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Author: Ms. Noemie Bernede
Space Generation Advisory Council (SGAC), Germany

ENTREPRENEURSHIP AND INNOVATION IN THE EUROPEAN SPACE SECTOR: OVERVIEW
AND IMPACTS OF EUROPEAN SPACE AGENCY AND EUROPEAN UNION'S INITIATIVES

Abstract

Undertaking long term space programmes require strategic non-dependence in cutting-edge and critical technologies as well as affordable mission and procurement costs for the customer. This requires innovation and competitiveness among the stakeholders of the space industry.

The academic and professional literature assesses that the implementation of sustainable space strategies and ambitious space programmes needs, on one hand, an integrated industry able to support important risks and, on the other hand, smaller entities such as Small and Medium Enterprises (SME), perceived as having structurally a higher faculty to adapt.

Following this statement, space-faring nations develop policies to support their industry in order to develop and foster key space capabilities. To ensure growth and sustainable innovation in the European space sector, the European Space Agency (ESA) and the European Union (EU) have elaborated policy measures dedicated to the space industry and service providers. Additionally, these programmes often pay special attention to facilitate to small entities the access to new business opportunities by sharing risks and investments, encouraging them to take part in research and development or services activities.

This paper aims to analyse the current framework programmes implemented in Europe to foster the capabilities of the space industry. On one side, the ESA addresses RD as well as spin-in and spin-off activities, among others through the General Support Technology Programme (GSTP), the Business Incubation Centres (BIC), the Technology Transfer Programme (TTP) and the Integrated Applications Programme (IAP), addressing both the industrial and the service segments. On the other side, the analysis presents the EU initiatives to contribute to this dynamic in its own way, through the Framework Programmes FP6, FP7 and Horizon 2020. In the study, similarities and differences between ESA and EU approaches to support the industry, and especially the small entities, will be analysed.

Looking at the conceptual approaches behind these framework programmes and at their implementation, the paper will extract opportunities as well as potential paradoxes for the space sector. From this perspective, this study will look at two parallel trends in the space industry supported by the public sector: the strong vertical integration and the support to develop SMEs.

The study, based on selected literature, interviews, analysis of policies and financial documents will expose the current challenges to foster entrepreneurship as well as maintain a strong space industry in Europe and the key role played by small entities in this context.