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SPACE & DEVELOPMENT: BENCHMARKING THE IMPLEMENTATION OF NATIONAL SPACE
PROGRAMS TO NATIONAL DEVELOPMENT OBJECTIVE

Abstract

An increasing number of development countries and multinational organizations such as APSCO and APRSAF— are implementing space programs. These entities recognize the potential value of space within their economies and national infrastructure and seek to maximize the use of space technology for infrastructure and applications development in support of national societal and economic development objectives. In order to effectively implement space programs policymakers require appropriate policy, regulatory and organizational frameworks for developing space capabilities as well as appropriate metrics to assess and benchmark the effectiveness of the implementation of those space applications.

Drawing upon experience in international space-program benchmarking and in supporting space-related trade and development programs in Southeast Asia, this paper outlines the need to benchmark nascent space programs in emerging countries to specific national development objectives. After establishing the need for benchmarking this paper presents the outline of a basic methodology through which specific considerations relative to national socioeconomic development challenges are addressed— by suggesting the space applications most relevant to addressing those challenges and the appropriate benchmark metrics that can be used to track implementation and use of those applications.

Such benchmarking allows policymakers to track implementation, and take appropriate programmatic adjustment to support successful and sustained space development. Governments and countries—regardless of development or economic stature—generally are motivated to invest in space capabilities by a common set of elements: to enhance national science and technology capacity; to improve national security; to advance economic growth and open markets; to gain pride and prestige in the international community; and to provide tangible benefits to society and citizens. As implementation practices for one area of activity become established, government and industry will learn lessons that can be applied to other new forms of space activity. This will enable growth to continue in a measured and responsible manner. It is this feedback loop that makes benchmarking a critical tool in the implementation of a space program. Effectively investing in and utilizing space assets, capabilities and products is pivotal to meeting strategic and tactical national development objectives.