

## Re: Getting Mega Projects Done

**Source:** <http://sci.tech-archive.net/Archive/sci.space.policy/2004-12/1019.html>

---

**From:** David Summers ([david\\_at\\_ualmliles.com](mailto:david_at_ualmliles.com))

**Date:** 11/28/04

Date: 27 Nov 2004 20:27:46 -0800

henry@spsystems.net (Henry Spencer) wrote in message news:<I7urAH.292@spsystems.net>...

- > *The key word is "risk" -- a word investors do not like to hear.*
- >
- > *There is technical risk, because although the fundamental physics looks*
- > *good, the detailed engineering for an orbital system has not been*
- > *\*demonstrated\* to work. There is some possibility that it might not, or*
- > *that it might have problems which would increase costs and delay returns.*

While this is certainly true, I believe that technical risk is something investors are used to, to a certain extent. When a several billion dollar cruise ship is built, there is some serious nail-biting during the maiden voyage over cruise speed, etc. Also, in general I believe that most people believe that technical problems can be overcome (with more money, perhaps, but it doesn't normally cause a write-off).

- > *There is market risk, because there are \*no\* \*customers\* right now for a*
- > *steady stream of small payloads, which is what those systems deliver.*
- > *Even disregarding that, the proven market for cheaper space launch in*
- > *general is inadequate -- existing markets are too small and not very*
- > *sensitive to cost, they won't grow much if the price drops. New markets*
- > *are needed, and they are all quite speculative: even if you can be fairly*
- > *sure that certain markets will appear, their size is quite uncertain.*

I believe that this is the big risk factor. What can be done to mitigate this? The only things I can think of are matching existing launchers as much as possible. Do you think that something can be done to decrease the market risk for the passenger market? How believable are the market surveys that have been floating around? Is it even possible to get credible predictions using surveys like that? If the market isn't there, I'm not sure anything can be done to create it. I'm hoping that cheap RLVs will prove that the market exists, and can scale well... if so I may have a chance.

- > *And there is political risk, because there are unresolved regulatory and*
- > *liability issues galore, plus the possibility of government-sponsored*
- > *competition, plus the possibility of adverse legislation in general (space*
- > *being an area with a history of government meddling, not all of it well*

> *thought out or even friendly*).

The political risks are very real, but big money always trumps politics – or at least immobilizes them. For \$50B you could get NASA disbanded – just contribute to every Senator... (I wish that was a joke)

> *The big benefit of a free market is that it doesn't \*matter\* whether  
> "standard business" buys into a new idea, because you can start a new  
> company rather than relying on winning support from the old ones. The  
> downside of this is that it isn't necessarily easy...*

As I said in another post, I agree and think that the only way this will happen is with a new company doing it.

> *The big bottleneck definitely is adequate funding. (For example, Rutan  
> won the X-Prize by a wide margin largely because he had money and most of  
> his competitors didn't.) Technical and political obstacles exist, but  
> most would-be launcher builders aren't even at the point of actively  
> confronting those. However, it's important to realize that the reason  
> why there isn't money is not "business" in some vague, mystical sense,  
> but the very high risks of investing in this field.*

Agreed. And understanding the risks is the first step towards mitigating them. For example, investors can be consoled by saying something like "if the tourism market rolls out like we think, you will get a 20x return on investment – if it doesn't, you will break even on normal satellite launches."

So I guess we really have to have a project under \$20B, so that the existing \$1–2B revenue stream can support it...