

## BUSINESS INNOVATION SYMPOSIUM (E6)

New space industry segments, firms, actor groups, and multiple programs: innovation, entrepreneurship & investment at the mesoscopic level of analysis (2)

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ON CHANGING ROLE OF SPACE RISKS INSURANCE AND SPACE ASSISTED INSURANCE AS  
IMPLIED BY GROWING COMMERCIALIZATION OF SATELLITE APPLICATIONS

**Abstract**

The paper considers the role of space risks' insurance as one of the effective economic mechanisms maintaining a stable progressive development of space activities. The 'canonical' risk management methods are considered, including avoidance, reduction, transfer and acceptance, as applied to the space projects. The general trend is identified of gradual replacing the 'hard' regulation of space activities by mean of comprehensive governments' control over the whole mission lifecycle with 'soft' solutions that include risk insurance as a tool of responsibility redistribution towards the more risk-tolerable community. The examples are provided from Russian and international practices that include both launch and orbital operations risks, with a number of case studies analyzed. The space risks' insurance is further analyzed in terms of direct and indirect effects on the industry, including both financial and quality management points of view. In the second part of the paper the attempt is made of vice versa analysis of using the space applications as a (commercial) option improving the toolbox of the Earth-bound insurance businesses, including in particular agriculture insurance, property and vehicle insurance et al. The approaches are analyzed suggested by a number of New Space players in Russia and abroad of using the commercial insurance model as an enabler of a number of space observation and monitoring programs' commercialization that were considered almost entirely 'public good' non-for-profit activities before. The conclusion is made that when it comes to space activities the insurance per se is a good 'translation tool' allowing monetarization of a number of effects that otherwise could not be counted as part of the universal 'cost/benefits' analysis thus providing more consistent reference system for the space entrepreneurs.