

BUSINESS INNOVATION SYMPOSIUM (E6)  
New Business Models in Traditional Space Industry Applications (2)

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ANALYZING THE PAST, PRESENT & FUTURE DEVELOPMENT OF THE MODERN SPACE AGE  
THROUGH THE DIFFUSION OF INNOVATIONS MODEL

**Abstract**

Throughout the modern Space Age, we have seen that space is a place of scientific and strategic awe. To operate in space, traditionally a country has had to be an international superpower with political stability and financial wealth that would allow its government to drive such a scientific cutting-edge program. Moreover, particularly during the Cold War, governments needed gall and ambition. These conditions widely known, governments aiming to enter the realm of space have looked to take advantage of the domestic and international showing of strength.

It is true that space has the ability to inspire, but as a science or technology is its development different than any other high technology or science? The Diffusions of Innovations Model (also known as “Roger’s Bell Curve”) and technology development chains associated with the model suggest a clear “no.” The framework, which emerged in the mid-20th century but enjoyed recent revival in studying the hi-tech boom at the turn of the 21st century, aims to explain how technology diffuses through the user community. The population in the end is broken into five segments: Innovators, Early Adaptors, Early Majority, Late Majority and Laggards.

The model, when applied to modern space sciences, can also help gain insight into the development of the modern space age. While domestic and international demonstration of strength has been a common thread over the past half century, the Diffusion of Innovation Model shows that, in fact, the key reasons for when and why countries have entered into the space sector have shifted as the technology has developed. Further, these models also can provide insight as to how the modern space sector structure could develop as industry begins to play a more pivotal role in the space sector in both launching services and space applications.