

Space for Development – Building Capacity in Africa

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Space for Development forms the backbone of sustainable satellite engineering and other space related activities in developing countries. To achieve the development objectives, requires an understanding of the complex value proposition that a high technology program, such as a space program represents. Within the value proposition, one can begin to establish the institutional support required to realise the value proposition and hence the development objectives.

Mastering space technology has over the last 50 years been a source of inspiration and innovation in many countries of the world. Space technology is thus a catalyst for developing the science and technology community in a country while at the same time giving opportunity for international relationships to develop.

Achieving sustainable development is important to ensure that the risks are averted and moral obligations are fulfilled in balancing of the acceptable quality of life for all in a global context. In Africa there are many challenges and the paper reviews a number of initiatives to ensure that space as a catalyst is used to achieve the broader, long term objectives of a successful Africa.

African Resource Management Satellite (ARMS) Constellation

The ARMS Constellation is a pan African project based on the premise that mastering and demonstrating space technology has a profound effect on local national science and technology community. Thus supporting growth in the knowledge economy.

In addition the combination of space based resources provides a powerful asset that significantly enhances an observation capability with the promise of developing new applications based on establishing a new type of data source with daily coverage of high resolution data.

The founding members included countries in North, Eastern, Western and Southern Africa to ensure best use of ground station infrastructure. Each of the founding partners are building on their successes and capacity established to date.

South Africa, Nigeria, Algeria and Kenya have committed to a joint user requirement and current activity includes obtaining political support for achieving the joint finance for the project.

The feasible implementation of an operational remote sensing system with local African knowledge bases, is supported by for example the space technology and utilisation capability developed in South Africa. Affordable small satellites can be financed for the price of a data license of a larger satellite, which makes it feasible to establish a national satellite capability. Sustaining the local engineering capacity requires a careful combination of a public private partnership. Ensuring lasting socio-economic impact of space technology and hence sustainability of its funding, requires a two pronged utilisation approach. This is the purpose of the GAINMDG.

Global African Implementation Network for the Millennium Development Goals

The GAINMDG is a multi-disciplinary vehicle to combine the best available academic resources to develop indicators and tools to develop a picture of the future and best practices for impacting on economic development at a local and national level.

Building a strategic picture of the future and the road map to achieve it, is critical to long term successful development. On the way both extreme poverty needs to be eradicated and a climate created and values agreed on, for sustained development.

There are clear cases for what needs to be done [Sachs] to eradicate extreme poverty, but when it comes to how it should be done, that is the implementation there are many challenges.

There are also many examples of successful development that recently includes the successes achieved by China and India. However, over the same decades many countries in Africa has not demonstrated the same progress.

What sets the GAINMDG apart from other initiatives is that it is multi-disciplinary from the start. For example, the health challenges that face countries in Africa are impacted by a number of other factors. Understanding and modeling the inter-relationships are key to ensuring the successful prioritisation and hence utilisation of resources.

Successful implementation of developmental interventions requires a combination of best practice techniques moderated by local conditions (strengths/weaknesses). Therefor successful pilot projects are key to ensuring that the combination of policy and technology are effective in promoting sustainable development.

The combination of demonstrating mastery of space technology in conjunction with the effective utilisation for poverty eradication and improved economic development, makes space technology one of the most powerful catalysts for development for a developing country. It is also available to every country in Africa.

Abstract for GDEST conference 17 to 19 March 2008, Cape Town, South Africa.

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