

FUTURE TRENDS IN THE GLOBAL ARENA – CHALLENGES AND OPPORTUNITIES FOR AFRICA

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Space exploration is today a total global engagement that is changing, daily, the way we live, interact and even foresee the future. Indeed, space enterprise is becoming one of the critical and fundamental pillars of industrialisation, with a variety of opportunities for technological advancement and related economic growth. Accordingly, the fore-runners in space are now setting the pace for the future use of that same environment, not only to protect their existing and future space assets, but also to maintain their leadership in space. Future space assets would include, inter-alia, space-based human settlements, commercial infrastructure for exploring and mining the moon and other planets as well as space-based military capabilities. Thus, within the global space community, a number of ideas and the technologies and funds to support their realisation are receiving necessary analytical attention while others are in various stages of development and design. Among these concepts are Responsive Space Systems (RSS) for military and civilian purposes, Dedicated Intelligent Earth Observation Systems and Human Exploration of and Settlement in Space including the Ethics of Outer Space.

This paper examines these global trends; it also addresses what should be Africa's focus and contributions, particularly in those key areas where it can excel, make its mark and attain its own goals. Presently, there is the sprouting of national space institutions on the African continent similar to the global scramble in the early 1960s after the launch of SPUTNIK-1. But those 1960 space-related institutions focussed on developing indigenous capacities and capabilities in human resources and machines. To be successful in space, Africa's emerging space-related institutions cannot do otherwise. African governments need to undertake a necessary rationalisation of their respective institutions of higher learning as well as nurture them to a first-class level in mathematics and science. Each African government should also cultivate its nation's indigenous private sector. These steps are precursors to a working partnership between government, the private sector and academia - an indispensable milestone for the attainment of envisioned national and regional space objectives in the region. Economy of scale and the advantage of working together and sharing knowledge to solve common problems dictate that integrated and unified efforts in the space frontier should become the norm in Africa rather than the exception.