



Introducing the SRCNet Development Project

Rosie Bolton

21/03/2024
Shanghai



SKAO Code of Conduct for Meetings & Events

The SKA Observatory (SKAO) aims to create a welcoming and inclusive environment where everyone feels they belong, there is fairness and respect for all individuals, and diverse perspectives and ideas thrive. This means cultural differences are to be respected, and harassment, bullying and discrimination will not be tolerated. More details are provided in the SKAO Code of Ethics.

All SKA meeting and event participants must contribute to an environment that encourages the creation and exchange of ideas, recognises and values differences and celebrates the diversity and contributions made by people of a range of cultures and backgrounds.



SRCNet Vision & Core Capabilities



SKAO Mission

“The SKAO’s mission is to build and operate cutting-edge radio telescopes to transform our understanding of the Universe, and deliver benefits to society through global collaboration and innovation.”



Staged Delivery Strategy

Milestone event (earliest)		SKA-Mid (end date)	SKA-Low (end date)
AA0.5	4 dishes 6 stations	2025 May	2024 Nov
AA1	8 dishes 18 stations	2026 May	2025 Nov
AA2	64 dishes 64 stations	2027 Apr	2026 Dec
AA*	144 dishes 307 stations	2028 Jan	2028 Mar
Operations Readiness Review		2028 Apr	2028 Aug
AA4	197 dishes 512 stations	TBD	TBD

- **Target: Build the SKA Baseline design (197 Mid Dishes, 512 Low Stations = "AA4")**
- Not all funding yet secured
- Develop the earliest possible working demonstration of the architecture and supply chain (AA0.5)
- Maintain a continuously working and expanding facility that demonstrates the full performance capabilities of the SKA Design
- User interaction with data products Expected to start towards the end of AA2 when the SKA is scientifically interesting (**Science Verification**)
- SRCs expected to be involved in this



SRC Network Vision

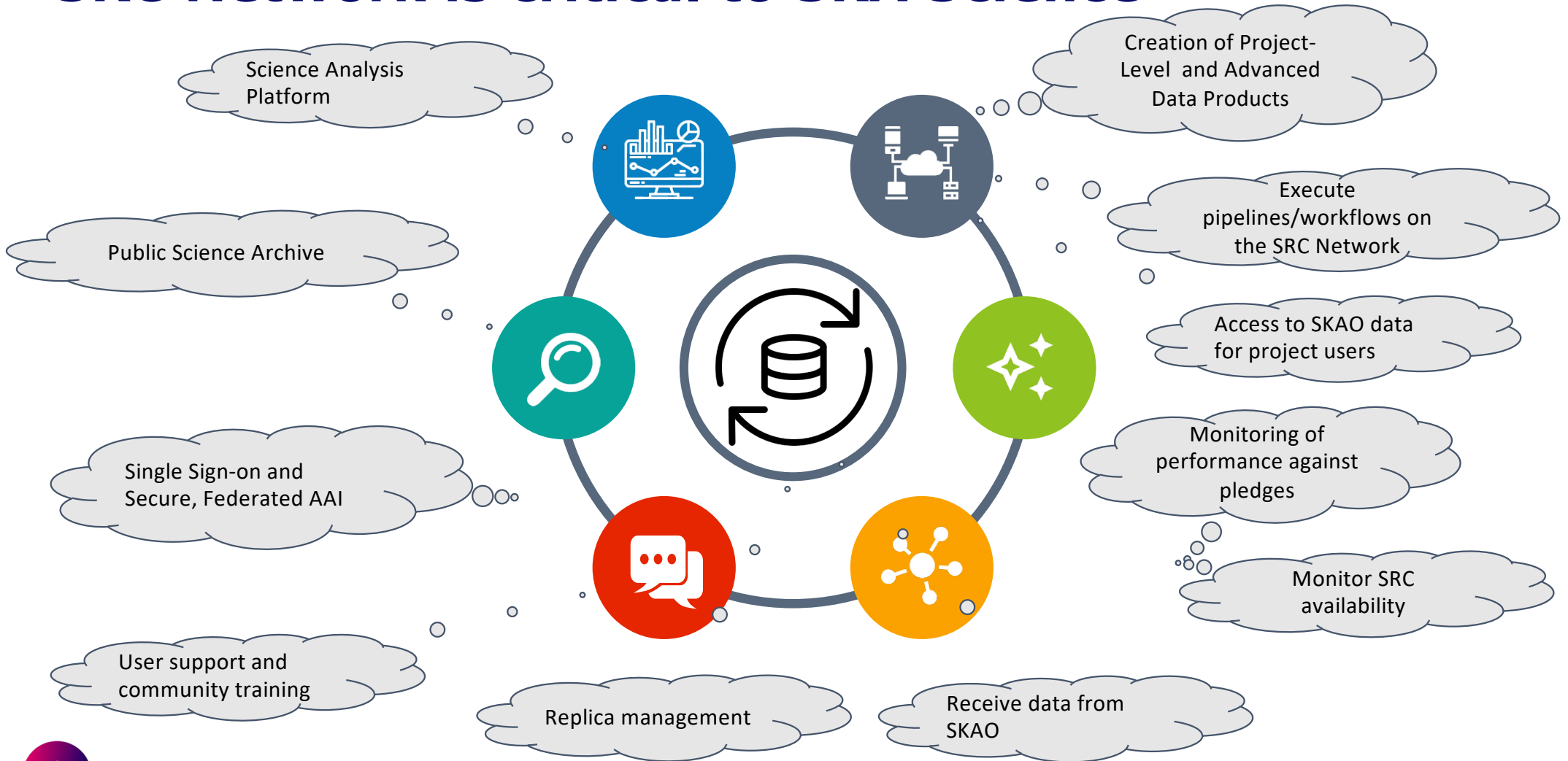
We will develop and deploy a collaborative and federated network of SKA Regional Centres, globally distributed across SKA partner countries, to host the SKA Science Archive. The SRC Network will make data storage, processing and collaboration spaces available, while supporting and training the community, **to maximise the scientific productivity and impact of the SKA.**

Initially, we will do this by:

- developing a scalable, prototype SRC Network that allows authorised users and teams to access and analyse SKA data;
- developing the software, architecture, policies and processes necessary for SRC Network operations;
- growing the prototype SRC Network, as new SRCs become available and expanded or new functionalities are developed, leading towards a fully operational and global Network.



SRC Network is critical to SKA Science



SRC Network Principles (some of them!) - written and agreed by SRCSC

- There will be a **common SKAO/SRC Network user account** that allows users access to SRC Network resources
- English will be the primary language of communication across the SRC Network
- There will be **one Helpdesk system** for the SRC Network and the SKAO.
- The SRC Network will **optimise its energy usage** whilst meeting the scientific goals of projects carried out in the SRC Network.
- Security of the SRC Network is the responsibility of the SRC Network.
- The SRC Network will **lead with principles of fairness, equity and inclusion** in all of its activities, and seek diversity of staff.
- The SRC Network will be committed to providing, and abiding to, **accessible and equitable tools, practices and processes**.
- The SRC Network will **provide workflow templates** to carry out basic and standard processing tasks.
- The SRC Network will **embrace FAIR and Open Science principles** whenever possible and appropriate.
- Resources pledged into the SRC Network will enter, and be allocated from, **a global federated pool**.
- The **allocation of resources will be per project**.
- The **physical location of SKA data** products will be determined to **optimise access and minimise data redistribution** within the Network, as much as is feasibly possible.
- Data processed within the SRC Network will **automatically propagate all metadata and provenance information**.



SRC Network Principles (highlighted for SRCNet0.1)

- There will be a **common SKAO/SRC Network user account** that allows users access to SRC Network resources
- Security of the SRC Network is the responsibility of the SRC Network.
- The SRC Network will be committed to providing, and abiding to, **accessible and equitable tools, practices and processes.**
- The SRC Network will **embrace FAIR and Open Science principles** whenever possible and appropriate.
- Resources pledged into the SRC Network will enter, and be allocated from, **a global federated pool.**
- The **physical location of SKA data** products will be determined to **optimise access and minimise data redistribution** within the Network, as much as is feasibly possible.



SRC Network Principles (highlighted for SRCNet0.1)

- There will be a **common SKAO/SRC Network user account** that allows users access to SRC Network resources

Single AAI System used by all SRCNet0.1 sites and services

Common policies for SRCNet sites (in addition to local policies)

- Security of the SRC Network is the responsibility of the SRC Network.

Ensure good user experience, for all users - Science Gateway UX

- The SRC Network will be committed to providing, and abiding to, **accessible and equitable tools, practices and processes**.

Implement IVOA standards and easy data and service discovery

- The SRC Network will **embrace FAIR and Open Science principles** whenever possible and appropriate.

Single AAI System used by all SRCNet0.1 sites and services




- Resources pledged into the SRC Network will enter, and be allocated from, **a global federated pool**.




These two are related; users go to best location depending on data location and appropriate available services, replicas centrally planned / moved to optimise global access

- The **physical location of SKA data** products will be determined to **optimise access and minimise data redistribution** within the Network, as much as is feasibly possible.



Key SRCNet Documents!

Document number	Title	PDF	Description
SRC-0000001	SKA Regional Centres Network (SRCNet) Software Architecture Document		
SRC-0000002	SRC Net Top-Level Roadmap		
SRC-0000003	SRCNet Science Analysis Platform Vision		

SRC-0000004	SKA Regional Centres Network (SRCNet) Use Cases		
SRC-0000005	SRC Network Vision and Principles		
SRC-0000006	SRCNet Operational Concept		



Questions / Discussion



End!

