



SKA Status ATUC

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13 April 2021

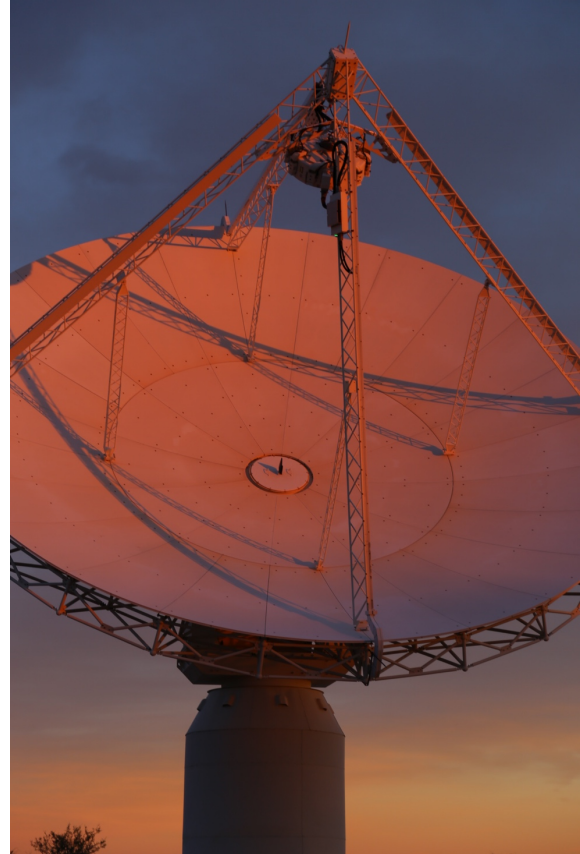
Australia's National Science Agency





SKA Progress

- IGO status
- Funding
- Construction Allocations
- Site establishment
 - Lease
 - ILUA
 - Heritage walkovers
- Site Entity
- Other facilities
- SKA staffing
- Construction schedule



SKA – IGO status

- IGO ratified – 16 December 2020
- Signatories:
 - Australia
 - South Africa
 - Spain
 - Netherlands
 - Italy
 - Portugal
 - United Kingdom
 - More to come
- Transition from Pty Ltd to IGO 1 May 2021
- June Council meeting – expect to vote on Construction Proposal



SKA – Funding

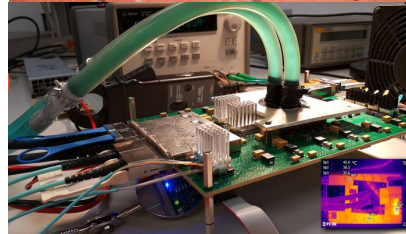
- Project has 85% of full baseline committed from members*
- Australia to fund 14% of SKA construction and operations costs
- Planning for Australian SKA Regional Centre (not part of SKA core project)

Country	Current indicative funding position (@2020EUR)	Percent of the latest €1986M Design Baseline (@2020EUR)	Likely start of funds flow
Australia	278.1	14.0%	2021
China	158.9	8.0%	2021
Italy	120	6.0%	2021
Netherlands	39.1	2.0%	2021
Portugal	29.4	1.5%	2021
South Africa	278.1	14.0%	2021
Sweden	26.7	1.3%	2021
UK	298	15.0%	2021
India	85	4.3%	2021
Canada	119.2	6.0%	2021
Spain	41.4	2.1%	2021
Germany	31	1.6%	2021
France	106	5.3%	2022
Switzerland*	25.8	1.3%	2021
Japan	40	2.0%	2023
S. Korea	26.7	1.3%	2023
TOTAL	€1703.3M	85.8%	



Construction allocations

- Allocation of work packages "finalized"
 - Focused on members achieving 70 % FWR
- Australia Tier 1 lead in:
 - Low Infrastructure (Industry contracts)
 - **Low Infrastructure Management (CSIRO)**
 - **Low Assembly Integration and Verification (CSIRO)**
 - **Low Station Management (CSIRO and Curtin)**
- And partner in:
 - **Digital systems (CSIRO)** joint with Netherlands
 - Station power & signal distribution and deployment (Curtin Uni + Industry)
 - **Software and computing (UWA, Swinburne and CSIRO)**
 - MID timing (UWA)





Site establishment

- **Lease**

- Terms of new lease for Boolardy Station agreed
- Kalli Station investigations underway

- **ILUA**

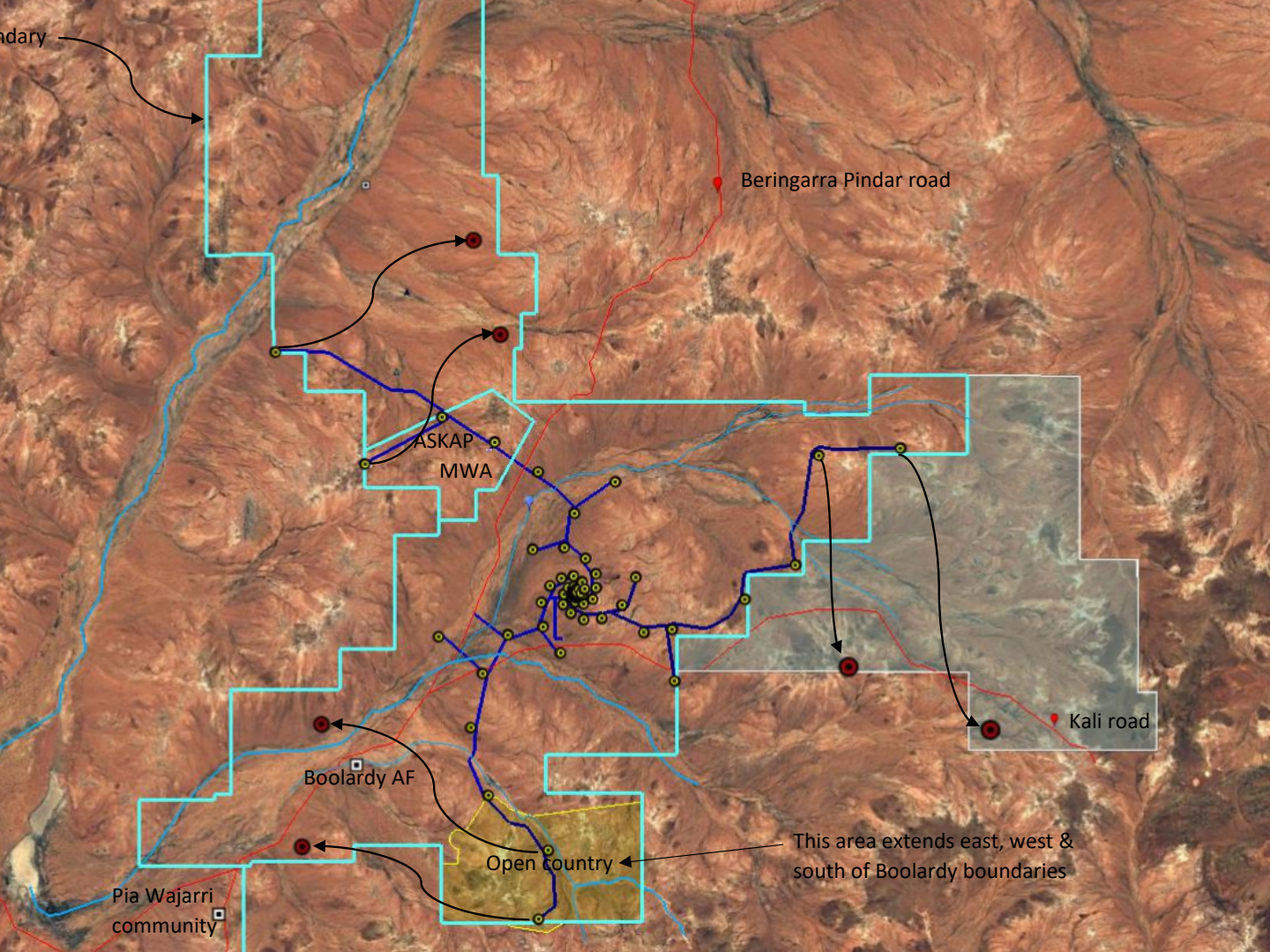
- Key terms all agreed (except Kalli)
- ILUA negotiating meeting
 - 20-21 April
 - Community meetings May – June
 - Heritage key topic



Heritage surveys

- COVID significantly slowed surveys in 2020 / 21
 - Exacerbated by some internal Wajarri issues and bad weather
- Primary consideration – avoiding disturbance of heritage sites
 - Long term protection of heritage
- Around 80% complete
 - Need to determine some alternate routes for some tracks
- Re-commenced but behind schedule
 - September 2021 completion ?







MRO Site Entity Update

- Site Entity responsible for running the MRO site on behalf Australia
 - Manage the land – 4,400 sq km (99.2% of all CSIRO land in Australia)
 - Fencing, water points, feral animal, airstrips, mustering, neighbours, etc
 - Boolardy + Kalli Station will form the new MRO
 - Radio-astronomy has primacy
 - Landlord to telescopes on the MRO
 - Provides services to the telescopes as needed:
 - Road grading, accommodation, maintenance ?, RFI monitoring etc
- Work on additional facilities underway:
 - Agreement with Curtin on principle of Science Operations Centre (SOC) in ARRC (Perth)
 - Regular CBIS / CASS meetings on SOC space requirements
 - = > fed into CSIRO's Perth Masterplan
- Power station procurement (with SKAO)
 - High level of sustainability – preliminary work indicates >75% solar



Other facilities

- Engineering Operations Centre (EOC)
 - New facility in Geraldton adjacent to CSIRO's MSF
 - Support ~ 55 SKA site operations and maintenance staff
- Boolardy Accommodation Facility (BAF)
 - New permanent accommodation facility needed for 70 – 90 people
 - Initial designs done, looking for significant indigenous engagement
- Science Operations Centre (SOC)
 - Situated at ARRC facility
 - Working with Property and tenants for space for refit
 - House approximately 65 SKA ops staff and around 108 related radio-astronomy staff (CASS, Pawsey support etc)
- Australian SKA Regional Centre (AusSRC)
 - Major partnership CSIRO, UWA, Curtin University with Pawsey, AAL and other universities in development
 - Primary mechanism for astronomers to access their SKA data and provide additional analysis



SKA Staffing

- Significant ramp-up in SKA staffing in Australia (+RSA) commencing
 - ~ 120 positions in SKA Operations
- Several categories:
 - Construction related
 - SKAO, CSIRO, associated groups with construction contracts
 - Operations under Collaboration agreement
 - CSIRO is collaborating with SKAO to operate SKA1 Low
 - CSIRO will provide ~80% of SKA staff to SKAO for Operations
- Watch recruitment sites:
 - SKAO
 - CSIRO



SKA Schedule

- SKAO needs to place 57 Tier 1 contracts to build 2 telescopes
- Construction Readiness Reviews on these contracts underway
- June 2021 SKA Council meeting
 - approve Construction Proposal ?
- Plan is for contracts to be awarded over 18 month period
 - Earliest around July 2021
 - Infrastructure related
 - Most in first 12 months
 - (Couple out as late as November 2023)
 - On site:
 - First on site work (temporary construction camp Dec '21)
 - First shovel in the ground : March 2022
- **AA0.5** (6 stations, at 3 locations, 2 km apart) – May 2024



Thank you

We acknowledge the Wajarri Yamatji as the
traditional owners of the observatory site