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Enabling safe commercial spaceflight: vehicles and spaceports (3)

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APPROACHES TO SPACEPORT PLANNING MODELS TO BUILD UP CAPABILITIES FOR SPACE
ACCESS PLATFORMS AND ASSOCIATED GROUND INFRASTRUCTURES

Abstract

The growing development of new technologies for frequent and low cost access to space is triggering at international level increased interest in selecting and outfitting Spaceports, that are currently being regarded as primary importance strategic and economy fostering assets; Spaceports are also considered suitable environments to aggregate educational and research activities, create opportunities for networking at different level. The present paper addresses different approaches for Spaceports assets and capabilities planning and procurement, as deriving from the stakeholders needs and the already existing assets of airports candidate as future spaceports, considering in all cases Safety as a common backbone in the development. Clustering operations and ground infrastructures are the major aim and challenge of a spaceport's management/owner to give rise to a spaceport as a hub for space access platforms. Also, the prevalent type of stakeholders commitment is a major driver to individual spaceport outfitting; this leads to demand-driven spaceport development stemming from the needs of the tenants, and from the pillar role of the anchor tenant, as well as from supply-driven spaceport development; in the latter case, the initial assets belonging to an existing airport or RD (public or private) local activities are the driving forces in the development, which is typically the case where future spaceports are new (or adapted) infrastructures; in this case future spaceports are able to offer general services, their owners look for tenants available to use the spaceport for their operations, and the national (local) government invests to create a new pole of development. In such cases the development path is driven by the most relevant already existing assets and by the no-aerospace demand in the area (for instance, automotive testing services or tourism). Access to space as of today is also triggering the interest of some emerging countries, that are drafting roadmaps which build up capabilities around the pivotal concept of Spaceport, aiming at filling the gap with more developed countries and at offering services to be integrated within the international network in support to the major Space Agencies programs. The present paper provides an overview of the approach being pursued by one of these countries that has proved to be very active in seeking involvement and becoming a significant actor in Space business by identifying investors and properly engaging the relevant Institutions.