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Science and Innovation
REPUBLIC OF SOUTH AFRICA



SARAO
South African Radio
Astronomy Observatory

MeerKAT Extension Update

Mid Annual Status Update Meeting
10 May 2022

www.sarao.ac.za

The South African Radio Astronomy Observatory (SARAO) is a National Facility managed by the National Research Foundation and incorporates all national radio astronomy telescopes and programmes.

Highlights

- **MPG-DS** IRR partial pass 3 Mar 2022.
- **Infrastructure** contract – 18/24 foundations cast
- **Band 2, Vacuum & SPFC**: AR held in March. Production complete.
- **Helium service**: contract placed. Kick-off meeting later this week
- Progress on final selection of **antenna locations** between Sphesihle Makhathini (SARAO) and Hans Reiner (MPG)

Highlights

- **Correlator** functionality demonstrated in an 8-antenna lab system: delay tracking, channelisation, baseline correlation products
- **Rack and power** (MKAT-ECP-259) design complete, procurement starting
- **Digitiser** – small delay due to finalising of the RFCU filters
- Next **MK+ board meeting** has been moved to 8 June 2022

MPG-DS

IRR partial pass on 3 Mar 2022.

- Several follow-up workshops held over March and April
- Review inputs are being wrapped up now

Schedule

- There will be some schedule impact – detail is not yet known yet
- Delays due to IRR findings and work required
- General supply chain issues also expected to impact delivery times
- Master schedule update for end of May will incorporate the new DS dates

Infrastructure contract

Amory Le Roux-Arries replaces Hendrik Hurter as PM

Fibre

- KAPB fibre installation scope is settled, additional costs to be approved

Foundations

- Foundation casting on hold while bolt cages are investigated/torqued
- First 18 unit bolts are waiting on method statement from contractor
- Comprehensive report from Gerhard Swart

- Lessons from MeerKAT:
 - Continuous out-of-specification creep (possibly made worse by rain on site)
 - Sudden change by ~ 1 arcmin due to large wind event
 - Programme of monitoring, levelling and pointing calibration to be set up

Project Map

SKAO
(UK)

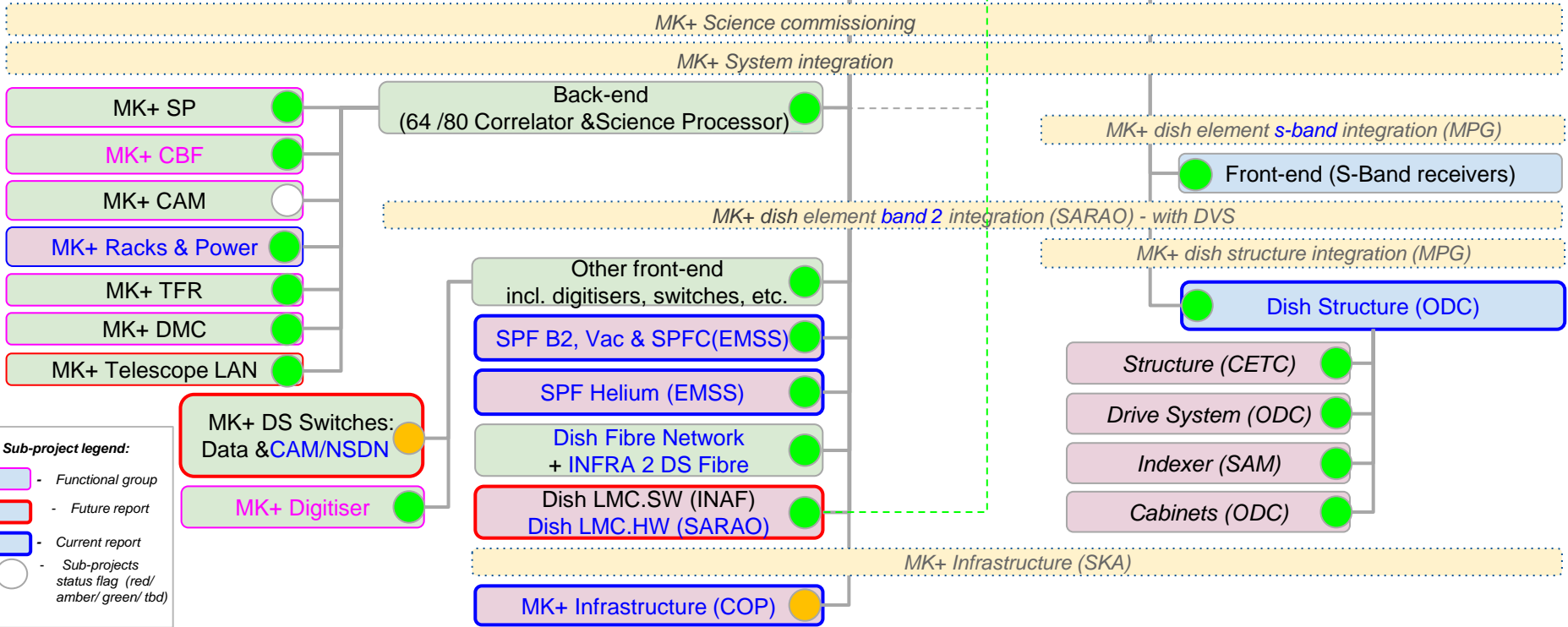
Product assurance

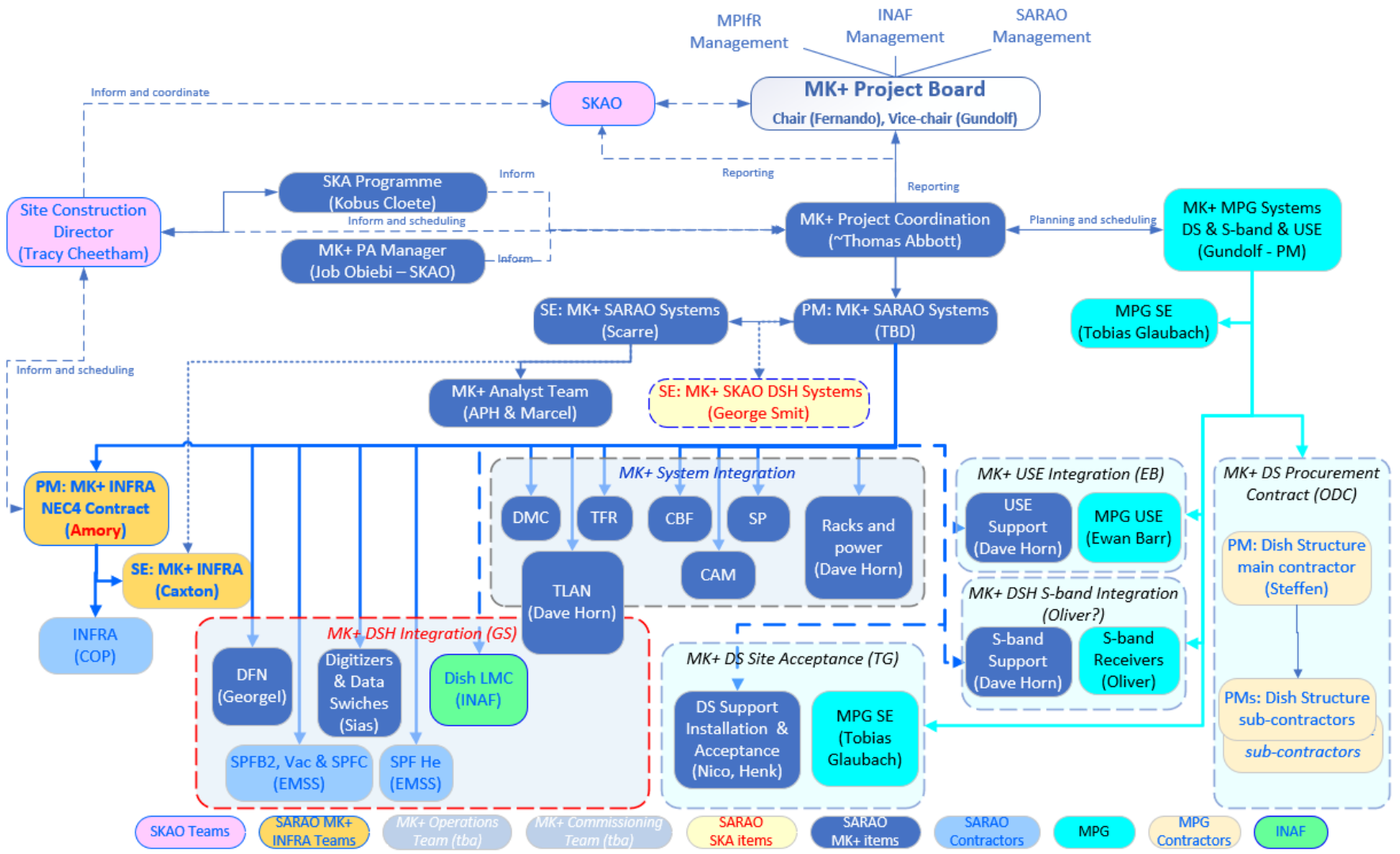
SARAO

MOA's

MPG
(Germany)

INAF (Italy)







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