

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

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DAVID AND GOLIATH: THE RISE OF SMALL COMPANIES IN THE SPACE INDUSTRY

Abstract

Historically, space exploration and the development of related technologies has been the exclusive domain of government organizations and the largest of companies. Originally driven entirely by military interests during the tail end of World War II, major advances happened during the 1950s and 60s due to the Cold War, where space development was pushed mostly through military and tactical concerns that helped increase the perceived value of the enormous expenditures required. With the advent of ubiquitous satellite-based communication technologies, the 1980s and 90s saw the rise of commercial interests in space. Many new groups saw the value in paying for the still very high expense of developing satellites and launching them into space. While this greatly diversified the groups with a vested interest in space-based technology by increasing the value and number applications of such technologies, the high cost of entry still prevented all but the largest corporations and governments from participating. The slowly expanding market was not growing fast enough to bring the costs down to the point that small business and private individuals could participate. The turn of the 21st century, however, is ushering in a new era of space exploration where small organizations and individuals are able to design, test, and participate in exploring space with a very modest budget. With the aging of the current fleet of space vehicles and satellites, the entry of these small and nimble players into the market place has an opportunity to significantly shake up the current market players and revolutionize the industry. This paradigm shift has the potential to increase participation and innovation while simultaneously bringing down costs and deemphasizing the militarization of space, which could change the face of space travel and exploration as we know it. This survey paper will review some of the historic landmarks that have led to the current business environment, introduce some of the new nimble players such as SpaceX and Copenhagen Suborbitals, and discuss possible legal, business, and technical ramifications of this new business model.