



Small Payload Ride Share Association

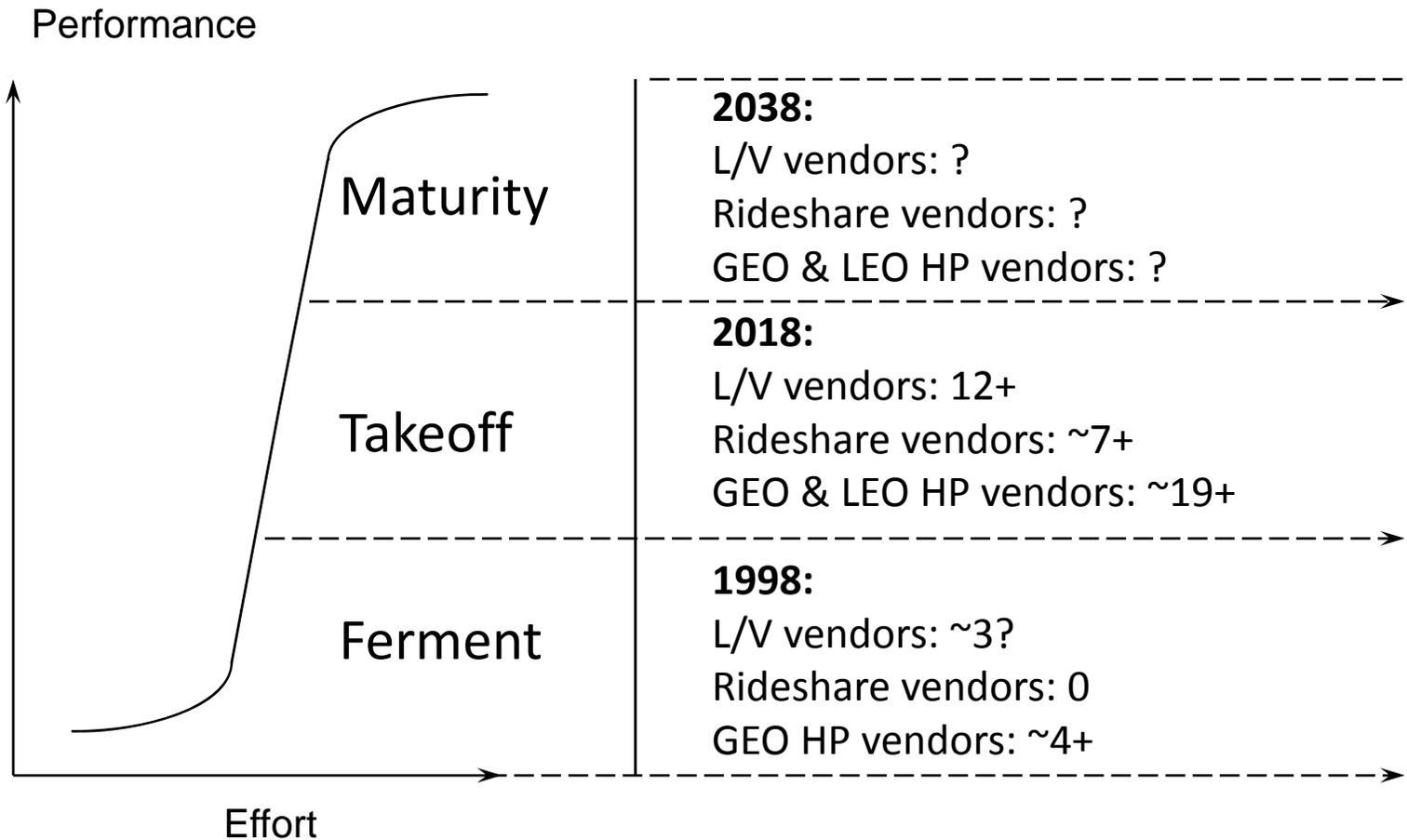
PANEL: Commercial Community Database - Pros & Cons

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Access to Space and the S-curve





Notes on the S-Curve

- S-Curves and Business
 - Businesses, or the products of businesses, that follow an S curve are characterized by a shallow start, where only early adopters and niche markets buy the product or invest in the company. Then they experience a rapid growth, and the product or business has a dominant position in the market. After the rapid growth, these businesses maintain a high performance level but with little growth, which often signals a mature but saturated market
- Technology
 - Technology businesses, such as computer, software and electronic manufacturers often display an S curve life cycle. One explanation for this, is that initial progress is slow because the principles of the technology are poorly understood. Once researchers get a better understanding of the technology, progress accelerates rapidly. However, as time goes by, the effort required to improve on the technology reaches such a level that increase slows down and the growth curve flattens out. Businesses and technologies with a well documented S curve growth cycle include automobiles, semiconductors, steam engines and disk drives.



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Reducing Transaction Costs, Increases Innovation

- Transaction costs theory:
 - Is defined as the cost of providing for some good or service through the market rather than developing it within a organization
 - There are three elements to transaction costs:
 - 1) the ***search and information costs***;
 - 2) the ***bargaining and decision costs***; and
 - 3) the ***policing and enforcement costs***
- The rideshare process reduces transaction costs to both payload providers and spacecraft providers:
 - 1) The SPRSA and NASA websites (S3VI, SOMA, etc) will ***reduce the search and information costs*** by collecting data on a) potential rideshare opportunities, b) rideshare spacecraft options, and c) rideshare components and systems
 - 2) The rideshare market ***reduces bargaining costs*** by standardizing interfaces (as defined in the USAF & NASA Rideshare Users Guide (RUG)) and by using more GSA schedules and FFP contracts
 - 3) The government Do No Harm (DNH) process will ***reduce the policing and enforcement costs*** by establishing a standard rideshare SMA and DNH process.
- Reducing transaction costs & increasing innovation examples:
 - CubeSats, e-commerce, IBM PC, etc.



Strategic Benefits: Standards Create Value

- *Reducing Uncertainty*
 - Standards help reduce technology uncertainty faced by users
- *Reducing Switching Costs and Prevent Lock-in*
 - Open standards reduce users' concern of lock-in
- *Reducing Price*
 - The competition shifts from performance to price when standards help define the boundaries of products
- *Shifting Competition*
 - Standards enable competition to shift from system to subsystems
- *Positive Feedback (success begets more success)*
 - Demand side economy of scale - users value a system because it is widely used & becomes the de facto standard