Netherlands SRC

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ASTRON
Netherlands Institute for Radio Astronomy

SURF

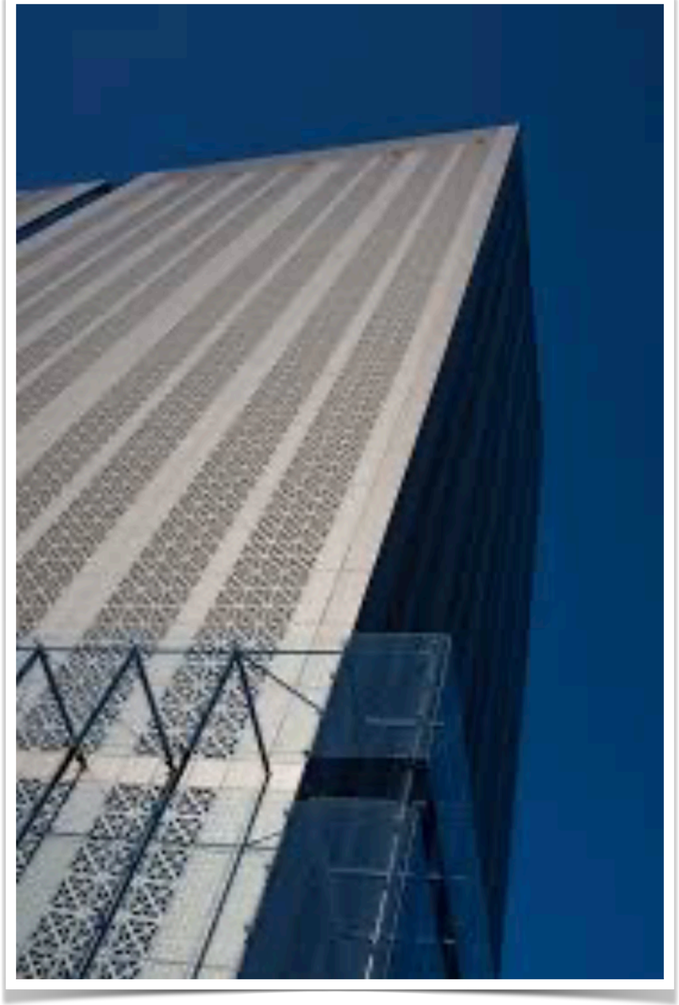
Dutch National e-Infrastructure for education & research

Data center: 100% renewable energy

GDPR data privacy
ISO 27001 information security

More than
200 Gbps High bandwidth network

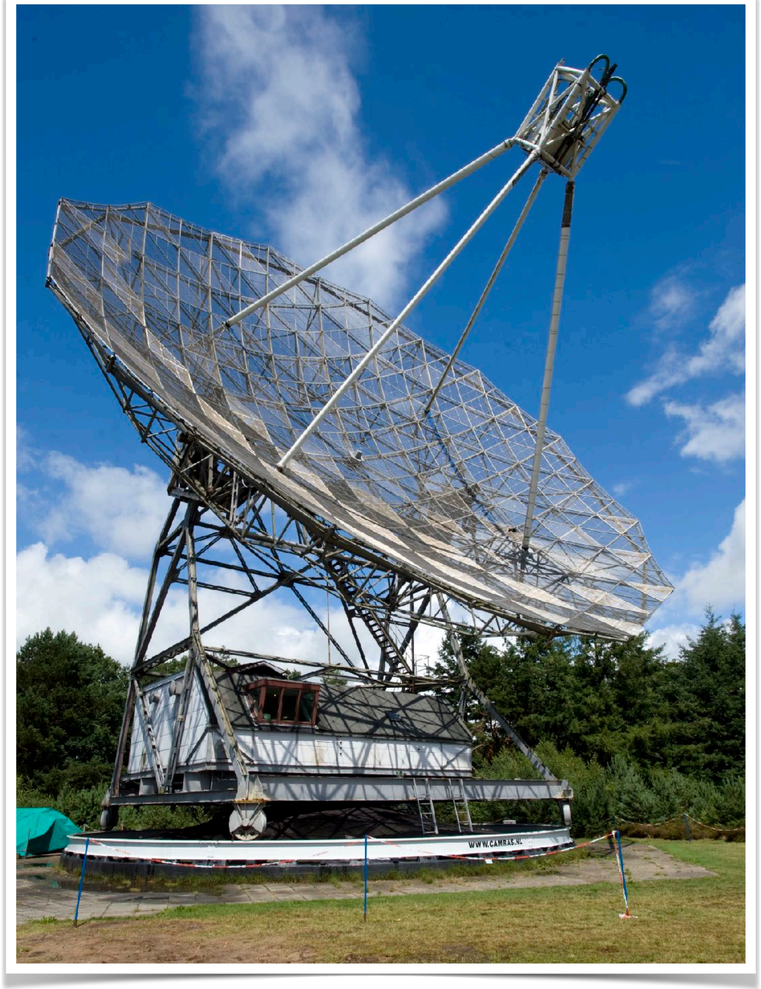
More than
100.000 cores &
150PB storage



ASTRON

Netherlands Institute for Radio Astronomy

- Current and former operator of cutting-edge telescopes and instrumentation, including LOFAR & Apertif/WSRT.
- Active astronomy group undertaking fundamental research.
- Cutting-edge technology development, including everything from receiver systems to processing pipelines.



SRCNet v0.1 Interest Form

With this form, you can express interest in becoming an SRCNet v0.1 site.

See SRCNet v0.1 nodes for more information about the process and the attached document for further details.

After completing the form, you can send the form to Program Team

Rosie Bolton - rosie.bolton@skao.int
Jesus Salgado - jesus.salgado@skao.int
Jeremy Coles - j.coles@skatelescope.org
Janneke de Boer - boer@astron.nl
Robert Perry - robert.perry@skao.int

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SRC: **Netherlands**
Representative name: **Michiel van Haarlem / John Swinbank**

This request is to show interest in the participation of your SRC in the SRCNet v0.1 production network and to gather resources available to produce a realistic implementation plan for it. As explained in the attached document and in the SRCNet roadmap document, v0.1 will contain a significant amount of synthetic and precursors data to allow the testing and problem-solving of possible engineering issues, getting experience in running a network with a significant size (both local and global) and promote the involvement of SRCNet in other SKA activities.

Please fill in the following matrix in case your SRC wants to be part of the SRCNet v0.1 deployment network.

This operational network will need to be maintained operationally, in coordination with the other nodes, with an acceptable availability percentage (TBD), which will imply the execution of operational activities as described in the People and Operational Requirements Section.

SRC responses could contain possible limitations on the provision of the resources requested in terms of software to be deployed, personnel to operate it and hardware (storage and computing) resources that will be considered for the implementation/deployment plan.

SRC	Netherlands SRC
Compliance Level	Meets most requirements
Summary	Strong proposal, that emphasizes scalability & long-term collaboration

https://www.discoverholland.com
https://www.flickr.com/photos/eelkedekker/5447913576
https://tulipfestivalamsterdam.com
https://bicycledutch.wordpress.com/2013/03/28/amsterdam-bicycle-rush-hour/

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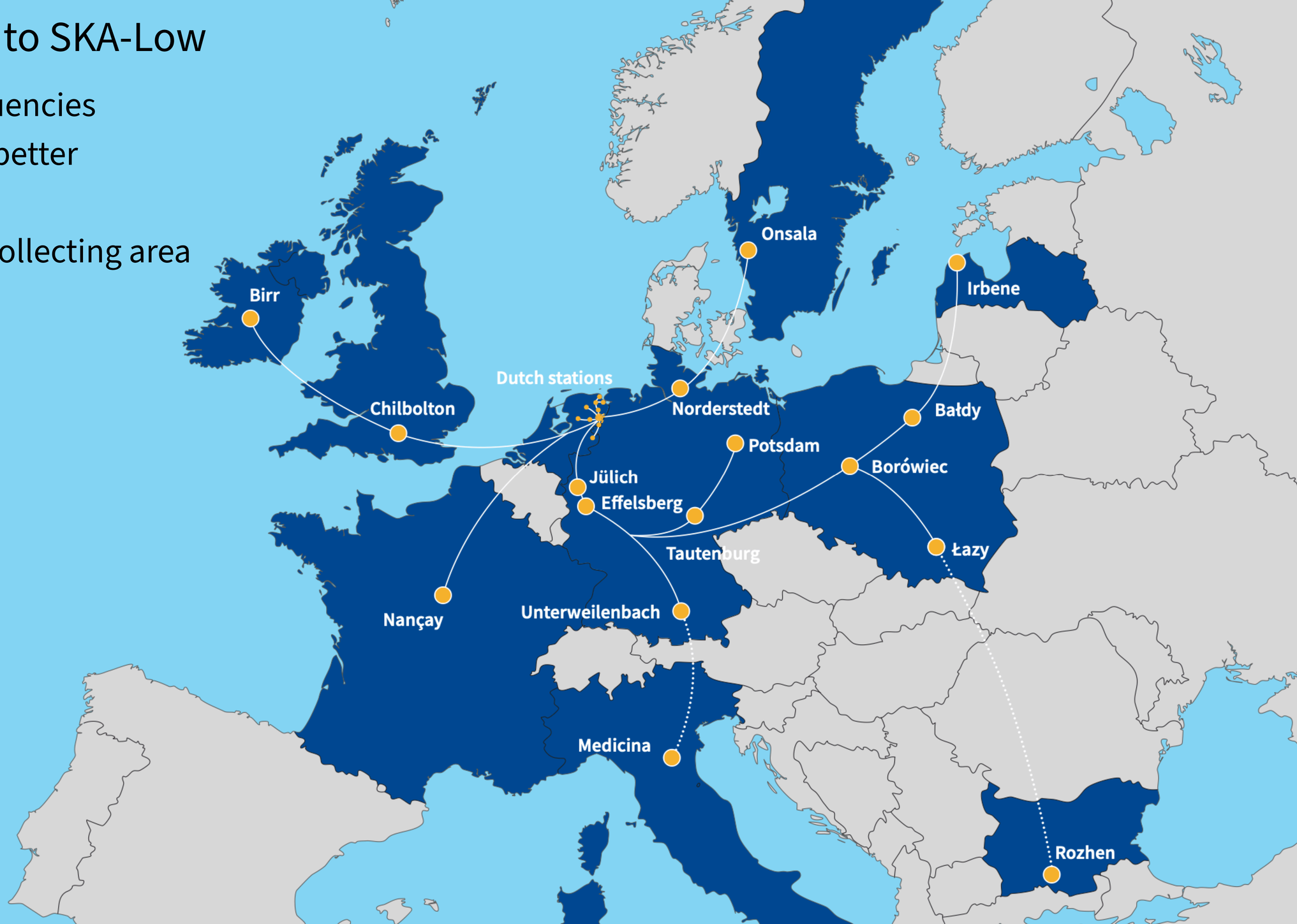
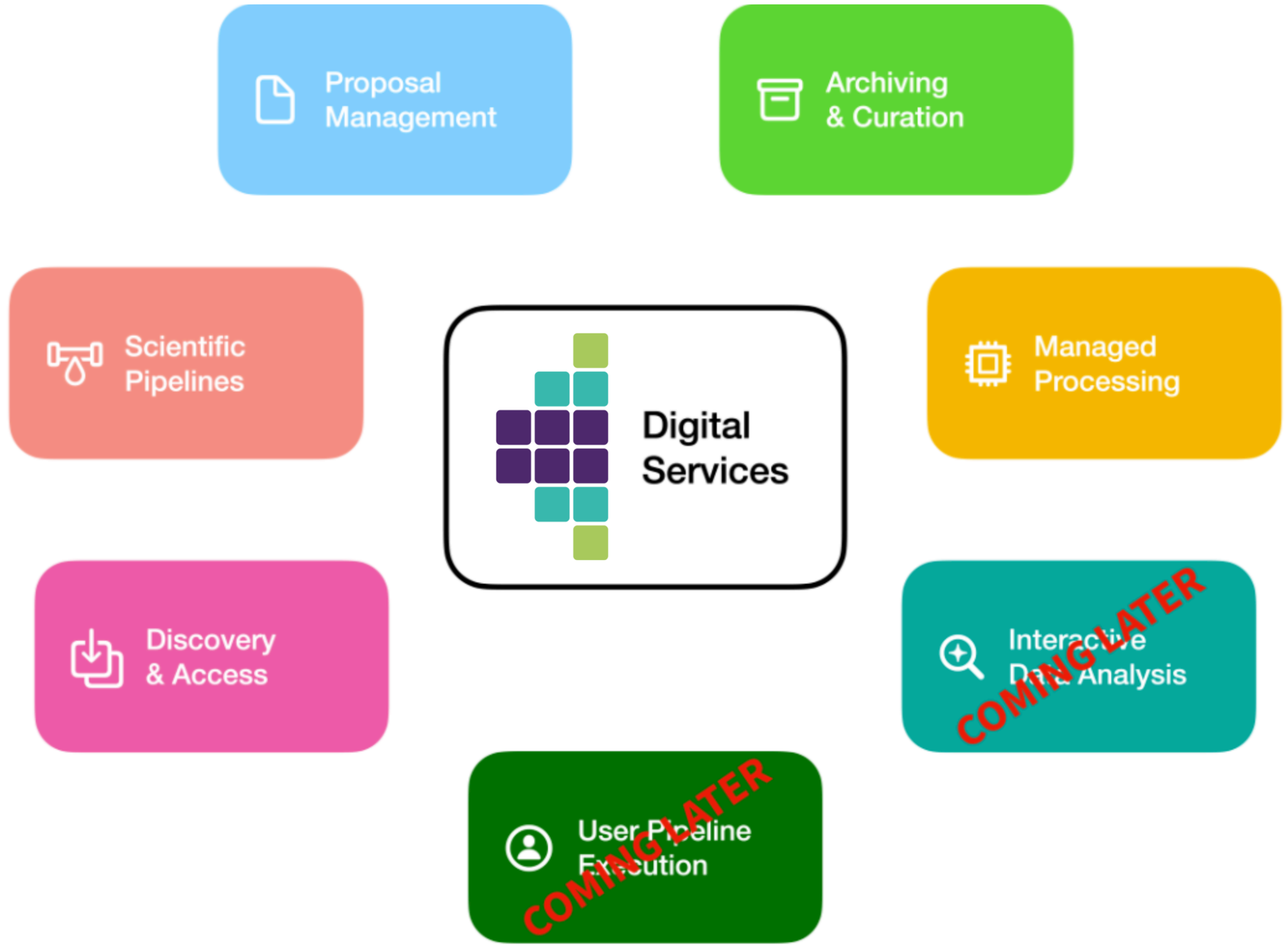
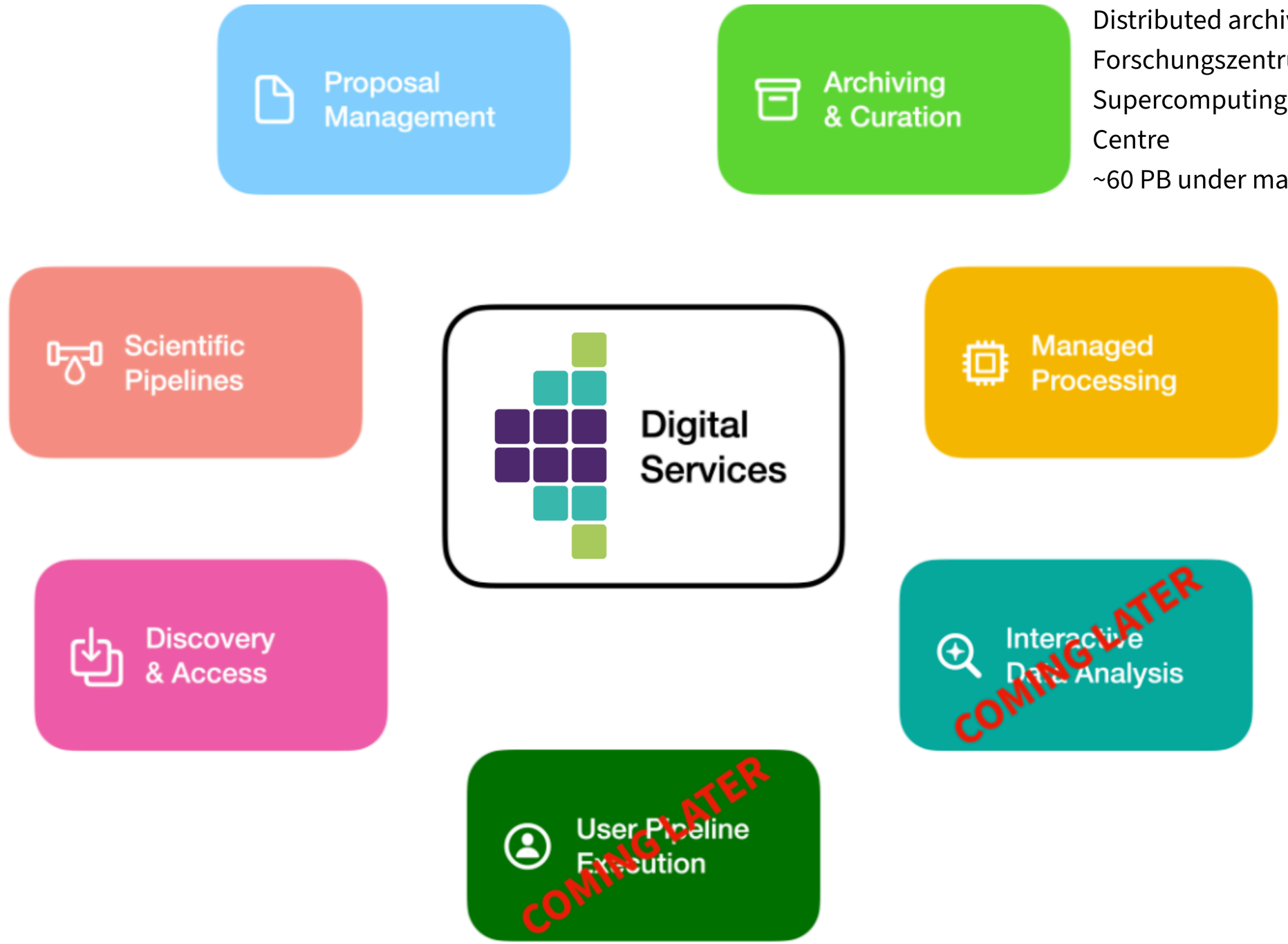
www.lofar.eu

LOFAR compared to SKA-Low

- Reaches lower frequencies
- Provides ~10 times better angular resolution
- Has ~10 times less collecting area

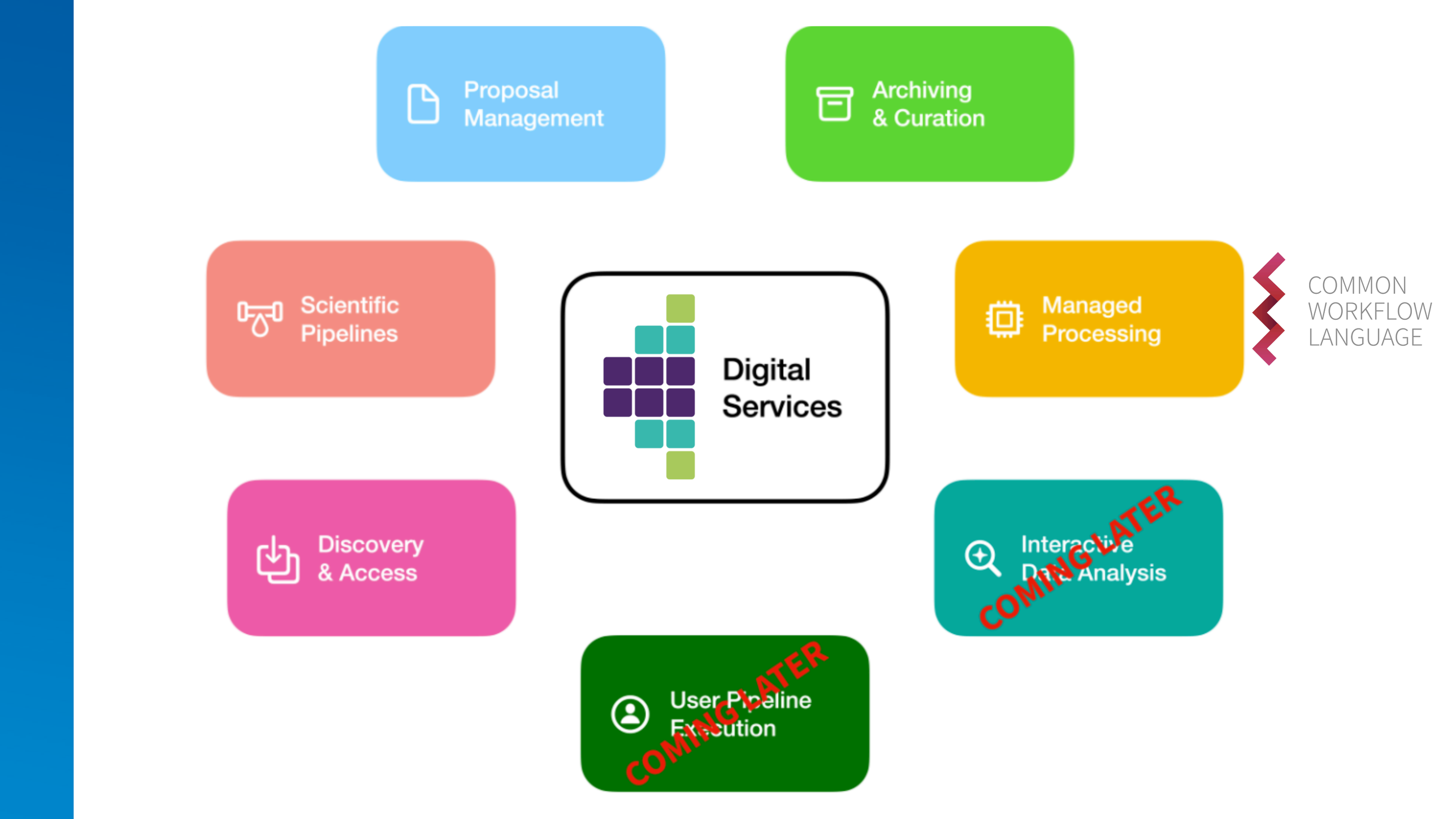


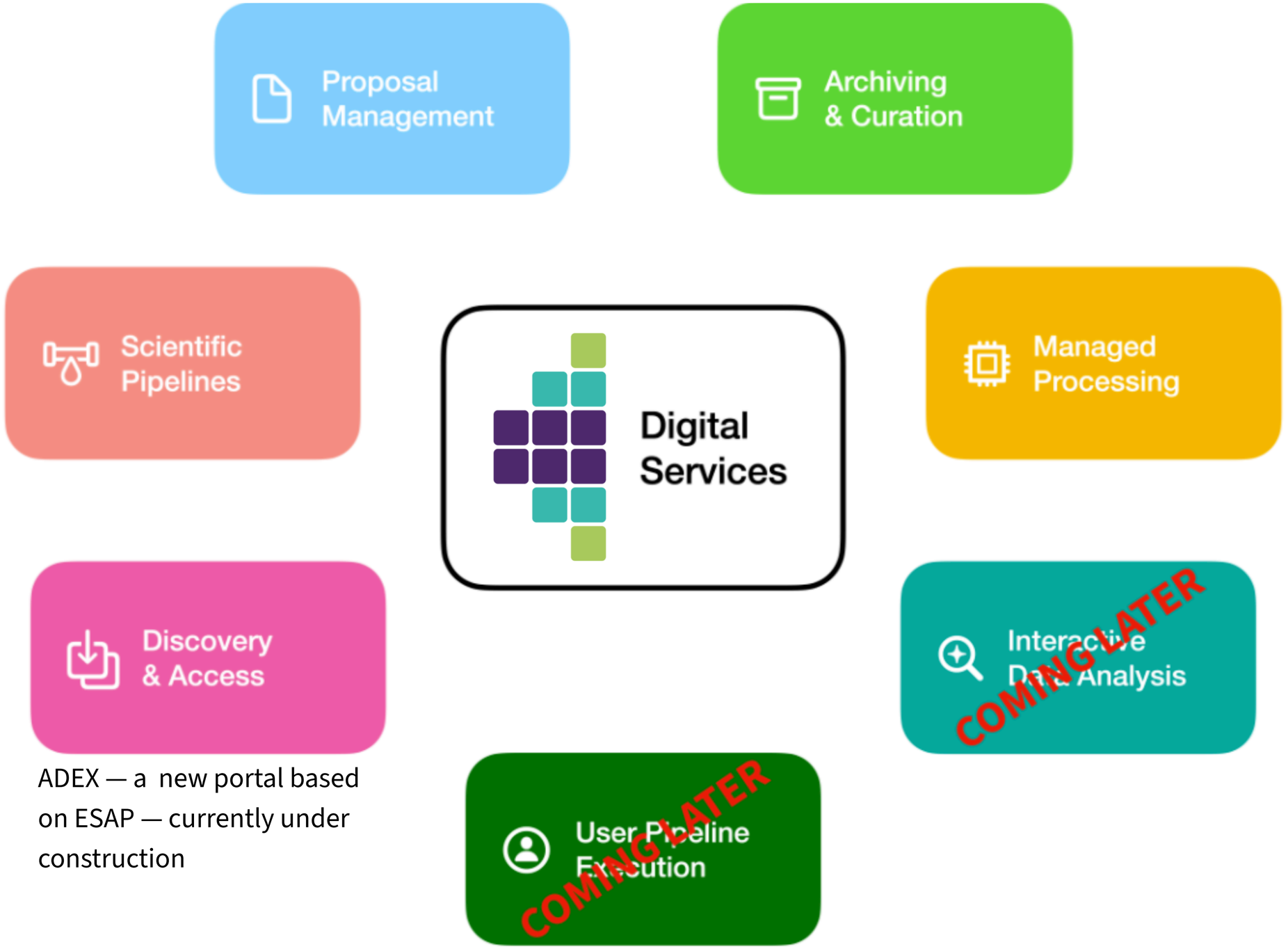

Proposal Management
Archiving & Curation
Scientific Pipelines
Digital Services
Managed Processing
Discovery & Access
Interactive Data Analysis
COMING LATER
User Pipeline Execution
COMING LATER



Distributed archive across SURF, Forschungszentrum Jülich, Poznan Supercomputing & Networking Centre

~60 PB under management


Proposal Management
Archiving & Curation
Scientific Pipelines
Digital Services
Managed Processing
COMMON WORKFLOW LANGUAGE
Discovery & Access
Interactive Data Analysis
COMING LATER
User Pipeline Execution
COMING LATER



ADEX — a new portal based on ESAP — currently under construction

The NLSRC v0.1 EoI: Considerations

- Positive answers to responses to effectively all hard requirements.
- Some requirements were felt to be under-specified (e.g. software stack includes a number of “possibles”; the validation tests haven’t been defined) or impossible for a single site to fulfil (e.g. inter-site connectivity requirements).
- Dedicating the “raw numbers” requested for computing & storage continuously is challenging; the more motivation the project can provide, the easier this is to justify to funding sources.
- Given the scale of infrastructure at SURF, we can easily consider “bursting” to additional hardware for specific tests.
- As a smaller partner, we are eager to collaborate with others.
- Scale of commitment beyond v0.1 TBD; dependent on the success of the v0.1 process.

Closing Thoughts

- The NLSRC team bring experience of actually running a very large (by contemporary standards) geographically-distributed astronomical data archive.
- Many of our near-term goals for LOFAR are aligned with the SRCNet aims; the closer we can align these, the more we all stand to benefit.
- Regardless of the outcome of the EoI process, we look forward to collaborating in any way we can to make SRCNet v0.1 successful.