SKA Regional Science Data Centres and the European Open Science Cloud

Michael Wise
Head, ASTRON Astronomy Group
Chair, European SKA RSDC Working Group

EQSC Stakeholder workshop
November 30, 2015

ASTRON is part of the Netherlands Organisation for Scientific Research (NWO)
SKA Regional Science Centres

- SKA science extraction will require significant computational resources beyond observatory processing
- SKA Regional Science Centres (RSCs) will provide these capabilities
- SKA RSCs must include storage, computing, and user support
- Working Group to deploy a large-scale, distributed RSC for the SKA in Europe

**SKA is expected to produce ~300 PBytes/yr of science data**

**RSCs will be the working surface for SKA science!**
**EOSC Advantages**

- EOSC can provide large-scale storage and compute capacity to support SKA
- EOSC can support deploying SKA software stack to cloud platform
- EOSC can provide HPC expertise
- EOSC can provide training and user support for SKA research community

**SKA Challenges for EOSC**

- Must provide long-term, persistent dedicated storage capabilities
- Sufficient computational resources to allow processing and analysis of SKA data
- Service level agreements on scale and availability of capacity
- Security and access protocols to support open data and proprietary data

---

**Astronomy ESFRI and Research Infrastructure Cluster**

**EC Horizon 2020 (€15 million)**

Address synergies and common challenges shared by the various Astronomy ESFRI facilities (SKA, CTA, KM3NeT & E-ELT)