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# Innovation

AMERICA'S JOURNAL OF TECHNOLOGY COMMERCIALIZATION

**Are We Being  
Out-Innovated?**

**Where Fed R&D  
Funds Are Going**

**Do You Need a  
Business Plan?**

**Bioscience Comes of Age**





## Now, About That Business Plan

**A**LMOST EVERYBODY has an opinion about the usefulness of business plans, although almost everybody thinks they're important for a variety of reasons. Our John Freisinger offers his take on page 31, as does our Betsy Gillette on page 35. Not to be outdone, this space also has some thoughts on the subject of business plan, but they are not necessarily my own. Nic Brisbourne, a venture capitalist based in London who runs a blog called The Equity Kicker, relays an arresting comment from a colleague:

"We all know that business plans are a sub-genre of science fiction."

Well. Brisbourne addresses the quote by noting that "the one thing we know that won't happen at any startup is that it will hit the plan. Something will change and the numbers will come in under or over. Guaranteed. And a lot of business plans are written with a view to raising investment and contain a lot of forward-looking thinking designed to excite and inspire—like science fiction."

Brisbourne relays his experience about reading business plans: "Nine times out of ten when I'm looking at a new business plan I'm rushed and my aim is to quickly work out whether it makes sense to meet the company behind the plan or whether we should politely let them know we are not interested, with a brief explanation as to why. As you would expect, we review many more business plans than we take meetings. I have never run the numbers but a back of the envelope estimate suggests that excluding plans from entrepreneurs who are well known to us, the ratio of meetings to business plans received is in the region of 1 to 10, and lower still from entrepreneurs we have no connection with. With these sorts of ratios it is important for our productivity that we get to a decision quickly."

**HERE'S MORE** of Brisbourne's view:

"From the entrepreneur's perspective, the situation is very different. The business plan is an important document, the one shot to impress a potential investor and try to get a meeting. Hence a lot of work goes into the business plan, and a lot of hope can be invested in it.

Clearly there is an undesirable asymmetry here—entrepreneur spends a long time creating the business plan, investor reads it quickly."

But this investor isn't opposed to business plans at all and thinks they can serve important purposes beyond getting a first meeting with investors. A plan helps to clarify and enhance thoughts about the business. Brisbourne wants his readers to know the parts of the plan in which he is most interested and which help him decide to go for that first meetings:

- Summary of the product
- Evidence of momentum—user traction or customers
- Summary of financials
- Evidence of ambition
- Description of market dynamics

Brisbourne concludes: "The astute among us may have noticed that despite the fact that VCs always harp on about the importance of the 'team,' it isn't on this list. That's because we form our opinion on people from meeting them much more than from reading about their history."

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## Do I Really Need A Business Plan?

*Well, if you want to start a business it might be a nifty idea*

**BY JOHN FREISINGER**

**G**ENIUS IS ONE PERCENT inspiration and ninety-nine percent perspiration.” We have heard this so often that it has become an entrepreneurial platitude that has lost its meaning. But as funding becomes more scarce, Thomas Edison’s words ring truer.

The idea for a business is actually the easy part, the one percent. The world is full of great, unrealized business ideas; unrealized because few of us are willing to commit to the next ninety-nine percent. The success of any idea is contained in the work that happens after the initial flash of brilliance, the humbling transition to opportunity.

Taking an idea and turning it into an opportunity requires substantial mental discipline. In the vacuum of our inspiration we often overlook the obvious demands that the crowded, unforgiving market will impose on our idea. It is much easier to jump ahead in our thought narrative and focus on the rewards instead of acknowledging the risks.

The disciplined mind of the entrepreneur works through these risks and explores them fully. Apparent risks such as manufacturing (Can I make it?), marketing (Does anyone want it?), sales (Can I sell it?) and funding (Where can I get the money to start?). Overlooked risks such as management (Can I put together a team that can run a company?), intellectual property protection (How do I keep people from stealing my idea?), and economics (If I do sell any can I ever make money?).

As these risks are explored the details of the assumptions, research and the gaps in our knowledge emerge. More questions are created and explored. More research,

assumptions and unknowns come forward until a point is reached where there is overwhelming evidence that the idea has a viable chance in the marketplace, or it does not.

In my experience with entrepreneurs, and in my own flashes of genius (it could happen), I have found that most ideas will not mature to opportunities. Sometimes it is a risk that cannot be mitigated, such as government interference, and sometimes it is an aggregation of risks, such as the snowballing cost of mitigating dozens of smaller risks. The important thing is that the idea is fully investigated before substantial capital is risked. Regardless of the financial environment this investigation is critical.

Occasionally an idea does have merit and can be developed into an opportunity. The details of the execution of this idea should take the form of a business plan. I know that the words “business plan” scare many people because they believe that business plans can only be written by MBAs with advanced studies in spreadsheet and diagramming. I prefer to think of the business plan more like an exam in math where you are asked to solve a problem and show your work. The right answer is only worth a small fraction of your grade.

Most of the work is already done by the time you sit down to write the plan. If you have already undertaken the mental exercise to figure out how you will turn your idea into an opportunity the business plan is simply the narrative of your risk mitigation strategy. If you have not, the creation of a business plan helps lead you through the questions that need to be asked and the

■ Please see *PLAN*, Page 36



## Articulating Your Product

**I**N PREVIOUS COLUMNS, I've addressed the value proposition, or the statement of how your product is differentiated in the minds of customers and creates value for them. This requires a good articulation of your product to form the backbone of the value proposition. For technology products, this is highly critical and deserves some time, as newer technology products can sometimes be difficult to explain.

I read a lot of business plans, and as all non-technical readers of those plans know, technology entrepreneurs love their technology. This is often detrimental to the business plans; all the talk of technology and how great it is doesn't tell us what the product really is, what it does, and why it's beneficial. (Okay, sometimes the plans discuss the beneficial part, but we can't figure out the whys or hows of the benefits because of the geek speak!) To present your best case for equity funding, or for developing marketing strategies for launching your product, you have to be able to talk about your product in words and ways that everyone understands. So, let's go through a couple of suggestions.

**FIRST, TRY TO USE** accepted and normal market terms for your product. Yes, I know that it's "disruptive" or unique technology, but even new technology should solve an existing marketplace need and will perform the same functions of products that are on the market now. Try not to use your own words for the product category, except as adjectives to describe your product

and/or the target market. Lately I've seen a number of business plans with thermoelectric waste heat recovery products. About half of those products are described with only technical jargon and theories, and with vague benefits such as reducing dependence on fossil fuels and cheaper energy creation. A power unit that is based on the scientific theory of X that produces low-cost energy doesn't really tell us much. What is a power unit? A plug-in cord for your PC? A back-up power generator? We don't know. What is this scientific theory? We non-technical or non-industry folks really don't have a clue or care about this. How does it produce low cost energy? We don't know.

Consider this, instead: A heat exchanger based on X type of material that can help reclaim and reuse wasted heat in X industry tells us much more. A heat exchanger is a recognized industrial product term. The type of material may give a hint as to the product differentiator. We know what it does (helps reclaim and reuse waste heat), and we even know which industry it is best suited for. We non-technical folks now have a clue. Venture capitalists won't have to wade through a lot of verbiage, which they may not be inclined to do, to figure out what your product is.

**SECOND, DISCUSS** how the product will work operationally. Where does it fit in the production process? What changes to that process might be necessary to incorporate your product? If your product is a

membrane for filtering wastewater in municipal water districts, where does it go? What is it attached to? How does the utility district know that it worked as promised? We don't need to know the full details, but just enough to give us an idea of how the product is used (if it isn't obvious). For example, does it go into an existing bioreactor? Are there new and/or better methods of assessing performance of the membranes that are required, or can the utilities use whatever methods they currently employ to assess their performance? Having just enough information on where and how the product fits in helps readers of the business plan better understand the product on terms they can relate to. It also gives an idea of the remaining effort to fully develop your product.

**THE BEST PART** about defining your product in accepted market terms is that it makes doing market research easier, so that you can determine an accurate market size and can determine your true competitors. It also makes product comparisons easier, and that in turn makes value propositions really stand out. Once you have the value proposition from your product definition, marketing messaging on your product advantages becomes second nature and more easily understood by your potential customers. 

*Betsy Gillette is market research director at Technology Ventures Corporation.*

■ From *SHERMAN*, Page 34

That mindset is something that may be harder for a government to recreate.

The nature of the entrepreneurial mindset is that failure is acceptable, sometimes preferable. Ideas are tested, nurtured and supported until the Darwinian forces of the free market judge them. Government intervention shelters ideas from the free market because failure is an unacceptable outcome for a government program. How does the government recreate the valuable lessons learned from a failure if failure is not an option?

Assuming that you can export this experience from Silicon Valley is certainly an option but I believe that it overlooks the wealth of regional talent that exists in places like Russia. When I visited Russia in the mid-1990s, the government had begun to permit entrepreneurial enterprises and the number of startups soared. Entrepreneurs emerged from an economy that had relied on central planning for over 70 years! I believe this proves that the entrepreneurial mindset exists everywhere and must be nurtured.

Governments should not work to re-create Silicon Valley but leverage the local assets that can make entrepreneurs successful and failures. Instead of grabbing the best and brightest from Silicon Valley why not grab the serial entrepreneurs from the Arbat (a commercial street in Moscow)? Who is to say that the Silicon Valley model is the best? Perhaps in years to come we'll all be traveling to Russia to try to recreate the Silicon Steppe. 

*Sherman McCorkle is president and CEO of Technology Ventures Corporation. Send your questions to him at [sherman.mccorkle@lmco.com](mailto:sherman.mccorkle@lmco.com).*

■ From *PLAN*, Page 31

assumptions that need to be tested.

The business plan allows others to understand your solution and the soundness of your plan. New ideas are risky and without this understanding

of your fully-developed risk mitigation strategy it is easy for others to reject your idea. Writing a business plan helps to eliminate the risk that others will understand and support you.

The format of the plan does not have to be scary, either. My colleagues and I will often advise that a well-written plan is 20 to 30 pages of narrative that discusses things like business definition, market and customer analysis, sales and marketing, intellectual property, research and development, management, exit strategy and financial forecasting. These topic areas provide a great structure for your risk-mitigation storyline but are no means all encompassing. Each business is different so each plan is different.

What should not vary is the inclusion of an executive summary, the concise, two-page overview of the entire plan. Ideally this should be written last and can borrow from the expanded business plan. Think of it as a movie trailer for your plan. If you cannot generate interest in two pages no one will ever read the next thirty.

In recent years a number of investors have begun asking for video business plans. These are typically visual representations that rely on the executive summary as a script; truly a movie trailer. A word of caution, however: your audience expects that there is a plan behind these teasers. If an investor cannot trust you to write a business plan how can they trust you to run a company with their money?

So do you need a business plan? A well-thought-out plan can help save you wasted effort on unrealistic business ideas. The business plan represents your risk-mitigation strategy that can help you determine how much money you will need and what obstacles you will have to overcome. The plan can help others understand your idea and allow them to invest money and expertise to your success. And the business plan is an essential part of your operation strategy. I guess you only need a business plan if you plan on being successful. 

*John Freisinger is a project manager at Technology Ventures Corporation.*

■ From *FLU*, Page 29

of infection, and reduce the impact of travel restrictions and advisories (such as school closures) only to areas where such measures are needed. Thus, public health countermeasures can be implemented efficiently without impairing global travel or causing excess inconvenience to the public. Moreover, these systems will also be useful in “research mode” to monitor animal populations for the emergence of potentially deadly pathogens before the pathogens are able to infect humans.

Surveillance is an essential part of containing and, more important, preventing a pandemic from occurring in the first place. The HTLN’s flexibility and modular design enables it to be modified quickly to accommodate a variety of animal sources and survey them for infectious agents, both natural and man-made. Ultimately, one of the benefits of this game-changing feature is that it dramatically shortens the time needed to produce effective vaccines. In order to develop a vaccine, scientists must analyze thousands of samples to detect and identify the particular type of pathogen responsible for the infection. The HTLN can provide the data of possible candidates in the bio-reservoir and increase the accuracy of the decision-making process, resulting in more effective vaccines and increased lead-time for the vaccine manufacturers to grow influenza vaccine strains.

The UCLA HTLN facility is the first module of a global network. As more facilities are established, the HTLN partnership team envisions a deployment in which the public health concerns of host countries are added with modifications supporting local interests in public health surveillance, in addition to the global surveillance of pathogens circulating in their animal hosts. 

*Jacqueline A. Shen is a writer at the Los Alamos National Laboratory. This article is written in memory of the late Dr. Tony Beugelsdijk, a pioneering champion of robotics and autonomics technologies and HTLN co-founder.*

**“We’re always open to meeting with investors and venture capitalists to help them try to find out what we are working on and how we might be able to collaborate with the private sector.”**

**TOM KALIL**

Deputy Director, White House Office  
of Science and Technology Policy