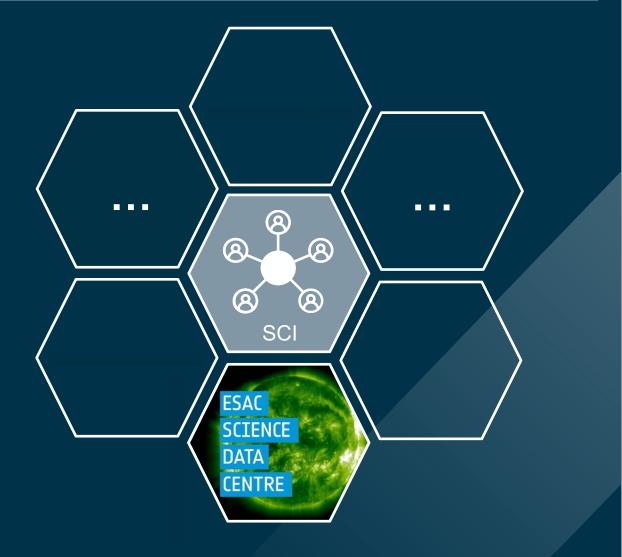




Multi-Domain & Multi-Mission Digital Platform

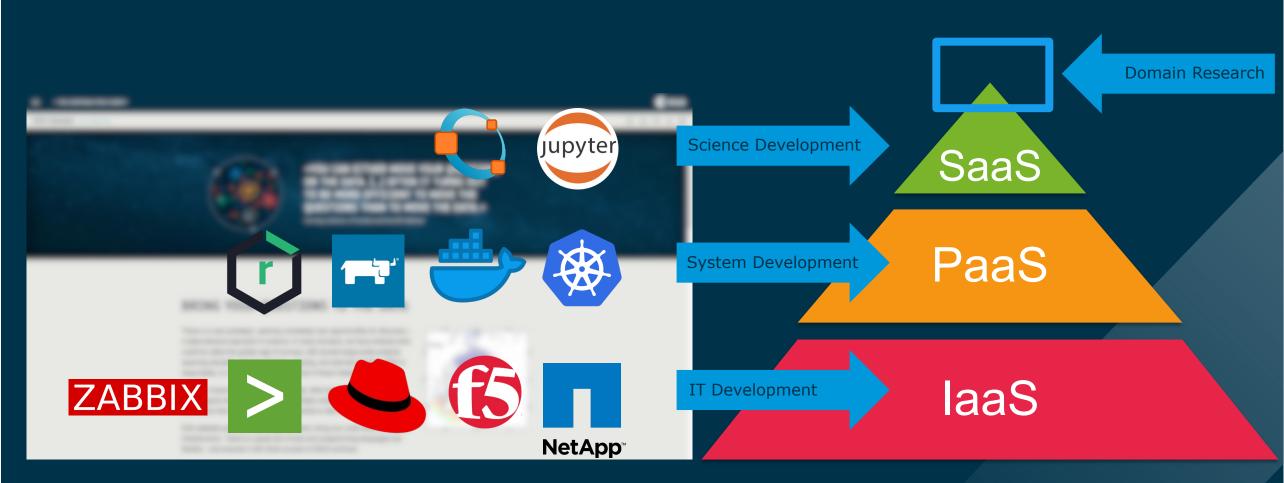






A Platform Designed to Boost Research Productivity

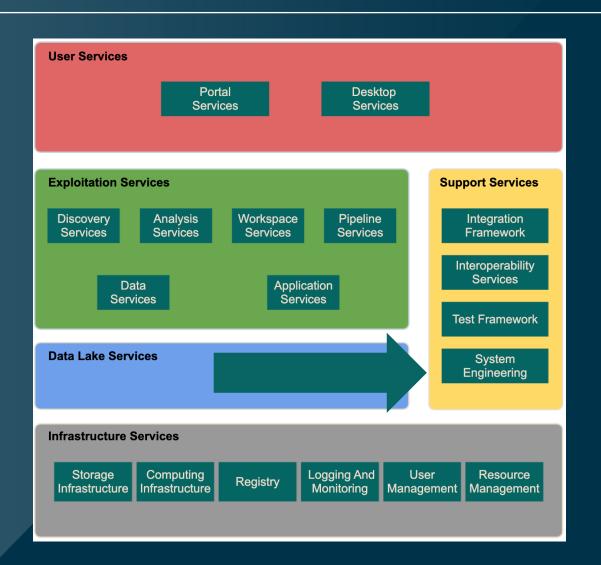




Software as a Service solution, low-code platform based on highly scalable microservice architecture

Innovative Architecture – Technology Stack

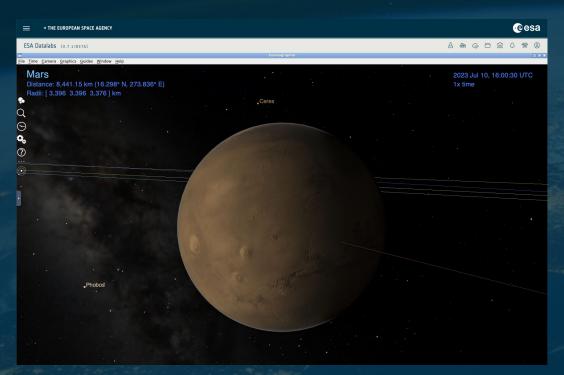




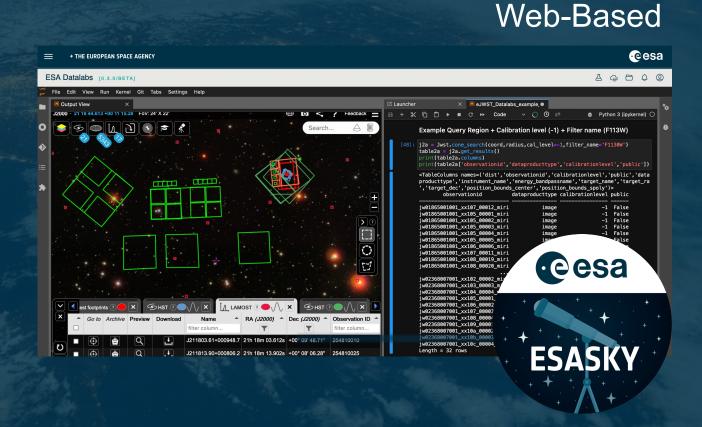


Datalabs for Interactive Analysis



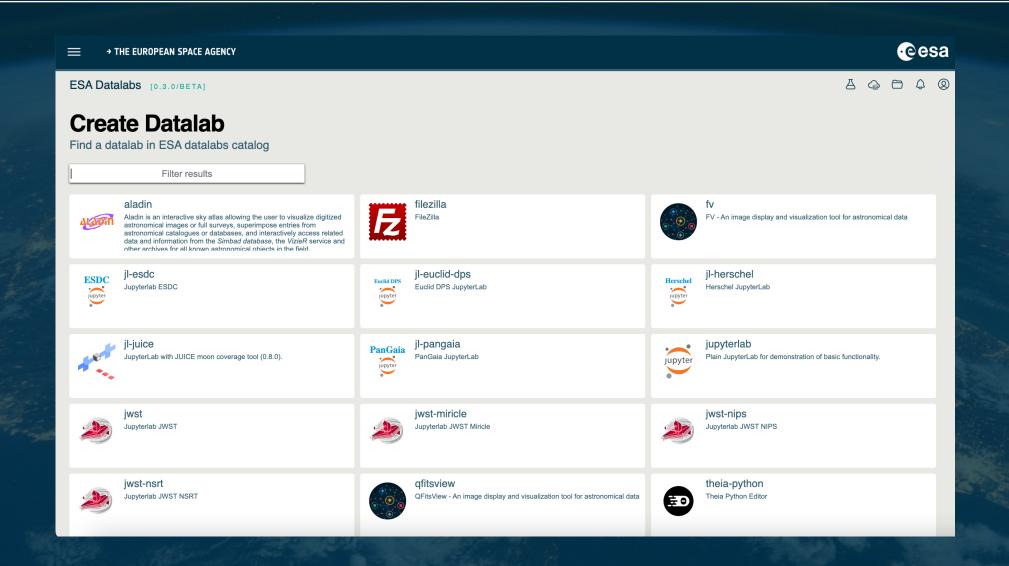


Desktop-Based



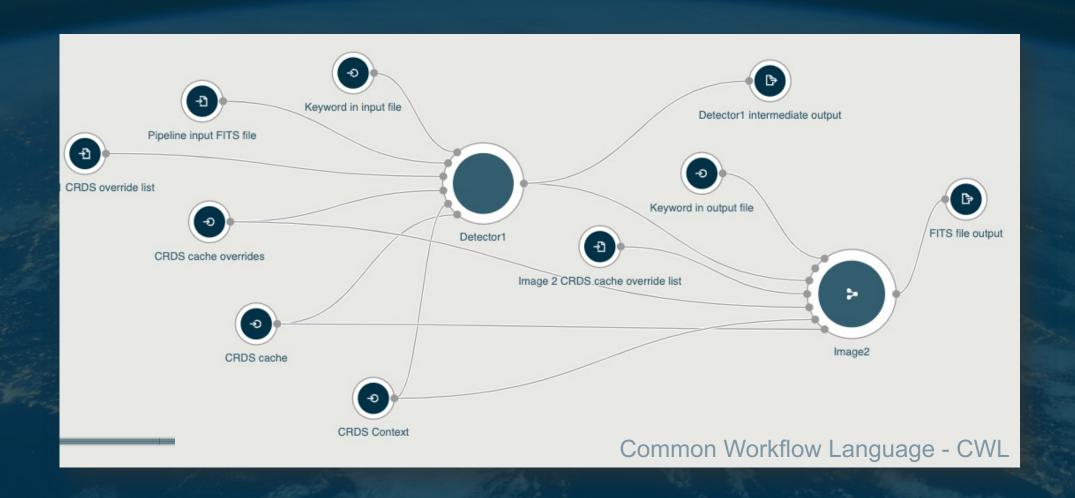
Datalabs Marketplace





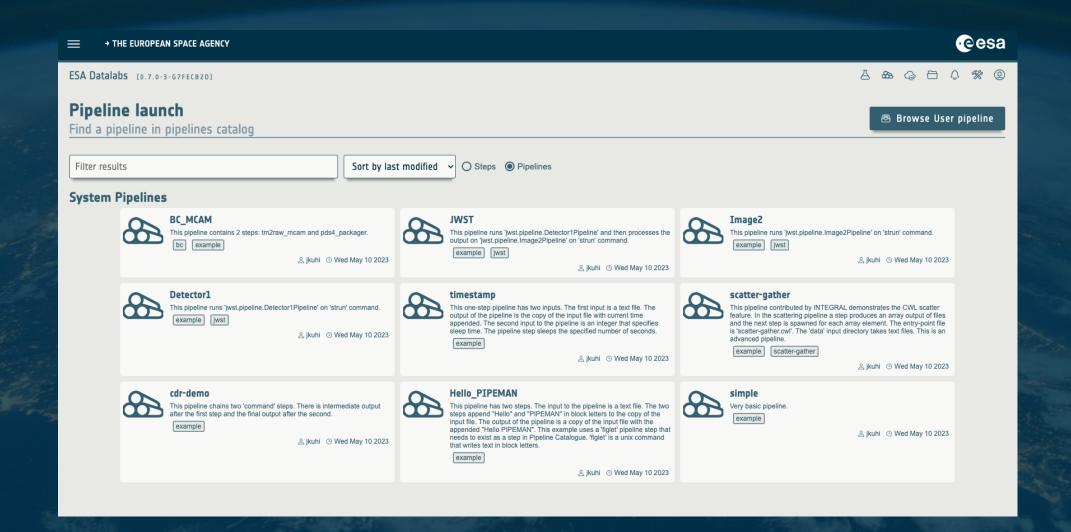
Pipelines for Batch Processing Analysis





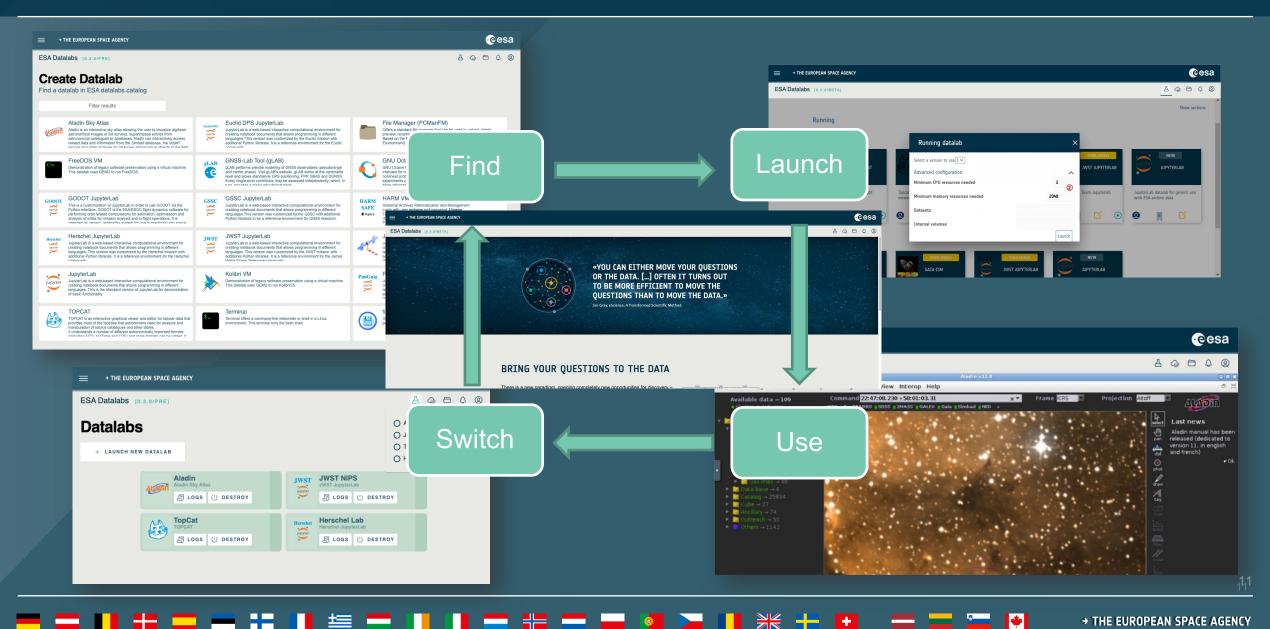
Pipelines Marketplace





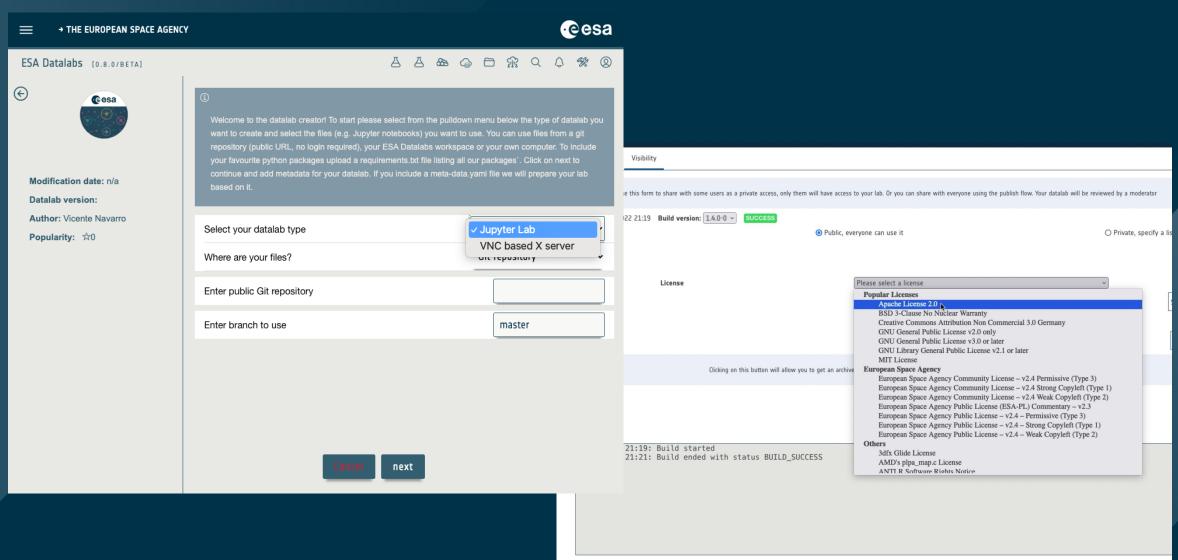
For Problem Domain Science End-Users





For Problem Domain Science End Users++



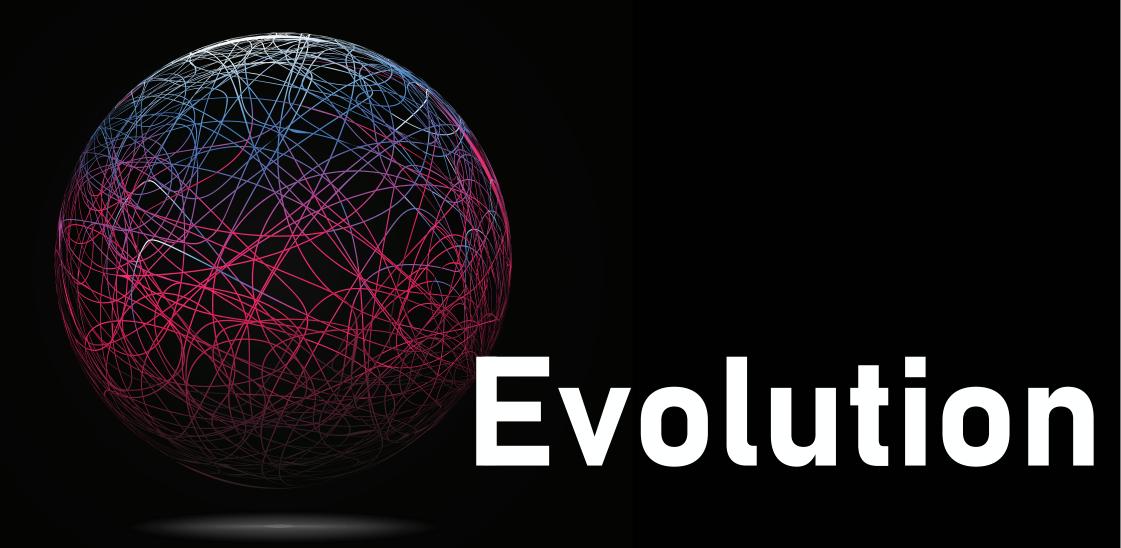


ESA Datalabs Community – Today









ESA Datalabs Community – Gauging Future Interest







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ESA Datalabs Community – One Year Forecast





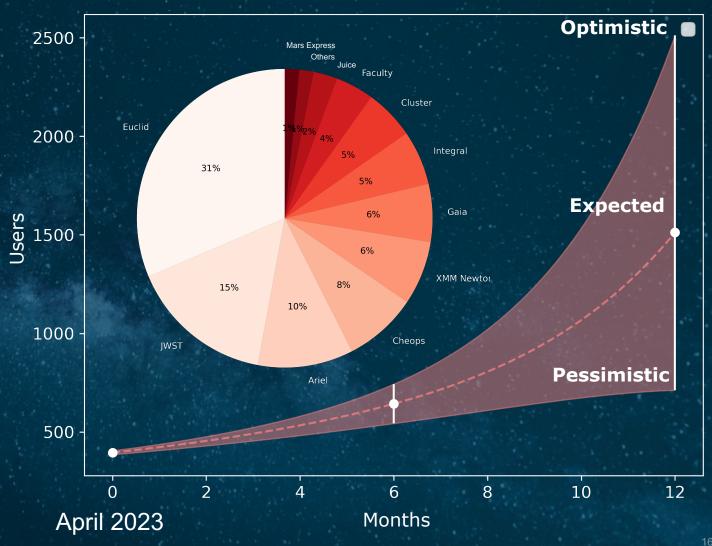
Optimistic: onboarding of all **ESA Space Science** interested missions and collaboration opportunities



Expected: onboarding of Space Science Euclid and JWST missions as currently planned

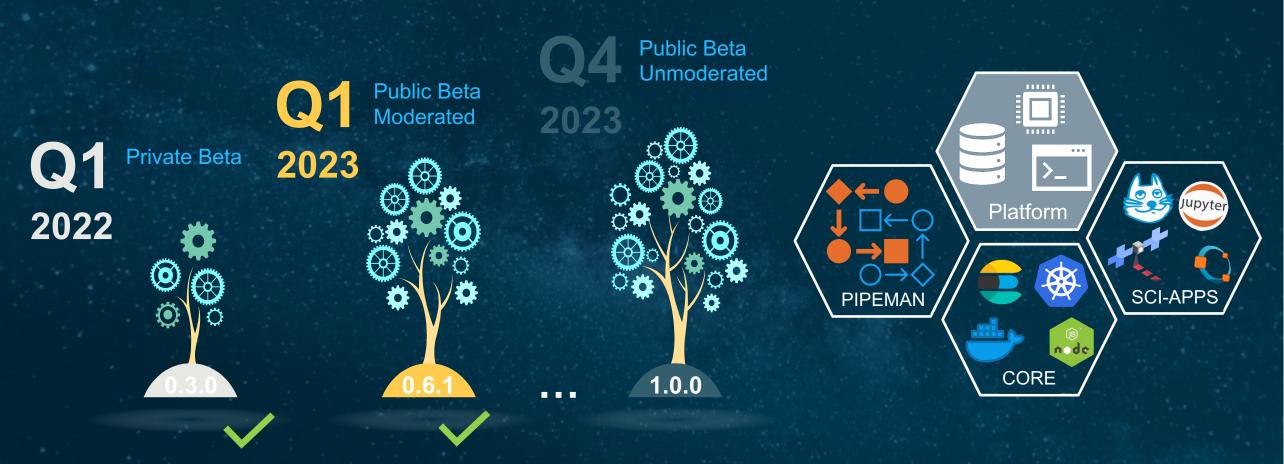


Pessimistic: onboarding of existing registration requests



Platform and Community Release Roadmap





Take away messages



The ESA Space Science Exploitation Platform

SCI Data available for researches to work on it, made easy

Increase Space Science Operations Efficiency

- Reusable for fast implementation of Scientific Processing Pipelines
- Reusable for fast implementation of Scientific Analysis and Visualisation Tools

Enable Collaboration and Open Science

- Share complex processing tools and data with your team (ala JWST)
- Share your contributions with the community in SCI 's AppStore

THANK YOU!





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