



Rebaselining and the Australian SKA site

David Luchetti, Australian SKA Office

- Short history of the rebaselining process
- The rebaselining recommendation
- SKA1-Low
- ASKAP/SKA-Survey
- Role of the Australian SKA Office

Early design work

- Nov 2012 – Site decision formalised
- Early 2013 – New baseline design
- July 2013 – €650m cost cap agreed for Phase 1
- Late 2013 – 11 international consortia begin detailed design
- Sept 2014 – Preliminary cost estimates - found to be too high
- Sept/Oct 2014 – Scientists and Engineers provide further input at SKA Engineering Conference in Fremantle
- Late 2014 – PDRs confirm high cost of planned design and a set of rebaselining options are developed

Science Prioritisation work

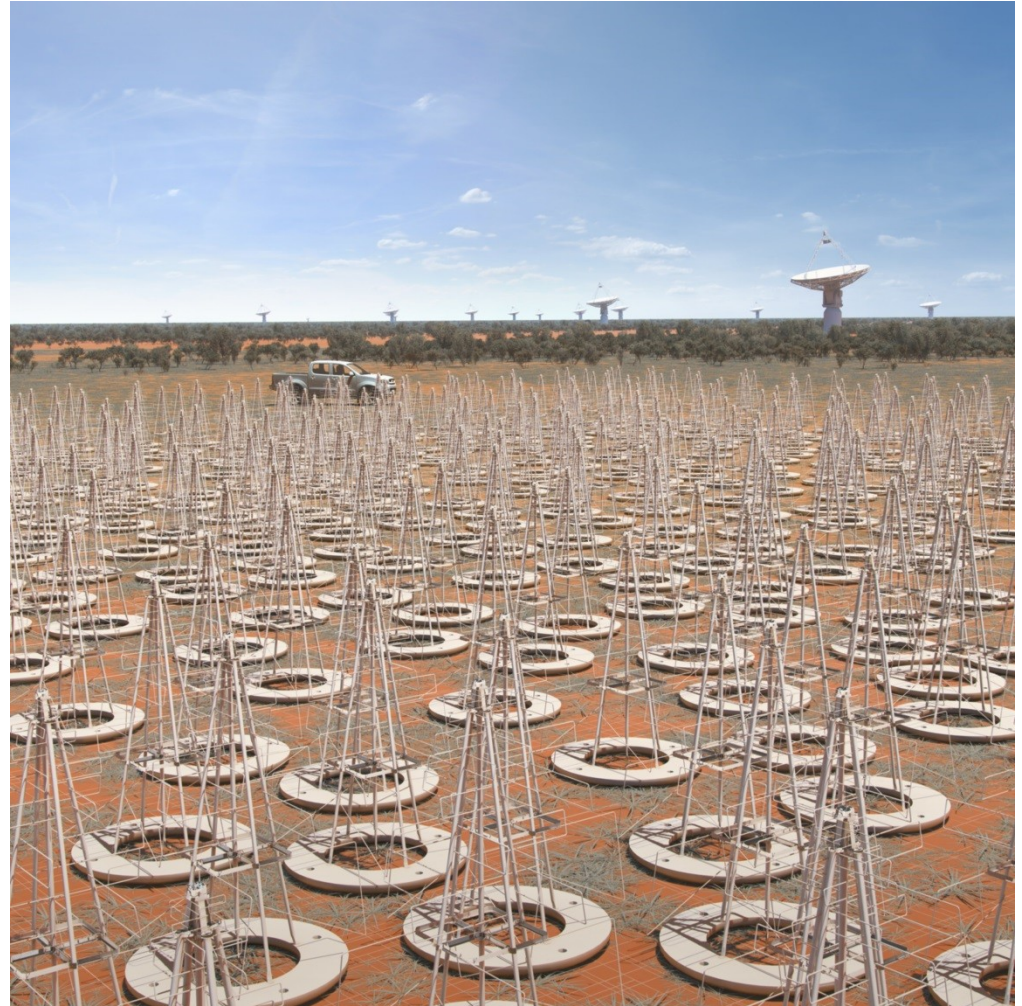
- 2004 – Original science priorities are set
- June 2014 – Further input provided by scientists at SKA conference in Sicily
- From July 2014:
 - The SKA Science Working Groups submitted their highest ranked science objectives to SKA Office
 - SKA Office assessed these against agreed criteria
 - Outcome of assessment reviewed by
 - 16-member ad-hoc Science Review Panel
 - Science and Engineering Advisory Committee
- October 2014 – High-priority science objectives presented to SKAO Board

Early 2015

- Rebaselining options reviewed against science priorities – recommendation to cut infrastructure
- Rebaselining recommendations reviewed again by:
 - 16-member ad-hoc Science Review Panel
 - Science and Engineering Advisory Committee
- Australian SKA Office:
 - Advocated for further inclusions in recommendation
 - Consulted with broadened Science Advisory Committee
 - Advocated for recommendation as starting point only for intergovernmental negotiations
- Recommendation noted at March 2015 SKAO Board meeting

- 70% of planned SKA1-Mid in South Africa (~200 dishes)
- 50% of planned SKA1-Low in Australia (~130K antennas)
- Planned build of SKA-Survey deferred
- Proposal to fund ASKAP operations from 2020 as early SKA-Survey capability
- Advanced Instrumentation Program to focus on continued development of PAF technology

- Will be capable of transformational science, even at 50% scale
- Presents significant opportunities for Australian industry



- Future of ASKAP
 - CSIRO transition?
- Wide-ranging implications
 - ILUA
 - Site management
 - Government position (business case)



Site establishment

- SKA site entity
- Indigenous Land-Use Agreement
- Indigenous heritage approvals
- Environmental approvals
- Radio-quiet protection
- Roads and Power
- Other governmental approvals

Policy

- Site of international headquarters
- Intergovernmental negotiations for SKA Treaty
 - Secure broader project funding
 - Negotiate key documents
- Approach cabinet for ongoing funding and commitment

Stakeholder engagement

- The Minister and Australian Government
- WA Premier and State Government
- Australian scientists
- International office, partner governments, etc.
- Industry
- Regional stakeholders
- The public



Australian Square Kilometre Array Office



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