



SKA Organisation

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Notes from the Chair of the SKA Board

**27th Meeting of the Board of Directors of SKA Organisation
held at Arabella Western Cape Hotel, Western Cape, South Africa.
11-12 July 2018**

Dr Catherine Cesarsky, Chair of the Board, welcomed directors and invited guests to the 27th Meeting of the Board of Directors of SKA Organisation.

The Board welcomed Spain as an Associate Member of SKA Organisation (effective from 1 June 2018) and France as a Special Member of SKA Organisation (effective from 12 July 2018).

Director-General's Report

Philip Diamond commenced his update on project activities since the last Board meeting by reporting on project safety, health and environmental issues. Since the last Board meeting, there have been no significant reportable or non-reportable accidents or incidents recorded at SKA HQ. Formal reviews of Health, Safety and Environmental issues have been undertaken at TM, SaDT, INAU and INSA element Critical Design Reviews. Project Safety Management Plan (Rev 2) and the Environmental Management Plan (Rev 1) are on target for completion in 2018Q3. A System Safety Review panel has been formed to integrate element safety reviews; its current focus is issue management, demonstrating safety in design and embedding functional safety.

Construction of the extended SKA HQ at Jodrell Bank has been completed, with handover of the building to the SKA due to take place on 16 July.

Engagement with potential new members, to both SKA Organisation and the future SKA Observatory, continues. Representatives from Germany, Japan, South Korea and Switzerland were in attendance at this meeting.

Science

Robert Braun, Director of Science, reported that SKA-1 High Performance Computing (HPC) and archiving requirements have been discussed with the Science and Engineering Advisory Committee (SEAC). He reported on computing bottle-necks and noted that the throughput of the SKA HPCs is dominated by calibration rather than data product generation. He also explored the constraints on SKA capability resulting from a phased deployment of HPC capacity. The resultant reports will be published in due course.

Preparations are underway for the first release of science data challenges, which will subsequently be released every six months or so.

An SKA Key Science Project Workshop and general science meeting will be held on 8-12 April 2019 at SKA HQ. This event will focus on new techniques, instruments and methods.



Engineering

Joseph McMullin, Programme Director, presented his Engineering Report. He stated that, having completed all engineering trade analyses at the Preliminary Design Review stage, Critical Design Review (CDR) demonstrates a fully compliant design that is ready to manufacture for a specified cost. The element CDRs for TM, SaDT, INAU and INSA have taken place and close-out actions are underway. The outstanding element CDRs are scheduled as follows: CSP (25-28 Sep 2018), MeerKAT Integration (22 Oct 2018), DSH (pre-CDR: 8 Nov 2018), SDP (17-19 Dec 2018), LFAA (17-19 Dec 2018), and AIV (8 Jan 2019). The Board noted both the progress made to the LFAA CDR development and the schedule developments for the Dish consortium. The date of the System CDR has yet to be finalised.

The Board noted that the unavailability of intellectual property of design-phase intellectual property needed to implement the SKA remains a concern and potentially impacts design choices and construction costs of SKA-1. The SKA Office continues to insist upon explicit IP declarations in cost submissions and is helping the design consortia to overcome problems of design disclosure at CDR; it is not possible for a consortium to pass its element CDR without resolving this issue.

Andrea Ferrara, Chair of the Science and Engineering Advisory Committee (SEAC), presented his report of the Committee's meeting at the FAST site, near Guiyang, China, on 2-3 July 2018. The SEAC's discussions included: (i) project status and Cost Control Project, (ii) CDR process, (iii) Bridging process, (iv) Early Production Arrays, (v) planning for operations, (vi) staged High Performance Computing deployment and its impact on science; (vii) SKA Regional Centres and (viii) commissioning. The SEAC made a number of recommendations, which were discussed by the Board. Philip Diamond thanked the SEAC for its report and responded on behalf of the SKA Office.

Joseph McMullin presented an update to the draft Bridging Plan covering the interval between the end of formal consortium activities and the start of construction activities under the SKA Observatory, a period beginning shortly and lasting to approximately May 2020. He noted that Bridging relies on completion of element CDR activity and covers activities which support (i) System CDR development and execution, and (ii) Construction Proposal development and delivery. It comprises 65 high priority ("Priority 1") tasks and involves 112 FTE years of effort from 19 providers. There will be central management of effort and development risk by the SKA Office, utilising NEC4-style agreements (MOUs).

The Board approved detailed planning of Early Production Arrays (EPAs) at its last meeting (April 2018). However, whilst the concept of EPAs remains within construction planning, SKA Office resources have been reallocated to support consortia CDR phases to pull in the project schedule as much as possible. Further work on EPA programmatic details will commence after element CDR closeout in 2018Q4.

Planning for Operations

Gary Davis, Director of Operations Planning, reported that the SKA Office has held regular discussions with host countries and other Members to further develop the Operations Model. Good progress was made at the most recent meeting, which was held on 1 June 2018 in Dubai, UAE, and the Operations Model now includes a plan to establish partnerships between the SKA Observatory with both CSIRO (for the operation of SKA1-LOW in AUS) and with SARAO (for operation of SKA1-MID in RSA). Both partnerships are to be led by the SKA Observatory. Further development of the partnership legal and programmatic concepts will be presented to the Board at SKA-BD-28 meeting (8-9 Nov 2018).



Gary Davis presented an update on planning for the SRCs, which currently fall outside the scope of the project and will be regionally funded. Following Board discussion, it was agreed that SKA Office will work with the SRC Co-ordination Group (SRCCG) to provide a paper at SKA-BD-28 describing the SRC network required to deliver SKA science, including the data and computing model, and estimated financial and computing resources.

Joseph McMullin reviewed the status of construction cost estimates since the last Board meeting (11-12 Apr 2018). The most recent SKA-1 cost estimate for the Design Baseline is €814.2M (Dec 2017 Euros).

The Board approved an inflationary adjustment of the Deployment Baseline cost cap to €691M (December 2017 Euros). An external cost review will be carried out following the System CDR and prior to the Construction Proposal submission in order to ensure that this figure represents the lowest level of cost risk for a scientifically transformative Deployment Baseline SKA1 Observatory.

Procurement

Alistair McPherson reported on the recent procurement Request for Information (RfI) exercise, which was well supported by Members. Early analysis and modelling highlights a number of strategic issues, such as delivery of a high level of minimum work-return within a competitive procurement process; these will need to be addressed in order to develop an acceptable SKA1 procurement plan.

The Board noted the update on the procurement RfI and that an updated report will be submitted to the Council Preparatory Task Force (CPTF), when established.

Policy

Daan du Toit, Chair of the Strategy and Business Development Committee (StratCom), reported on the Committee's meeting on 5-6 June 2018. The Board was informed about StratCom's discussions on: (i) stakeholder engagement, (ii) the integrated schedule of policy-governance, engineering and science timelines, (iii) development of the business plan for 2019-20, (iv) transition planning, and (v) establishing the Council Preparatory Task Force (CPTF). The Board noted progress to prepare for the establishment of the CPTF, the body which will lay the groundwork for the establishment of the SKA Observatory Council, and the potential role for the Director-General and Board Chair in informal discussions on funding ahead of the CPTF's formal activities.

Daan du Toit reported that China had initialled the convention and was the sixth Member to do so. He added that further details on the signing process were awaited imminently from the Italian Presidency. [Note: since this meeting, The Netherlands has become the seventh Member to initial the convention].

Theresa Devaney, Transition Co-ordinator, provided an update on planning for the transition of SKA Organisation to an Inter-Governmental Organisation (IGO). She noted that the Board has already endorsed the establishment of a Joint Working Group for Transition (JWGT) to support delivery of the transition plan and to facilitate the interface between the SKA Board and the CPTF. The Board noted revised Terms of Reference for the JWGT and plans for its initial meeting in 2018Q4 (following the establishment of the CPTF).

Theresa Devaney stated that a key part of the transition plan is to establish the SKA Observatory Operating Model, which includes all administrative functions and operation of the



telescopes, supported by the relevant policies and procedures fit for the future IGO. The Board endorsed the approach for informal planning of the activity required to develop the SKA Observatory Operating Model.

Communications

William Garnier, Director of Communications, Outreach and Education, presented an SKA Communications Strategy for 2018-20, covering (i) end of design phase; (ii) bridging phase; (iii) transition to IGO; and (iv) SKA Observatory early days. This strategy is inclusive and relevant to the whole organisation and its partners, involving all stakeholders from across the SKA partnership. Newly defined objectives are:

1. Support the legal foundation of the SKA Observatory by providing the worldwide SKA community efficient stakeholder engagement and coordinated, targeted and timely communications across partner organisations;
2. Maintain and enhance high levels of engagement with key stakeholders throughout the construction preparation phase using a variety of communications tools, vehicles and initiatives to demonstrate momentum and enhance credibility; and
3. Continue increasing the profile of the project internationally among the general public and expanding the number of followers/supporters in member and prospective member countries.

The Board approved the implementation of the SKA Communications Strategy 2018-20.

Administration and Governance

The Board re-elected Lars Börjesson for a further two-year term as Vice-Chair of the Board of Directors.

Fiona Davenport, Head of Human Resources (HR), presented an update on implementation of the HR plan for 2018. A review of current attraction and recruitment channels is underway with the aim of maximising high quality and diverse candidates within budgetary constraints. Current recruitment data indicates that SKA is attracting relatively few women in science and engineering roles and also low numbers of applicants from some of the Member countries; the HR team continues to work to address these issues. A staff engagement survey was recently conducted and the results, which are currently being analysed, will provide insights to help us attract and retain talent from around the globe. It will also inform the development of an internal engagement and internal communications strategy.

Implementation of an Enterprise Resource Planning (ERP) system at SKA HQ, which will include an HR module, is underway.

The SKA's submission for Athena SWAN accreditation was made May 2018 and the results are expected this October. Athena SWAN is a UK charter with the aim of advancing the representation of women in science, technology, engineering, medicine and mathematics (STEMM).

Colin Vincent, Chair of the SKA Finance Committee, presented a report of the Finance Committee meeting on 15 June 2018. Following the Committee's recommendation, the Board approved the Report and Financial Statements for 2017 as a true and fair view of the Company's financial position. The Board welcomed the assurance provided by the external auditors that SKA Organisation is a viable going concern.



The Board confirmed the following future Board meetings:

Interim meeting: 18 September 2018 (by video)

SKA-BD-28: 13-14 November 2018 (SKA HQ)

SKA-BD-29: March 2019 (SKA HQ). Dates to be confirmed.

SKA-BD-30: mid-July 2019. Dates and venue to be confirmed.

Catherine Cesarsky
Chair, Board of Directors
SKA Organisation
20 July 2018