

BUSINESS INNOVATION SYMPOSIUM (E6)  
Case Studies and Prizes in Commercial Space (1)

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WINNING BY LOSING - INVESTMENTS, INCENTIVES AND REWARDS OF PARTICIPANTS IN  
AN EXTREME FORM OF INNOVATION TOURNAMENTS

**Abstract**

Competitions as a means for stimulating innovation are an old phenomenon dating back to eg. the audacious construction of the Florence Dome in 1418 (Lakhani 2011) or the famous invention of the food conserving can induced by a competition launched by Napoleon to increase his troops' mobility – in the long run ever more a source of civil wealth. (Masters/Delbecq 2008)

Some similarities are visible in space-faring technology. Unlike less complex technologies, those for space exploration had never left the domain of military or State-funded ventures. In 1996, i.e. 40 years after the first human being in orbit, space remained in control by States - the reason why the X Prize Foundation was initiated.

A comparable successful example where prior to a grand challenge both technically and commercially risky opportunities were considered unattractive, and commercial ventures disregarded was trans-atlantic air flight. Manuel Orteig recognized this by prizing its achievement in 1919 - Charles Lindbergh had won this prize in 1927. (Bak 2011) This has stimulated the development of a giant global industry; long-haul flight became normal.

By 2012, a first private mission had reached ISS. In other words, just like in some historical examples, an industry's dawn has broken and commercial operations are about to take off both literally and figuratively. However, why did merely a prize of this size and nature evoke this development? And how do we build up the capacity for future technologies/industries to avoid such traps?

One important variable seem to be motivations and incentive. Smaller-scale competitions (Innocentive-style) offer a clear incentive to participate. Terwiesch/Xu (2008) demonstrated the relationship between price-structure and its incentive on participation level and effort mathematically. The presented case-study explores the motivation of participants in large-scale innovation competitions by the Ansari X Prize and their long-term effects.

Besides a range of systematic differences to classical innovation tournaments, an additional contrast becomes salient: Tournaments such as the X-Prize offer very large prizes, yet the amount of money awarded does not attain the level of investment needed for actually claiming the prize. Incentive structures and underlying motivations in such extreme settings, where the participation of 23 teams in a race for USD 10 m even appears to be economically irrational, have remained unexplored so far.