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## Telescope Manager Consortium: the Italian contribution - 25'

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Telescope Manager (TM) is the central element of the SKA. Its role (and responsibility) are the management of the preparation of astronomical observations, the execution of telescope operations and the control and monitoring of the overall telescope status.

To accomplish these functions, TM was originally structured as made of of specific sub-elements: Observation Management (OBSMGT, UK-led), Telescope Management (TELMGT, India-led), Local Monitoring and Control (LMC, Italy-led) and Local Infrastructure (LINFRA, Portugal-led). The TM Consortium, led by the NCRA team at Pune (India), also included South Africa for System Engineering as well as Australia and Canada for review and consultancy. The TM architectural design started on November 2013.

During the development of the final design an important change occurred after the adoption of the SEI architectural design standards by the SKAO. The TM PBS was redefined, in line with the change introduced at system-level, and three high-level products were foreseen: TM-Observatory, TM-Mid and TM-Low. Correspondingly, the design of TM was redefined as composed by two main software modules: *Observatory Science Operations (OSO) software* and *Telescope Monitoring and Control (TMC) software*. In addition to them, however, three cross-cutting modules were introduced: *TM Services (SER) software*; *Authentication, Authorization and Auditing (AAA) software* and *User Interface (UI)*.

The groups from INAF led these three important modules, while collaborating with the UK team in the development of the *Observation Data Archive (ODA)*, a crucial part of OSO software.

The TM consortium successfully passed the CDR in April, 2018 (the very first CDR of the whole SKA project). A large part of the activities carried on during the Pre-construction Phase, especially those concerning INAF, are to be prosecuted during the Bridging Period and could possibly play an important role during the SKA Construction Phase.

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