

# ASTRON

Netherlands Institute for Radio Astronomy

## European Network of SKA Regional Science Data Centres

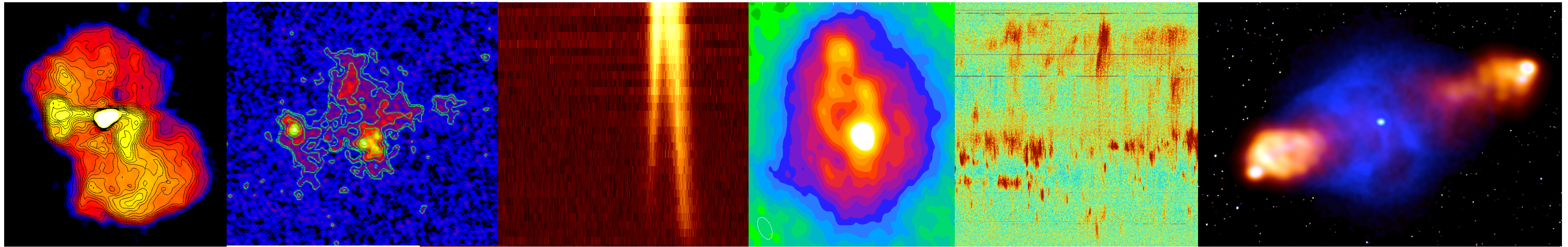
Michael Wise  
ASTRON

ASTRON - EGI Discussion  
July 8, 2015

ASTRON is part of the Netherlands Organisation for Scientific Research (NWO)

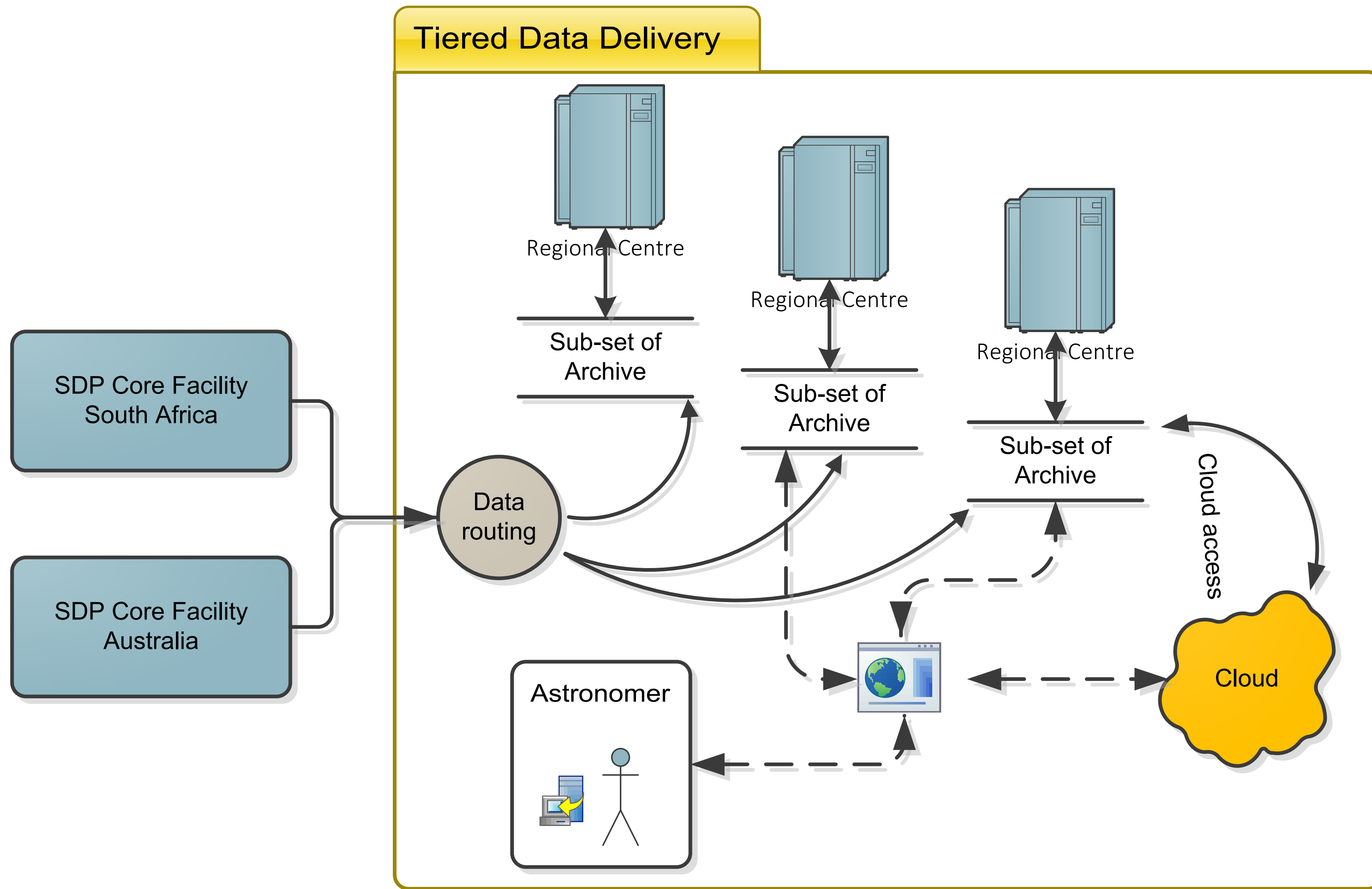


LOFAR



- SKA science will require major additional resources beyond SDP
- Need for RSCs already highlighted by SKAO at board level
- Mechanism to coordinate and empower national communities
- Opportunity to strengthen European Participation in SKA

*Regional centres will be the working surface for SKA science*



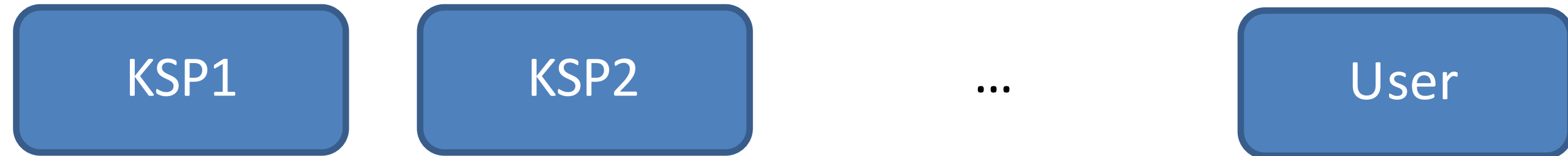
## *Data oriented operations:*

- Data archiving and curation
- Data management, discovery, and access (VO compliant)
- Automated processing and reprocessing (calibration, imaging etc)
- Generation and storage of derived science products
- Continued pipeline and algorithmic development

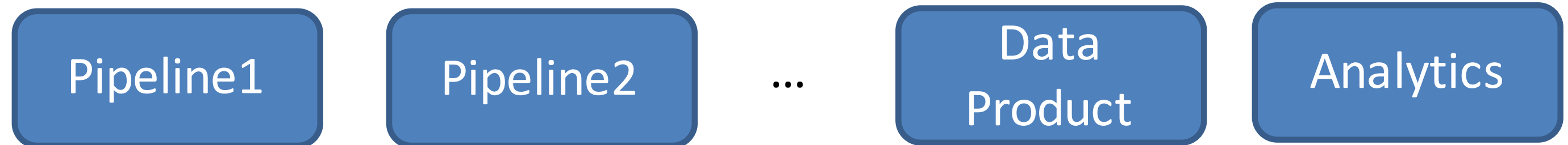
## *Science oriented operations:*

- Portal-based data product access (raw and science-ready)
- Interface to data processing and reprocessing pipelines
- Interface to VO multi-wavelength discovery and analysis tools
- Support for development of custom user analysis (HPC-enabled)
- Development of new algorithms, science enabling tools, data analytics (visualisation, etc.)
- End-to-end astronomer support (proposal => science exploitation)
- Community education & outreach
- Face-to-face user support
- 24/7 help desk

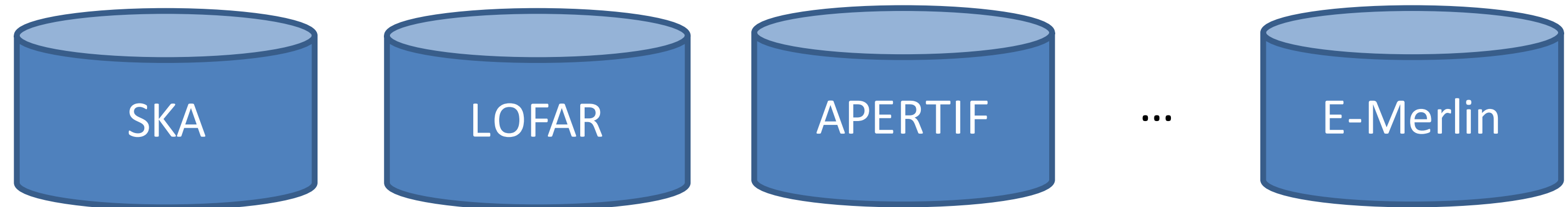
*User Layer*



*Services Layer*



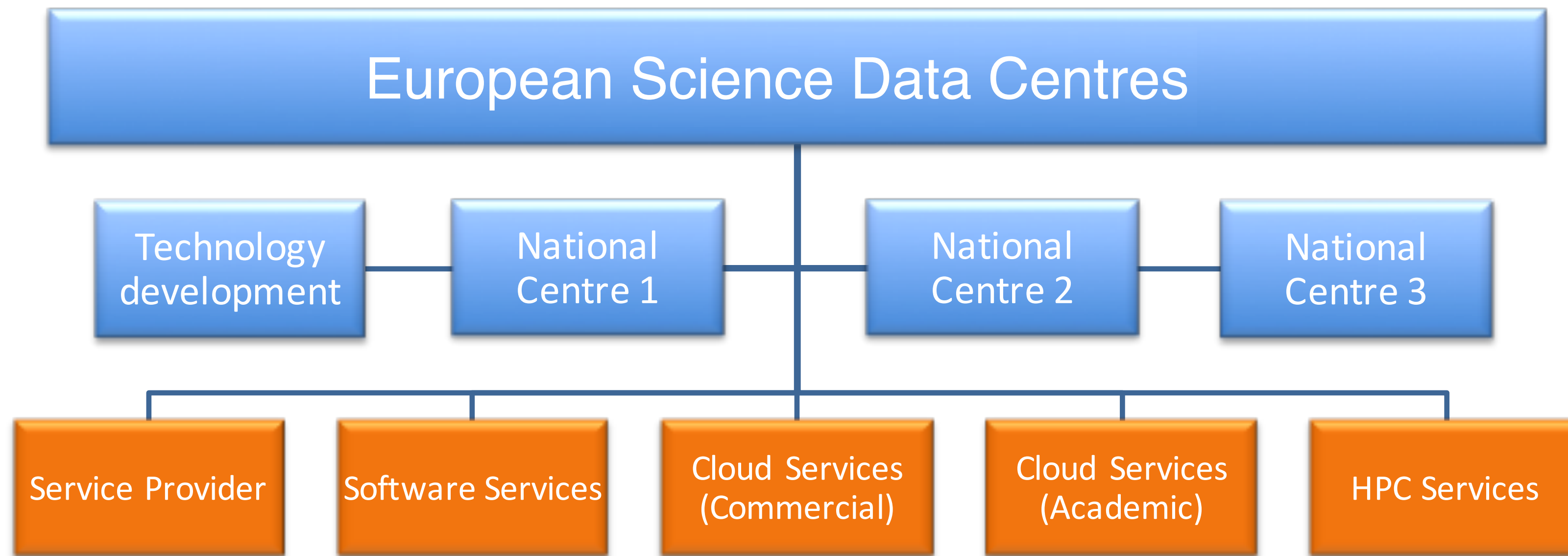
*Data Layer*



*Infrastructure Layer*



*Also need an expertise layer!*



- Provide governance on European level for network of national Science Data Centres
- Represent the needs of the European SKA scientific community with SKAO
- Coordinated engagement with national ICT communities, industry, and service providers
- Facilitate shared development, interoperability, accessibility and innovation
- Serve as coordinating entity to pursue EC and other funding
- European counterpart for engagement with Science Data Centres internationally

- Form European Association of Regional Science Centres
- Identify national representatives and chair for the working group
- Draft white paper describing vision for EU RSCs
- Engage with scientific and potential KSP communities
- Engage with ICT communities and existing HPC centres
- Work with SDP to design European SKA data topology
- Begin preparations for upcoming H2020 funding opportunities

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