

SMALL SATELLITE MISSIONS SYMPOSIUM (B4)
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SPACE FOR DEVELOPMENT – SMALL SATELLITES AS A CATALYST FOR DEVELOPMENT

Abstract

Space programs has been used for motivating the development of Science and Technology capacity in many countries. The application of the space infrastructure has been for exploration, earth science, space science in addition to telecommunication services and remote sensing. Often the drivers of progress in space technology has been through focussing on national security issues.

Affordable access to space via small satellites and lower cost launches, has made it possible for developing countries to undertake space programs. However, the return on investment for developing countries need to be clearly demonstrated to the voting public as state resources often compete with priorities in the areas of health, housing and education, amongst other things.

The question is how a developing country can gain the benefit of undertaking a space technology program, while ensuring short term leverage of such a program in its economy over and above the long term benefits that accrue from such an undertaking.

This paper will examine a development logic based around the unique properties of space infrastructure, in particular small satellite space infrastructure. The solution is based on a multi-disciplinary approach to utilising space infrastructure.

The approach differs from existing approaches as it does not focus on a technology push, but rather starts with user needs and then uses what is possible from available and future space infrastructure.

The paper starts with reviewing the unique properties available from space based resources and how it relates to the human security needs of people. The development logic is next described with a few examples from existing space technology solutions that has been demonstrated in the past. The paper closes with a solution that combines a number of the today individual solutions into an holistic approach addressing a critical mass of developmental issues.