

SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)  
Enabling the Future - Developing the Space Workforce (5)

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THE NEED FOR THE DEVELOPMENT OF THE SKILLED SPACE WORKFORCE IN AFRICA: THE  
CHALLENGES, OPPORTUNITIES AND APPROACHES

**Abstract**

A number of African countries have been involved in the use of space science and technology since the dawn of the space age. Over the recent years a handful of these countries have invested in the building and development of own space capability to support capacity building and encourage the development of knowledge base. The challenge faced by these countries is the sustainability of the capacity and workforce to support the needs for the development of space capability, as many of these satellites are either developed locally or sourced internationally with limited transfer of skills. In order to curb these short comings a number of programmes and collaboration tools have been put in place. These include the Africa Resource Management Constellation Agreement, currently with four Parties, South Africa, Kenya, Algeria and Nigeria. The space agencies and organisations in these countries aim to use agreements like the ARMC to ensure the sustainability of space activities and the development of the necessary skills in Africa. Even though this is the case, most of the countries continue to lose critical skills to support space activities. The fundamental approaches and opportunities to develop the current and the future workforce to ensure the sustainability of the future workforce to support the exploration of space include the following; • Investment by space agencies and organizations in education and training to develop technical, management and engineering skills to meet the current and future needs in space science and technology; • Strengthening of professional development programmes for the current workforce; • Strengthening of collaboration and exchange programmes to ensure the availability of the right skills to continuously support the current and future needs in space; and • Development of policies and strategies to ensure succession planning and the sustainability of current and future workforce. This paper will seek to outline the challenges, opportunities and approaches to ensure the development of the workforce. This paper provides the detailed discussions in each approach to inform the development of a broader agenda for workforce development policies. The paper concludes with a discussion of how these approaches could be scaled and further advanced and how policy could better support their broader implementation.