

## Re: Getting Mega Projects Done

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**From:** Earl Colby Pottinger ([earlcp\\_at\\_idirect.com](mailto:earlcp_at_idirect.com))

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david@ualmiles.com (David Summers) :

> *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).*

That is a poor example, first cruise ships are making money hand over fist already, all the investor is doing is cutting themselves in for a piece of the pie. Second cruise ships today are built in one or two years by companies that you already know know how to build cruise ships because they did it before so you know they can build it. Third the first cruise ships were already cargo ships at a time that cargo ships were making money hand over fist. If the cruise ship idea did not work out you could still convert over to a cargo ship to a known market. Fourth cruise ships from reservations start making you money before you have even finished it. Big time cruisers to save money book as much as a year in advance or more, it is possible to sell half of the cabins off before the hull is even completed.

>> *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.*

Basically you need enough money to stay in business for the time it takes business to trust you and to take off, and that can be years. Assume that tomorrow you can offer to put a capsule in orbit for \$100.00 with zero government problems too! How long before people take you up on your offer? I would say at least one to two years, first they have to design one, test it, add the features they want, add a recovery system if they think it is needed, test it more, get insurance, transport it to your launch point, check it out again that transit did not damage it then launch. Less than a year to do that, you are dreaming, or they are suicidal fools. Even a simple sat. will take months to design and assemble.

- > > *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)*

No, you could not, too many congress people need to protect jobs in their area to just disband NASA like that, first you need to spread your money to cover most of the areas affected. By the time you are finish you will find yourself so messed up you will be no better than the present NASA is (if you are even that good). If all it took was money ERON would still be in business. Don't think you can buy out the government it's budget hits trillions, you are always small fry to them. If however you are doing something that the government does want done, then that is where you money directs who gets the contracts and what outriders can be added to a bill before congress. Think money buys freedom, ask OTRAG or Dr. Bull.

- > > *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...*

sci.space.policy: Re: Getting Mega Projects Done

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- > *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."*

Problem is to figure out the risk the same investors are going to want a lot of details on your new material approach.

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

Problem, there are other companies planning n building BeanStalks for less than \$10 Billion, you may have already priced yourself out of the market.

Earl Colby Pottinger

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