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Commercialization of Science: The Value of Integrating Marketing into Product Development

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Investors are

more interested in marketing potential than in interesting science. How can the scientist with a product to launch ever communicate value in those terms?

One of the great challenges facing a new biotechnology company is that the brilliant scientists developing the products usually end up forming the nucleus of the initial management team. Being scientists, they are not experienced or trained to think of their scientific work within a business framework. The result can be difficulty getting investment financing, a poor product launch, forecasts that are never met, and in some cases difficulty striking a deal with a distributor.

These marketing-related challenges can be overcome when a fact-based, rigorous assessment of a market leads to the development of a realistic marketing strategy—one that can be clearly communicated to external parties.

VALUABLE OR INVALUABLE?

While it is vital in marketing to discuss the value proposition of a product, that value can vary depending on perspective. Biotechnology commercialization is the process of taking a product from the lab to the marketplace. The value of that product is a key component of forecasting, obtaining investments, finding distribution partners, and launching the product. A challenge arises because the means of determining product value is very different in the lab than in the marketplace. In the lab, value is often assigned based on the reputation of the scientists, the amount of federal

research dollars obtained, and the years spent on development. In the marketplace, the buyer ultimately determines value. The definition given to a product's value has a key impact on marketing strategy.

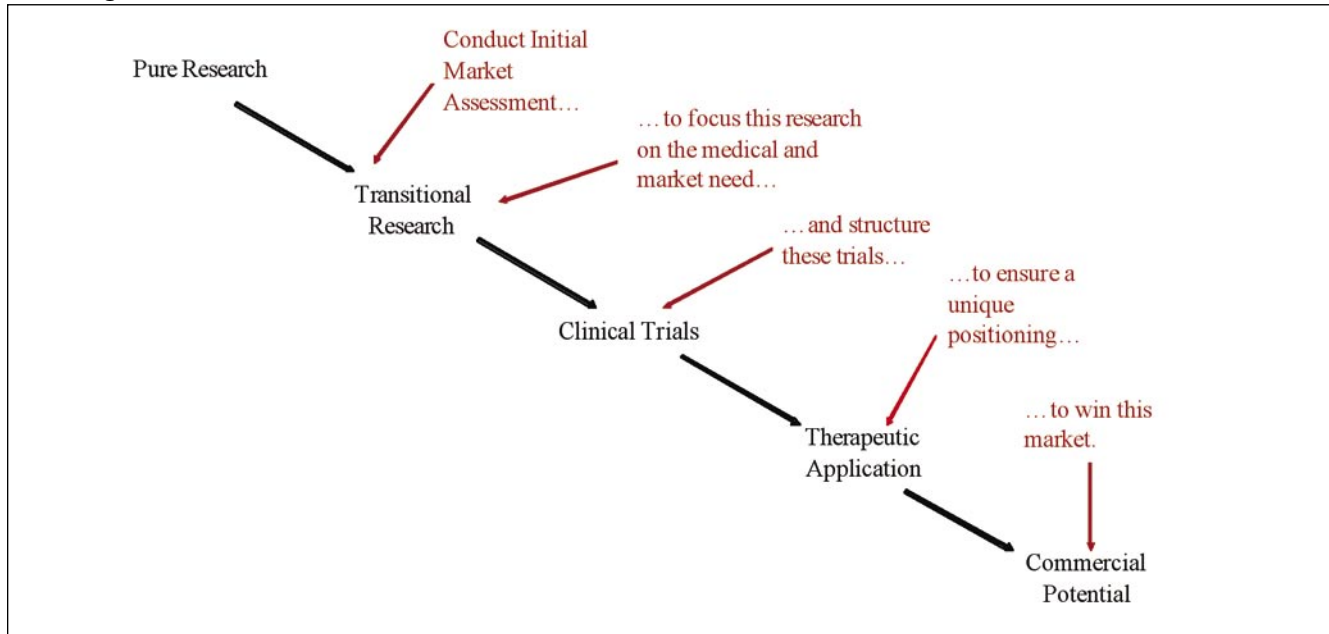
Commercializing a biotechnology product requires large amounts of capital. Much of this money is needed to compensate the scientists for the work they have done in the lab. Other expenditures typically involve clinical trials where the product is tested for efficacy, dosing, side effects, and other attributes. To obtain the necessary financing, biotech scientists—usually the only executive level employees in early stage companies—try to convince investors to give them money to conduct the necessary work towards commercialization.

TWO PERSPECTIVES COLLIDE

More often than not, the sole focus of a scientist's discussion with a potential investor is about the science of the product. The scientists have devoted so much time and energy to creating their product that they try to convince investors to give them money based only on the scientific attributes of the product. The scientists are viewing value only from a scientific perspective.

The disconnect occurs because investors are not particularly interested in scientific value, but rather in earning a return on their money. To earn a return, the market (buyers) must perceive the product's value and be

Marketing Cascade



This diagram shows when marketing should begin and what impact it has as products move from pure research to market-applied research.

willing to pay for it, resulting in sales and revenue generation. The investors glance at the science, but to them, the product's true value is based on its marketing potential. Scientists know what the product can do; marketers know what it needs to do—to be financially successful.

Many start-up biotech companies, and some larger ones, fall into the trap of avoiding any thought about marketing until the product is well along the path of development. They fail to appreciate the benefit of integrating marketing into the science. An important distinction needs to be made—while marketing should not dictate the science, neither should the science dictate the marketing. Strict FDA regulations limit the claims a product can make in the marketplace. Therefore, as a product moves along the path toward commercial development, consideration needs to be made about the market so clinical trials can be structured to permit the most effective marketing after launch.

SYSTEMATIC APPROACH

Taking a systematic approach to marketing and integrating it early in the product development process is vital to determining the market value. If done correctly, this permits the creation of a rigorous, fact-based marketing strategy that exploits the market value. Such a strategy leads to

a realistic product forecast, company valuation, and a successful product launch. A systematic approach to marketing also allows for the creation of a story that communicates the value. This story explains your product's value proposition, convinces investors that your company will generate revenue, convinces distributors that they can make money with your product, and ultimately convinces customers to use your product.

COMMERCIALIZATION WIZARD

One example of a systematic approach to marketing is Bioscience Commercialization Roadmap. The Roadmap guides biotech scientists (and other executives) through the steps necessary to help shift their thinking from pure science to the commercialization of that science. This vital process can lead to investment financing and ultimately success in the marketplace.

Following the proven steps in the Bioscience Commercialization Roadmap permits companies to generate a bottom-up sales forecast that will help convince investors that their product has the ability to generate a return on their investment. Showing that your forecast is based on your strategy to exploit the dynamics of the marketplace has a much stronger impact than the “guess-cast” presented by many start-up

BIOSCIENCES COMMERCIALIZATION ROADMAP

1. Conduct Market Assessment
2. Define Customers
3. Position Product
4. Determine Marketing Strategy
5. Prepare Communication Strategy
6. Develop Sales Tactics
7. Train Sales Force
8. Sell Product
9. Measure Impact of Strategy and Tactics

The Biosciences Commercialization Roadmap consists of nine steps leading from the lab to the market.

biotech companies that is merely based on disease prevalence divided by a hoped-for market share. Along with allowing reality in financial projections, this approach helps companies find their value proposition, segregate their market target, provide evidence of customer interest, show respect for the competition, have valuation reasonableness, and develop a fact-based strategy to capture market share.

The first four steps of the Roadmap culminate in the creation of a marketing strategy. Bioscience companies should follow these steps early during the development of each product to give them guidance and permit initial conversations with potential investors. As the product gets closer to launch,

it is important to revisit the information and see what has changed in the market and perhaps with the product as well. At this time, information also can be used by senior management to craft an effective marketing strategy to win market share and attract investors or partners.

MARKET ASSESSMENT

It is important to emphasize that many people are confused about the contents of a market assessment, the first step in the Roadmap. In fact, this is one of the main reasons that companies have difficulty finding investment capital and experience poor market launches. Scientists, and marketing executives without life science experience, often gather information that is not directly relevant to the business value of a biotech product.

A useful market assessment begins with a fact-based, commercially-oriented assessment of the marketplace. In every case, this assessment should be conducted by a non-scientist. The reason for this is to ensure that the product makes sense in a commercial setting. It also identifies the terminology that forms the basis for critical conversations with non-scientists such as investors, potential partners, and future customers.

Many pieces of information must be gathered from a wide variety of primary and secondary sources to accurately assess a market and craft an effective marketing strategy. Too often, this information is gathered without the proper discretion.

For example, it is important to understand market dynamics—such as who will treat the disease (physicians or other healthcare professionals). However, this raw data must be broken into smaller segments to understand, not only who treats patients, but when they treat them, how they treat them, as well as determining who the potential product champions will be.

Then treatment algorithms need to be understood and proactive steps taken to place your new product into a clearly identified position within these algorithms. And lastly, all potential influences on treatment decisions need to be identified.

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CUSTOMER IDENTIFICATION

Although the science behind many biotech products is unique, it is vital to accept that all products have competition. Home remedies, over-the-counter products, surgeries, prescription products, and lethargy are all competitors for some segment of the patient population. The creation of a good marketing strategy will include an identification of how many patients fall into all the possible categories and understanding why. With this information, a company can develop a strategy to capture as many patients as possible.

This information is not gathered through any one methodology, but through a combination. While personal interviews are useful, there are many other sources of marketing information that are more crucial to a realistic understanding of the marketplace. The most effective use of personal interviews comes after other data is used to begin building a picture of the market and some key questions emerge that can only be validated by speaking with healthcare providers or patients. Comments heard in personal interviews should lead back to other sources of data for similar validation. Research is an interactive and broadly inclusive process. While syndicated studies can provide some information about a market, biotech products are so unique that every market assessment needs to include a wide variety of sources. There is no off-the-shelf report that is sufficient. Preparing a good market assessment is tedious and time-consuming work, but well worth the effort.

Too often, scientists who have been working on a product or in a particular area of study for years, assume they know all there is to know about a market. The reality is that they often know very little outside of the laboratory dynamics. Unfortunately, they will not be selling the product in the laboratory. One of the most frustrating but common conversations that marketers have with scientists is an attempt to convince them that their assessment of the market is not accurate from a marketing perspective. Without a proper market assessment, all the other steps in the commercialization of a product are severely weakened and increasingly likely to fail. The market assessment is the foundation for all the marketing activities that follow.

POSITIONING

With a fact-based assessment of the market, and an understanding of who the customers are and what motivates them, a company can then position their product. The act of positioning a product permits a company to have impactful conversations with investors. Crafting the positioning involves the identification of important and unique benefits and features in a product. The challenge is to ensure that the customers' perspective is used rather than that of the developer. A scientist may be able to explain in great detail how a product is unique, but it is unlikely to include the key factors that will ultimately drive usage in the marketplace.

MARKETING STRATEGY

Once the market assessment, customer identification and positioning are complete, company executives can craft a marketing strategy. The most effective method for doing this involves all company stakeholders reviewing the same scientific and market information, and then going through a process to turn that information into a strategy. The marketing strategy creation is optimized if all the data is not merely dumped on the stakeholders, but rather is presented in such a way that decisions can be made regarding each piece of data. It is also imperative that this step be led by a marketing person—and even better if it's led by

someone external to the company who can take a wider view of a market without being intimidated by the presence of senior management.

Conducting a fact-based market assessment, understanding customers, positioning a product, and crafting a marketing strategy should be done early in a product's lifecycle and repeated as the product gets closer to launch. These steps are appropriate for both early stage companies and late stage companies.

The initial steps for the Bioscience Commercialization Roadmap provide great value to early stage companies. Those seeking to raise capital from investors can follow steps one through four to begin crafting a marketing strategy that will form the basis for their investor presentation. Rather than talking with investors about the science of a product or throwing out general incidence and prevalence numbers, company executives can clearly explain their strategy for gaining market share. This translates directly into the potential return on investment—which will make the conversation much more satisfying for everyone.

Later stage companies can use the information from the first four steps to help them in negotiations with potential partners and to prepare themselves for product launch if they are going to sell by themselves. Companies that are involved in clinical trials, particularly phase III, and are faced with near-term future sales, can also use stages five through nine of the Bioscience Commercialization Roadmap to strategically prepare to enter the marketplace. Each of these steps is dependent on the marketing work conducted earlier. The sales strategy will come directly out of the marketing strategy. The tactics and materials used by the sales force will be developed based on the market assessment, customer base and product positioning. Each piece is built on the foundation of the others.

GOING WITH THE FLOW

The key lessons for biotech companies at any stage of product development include the following:

The marketing strategy creation is optimized if all the data is not merely dumped on the stakeholders, but rather is presented in such a way that decisions can be made regarding each piece of data.

- Finding a commercialization process that works (including an external perspective of your market)
- Using external personnel to facilitate the development of a marketing strategy (to avoid the dominance of a senior person or being blinded by the science)
- Identifying the value of your product from a marketing perspective

Building a great new product was half the battle—selling it is now the other. However, by following the approach laid out in this plan, conversations with investors, potential partners, physicians, and patients will become much easier and productive—which should ensure that the flow of investor capital remains uninterrupted. ∞

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