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SMALL SATELLITE CONSTELLATIONS – THE LINK TO ECONOMIC DEVELOPMENT AND THE
SUSTAINABLE DEVELOPMENT AGENDA

Abstract

The rationale for national space programs to motivate the development of Science and Technology capacity in many countries is well understood. The combination of this motivating factor and the continued evolution of small satellites combined with more affordable access to space and competitive launch opportunities, has in the past made it possible for developing countries to undertake space programs. The challenge for developing nations to demonstrate the business case for space programs and the link to economic development remains in order to compete for relatively limited public sector resources and developmental funds with notably socioeconomic developmental priorities in the areas of health, education, food security, etc.

In 2015, nations come together to review the manner in which the 15 year programme of action underpinned by the Millenium Development Goals (MGDs) have succeeded. A new set of 17 goals, the Sustainable Development Goals (SDGs), were outlined which aims to end poverty and hunger by 2030. With the SDGs the connection between people and planet has been recognised and the result is 17 goals for land, oceans, waterways, climate, health, etc. The contribution of space to the achievement of these goals has been the topic of several panel discussion in various forums since 2015. During the 2016 Global Conference on Space and the Information Society (GLIS) there was consensus that satellite systems will play a critical role in supporting the achievement of the SDGs. Representatives from the global space community, who shared their views on how space can help drive sustainable socio-economic development resolved in November 2016 at the High Level forum organized by the United Nations Office for Outer Space Affairs (UNOOSA), that space-based technologies such as satellite imagery and data can be useful tools for achieving global development objectives.

The research considers the complex value proposition represented by nations, or economic trading blocs and regions, for investing in small satellite constellations as being fundamental in advancing the competitiveness in developing economies. By carefully combining the business cases of the short term, medium and long term, a developing country has to derive the benefits of investing in a space program for economic development but at the same time provide access to satellite systems in the quest for the achievement of these Sustainable Development Goals.