Feasibility Analysis

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In the last few articles, we have discussed how to bring a biomedical product to market. The first step is idea generation where the entrepreneur matches a market opportunity with a solution that provides value to the customer. The basic question at this early stage is whether your technology can be made into a product that meets a significant market need and whether the intellectual property can be protected. Remember, value is the difference between tangible and intangible benefits, less tangible and intangible costs in the mind of the customer.

Step two is to look at the opportunity and more closely and in more detail, assess the idea, from a product performance, market, and competition perspective. Following this step, the inventor makes a decision about proceeding with the idea or abandoning it.

If the opportunity looks promising, then the third step is to do a more in-depth feasibility analysis of how to create a business around the new invention, discovery, design, or process. There are several key elements to the feasibility or innovation plan.

The feasibility plan is designed to "flesh out" and explain how you will turn your new product or service idea into a profit-making business. Key issues include the features and benefits of your new idea, the competitive landscape, how and where you intend to manufacture or produce your product, regulatory and reimbursement hurdles, and how you intend to meet them. In addition, you will need to state how much it will cost to make your product, how you intend to price, promote, distribute, and sell your product, and what it will cost to do so.

While the first two steps, idea generation and opportunity assessment, can usually be done using secondary research sources, primarily from the Internet, a more detailed feasibility plan frequently requires data from primary sources such as potential user feedback, focus groups, and ethnographic analyses of how customers actually do things or use products to meet their needs. The objective at this stage is to validate your product and marketing assumptions. There are several ways to do this, but the main goal is get customer or user feedback early and often in this stage of new product development. Put yourself in your customer's shoes and look at your product, tracing their steps, not yours.

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Secondly, at this stage, clearly differentiate the benefits of your idea from the features. Features are the technical parts of your ideas, e.g., the fact that your instrument is made from stainless steel, is lightweight and can flex. Benefits might be that the product is easier to keep clean, easier to use, and cheaper than the competition. There is an old marketing saying that "Customers don't look for a drill, they look for a way to make a hole." The better you understand your customers and their needs, the better you will understand their problems. You will then be able to articulate the benefits of using your product instead of the competition's or the status quo.

Finally, there is a difference between a feasibility analysis and the final step, writing a business or product commercialization plan. For example, after writing the feasibility analysis, you are still required to make a GO or NO GO decision. Once you have made the GO decision, then you have decided to commit substantial time, energy and resources to the idea and will need to write and execute your business plan. It is better to cut your losses early than to proceed down a more difficult and risky road unveiled by your analysis. The good news is that should you decide to move ahead with your idea, the feasibility analysis will provide you with about 80 percent of the information you will need to write your business plan. The gaps are typically in sales and marketing, manufacturing, and finance, areas that will need further development in the final business plan.

Moving from idea generation, to opportunity assessment, to feasibility analysis, to the product commercialization plan, will help you better conceptualize your idea. It will also identify early potential land mines and "deal killers," and give you frequent opportunities to abandon the idea when it is less costly to do than at later stages.

As always, I'm interested in your experiences as a bioentrepreneur or inventor. You can contact me at Arlen.Meyers@uchsc.edu

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