

IAF BUSINESS INNOVATION SYMPOSIUM (E6)  
Interactive Presentations - IAF BUSINESS INNOVATION SYMPOSIUM (IPB)

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A CASE STUDY OF SMALL LAUNCH VEHICLE TECHNOLOGY ROADMAPPING USING A  
WORKSHOP-BASED APPROACH

**Abstract**

The advent of the NewSpace era has brought many changes in the space field. With the transition from the government-led space development to the private-led space development, space utilization fields are diversifying, space technology is fused with other industries, and demand is exploding. This trend changed the roles of space agencies and public research institutes. In South Korea, the role of public research institutes was focused on carrying out the missions included in the National Space Development Plan. Since the success of the national mission was the most important thing, the most considered factors were the period, budget, and human resources. However, in order to cope with various changes in the future environments, public research institutes must meet the needs of the market in the NewSpace. Accordingly, it was necessary to establish RD strategies to respond to the changes, and this study attempted to implement a small launch vehicle development strategy using a technology roadmapping (TRM) methodology from a practical standpoint. A workshop-based TRM approach was performed to identify and explore strategic issues and opportunities. This study shows the practical case of establishing the TRM-based strategy of small launch vehicle development, and we expect that this case can be an opportunity to connect with private and commercial sectors.