



LOFAR

Radio Astronomy Competence Centre Data Services

Supporting the LOFAR community on the European Open Science Cloud

Hanno Holties

ASTRON

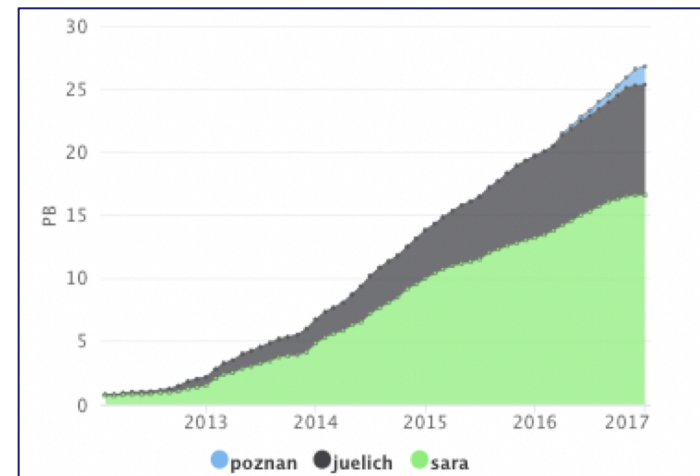
holties@astron.nl



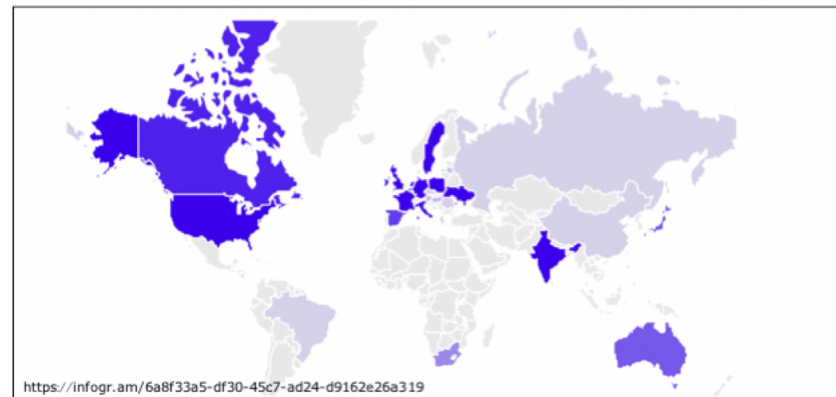
EOSC-hub receives funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 777536.

International LOFAR Telescope

- 35 PB data archive (start 2018)
 - Distributed over three sites
 - 7 PB growth per year



- Worldwide community
 - Hundreds of active users
 - Strong European representation



- Community challenged by
 - Data volumes (100 TB datasets)
 - Computational resources
 - Network capacity storage - compute



Projected Data Services

- Infrastructure
 - 55 PB long term storage (21 PB growth over coming 3 years)
 - dCache storage at LTA sites. Use case: Archival storage large datasets
 - ~5 PB online capacity work & user space
 - TBD. Use cases: Workspace for processing & FAIR Data Repository
 - Shared filesystem
 - Using CVMFS. Use case: distribution of images/software
 - High Bandwidth (~10 Gbps) Storage – Compute (On demand?)
- Services – to be selected & integrated in 1st half of project
 - PID's (e.g. B2HANDLE)
 - FAIR sharing (e.g. B2SHARE, B2FIND)
 - Integration Long term storage (e.g. B2SAFE/B2STAGE)
 - Workflow support/orchestration TBD (Data locality! CWL)

RACC Preliminary Architecture

Green: production
 Yellow: POC phase
 Blue: TBD
 Red: Data storage service components

