

34th IAA SYMPOSIUM ON SPACE POLICY, REGULATIONS AND ECONOMICS (E3)  
Economics of Procurement in Space Contracting (6)

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TRAINS, STATIONS, AND CARTS - A FRAMEWORK FOR SPACE PROCUREMENT  
INFRASTRUCTURE

**Abstract**

Whenever humanity expands into new sectors, it requires investment in new infrastructure to fully utilize the new market. To examine the economics of space procurement this paper contextualizes the expansion of needed financial infrastructure by comparing it to similar models and systems used for physical infrastructure. In particular, it utilizes the analogy of: trains, representing large government agencies; carts, representing SME; and stations, representing business incubation centers and intermediary funds.

Trains and agencies run steady courses on expensive infrastructure which is slow to change, but can move large volumes that are resilient to weak market conditions. This allows them both to serve as a backbone in most major markets. SME ‘carts’, on the other hand, are well suited to penetrating into the foothills of niche product demand, traveling anywhere without the need of expensive railroads, and changing course easily to find the easiest path. However, carts suffer from a lack of capacity, dependence on stable supply lines, and are prone to failure. Stations serve as an interface between trains and carts that utilize the strengths of both systems and create the opportunity for interaction. This paper examines how stations are the best way to stabilize development and support higher success rates through the creation of enabling environments. Special attention is paid to the impact of empowering stations further with the use of blended finance to better engage the private capital markets and better leverage public funds.

Using that analogy, this paper investigates several international development cases studies where the tools of blended finance, public procurement, public private partnerships, and developing emerging markets are used in conjunction. The International Finance Corporation, large renewable energy projects, and infrastructure development in particular are the main studies. From these historical cases, this paper models how developing countries and major space players can more effectively invest public money into both public and private markets to gain the most utility from future space development.