

Commercialization Strategies

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What is a Commercialization Strategy?

The phrase *commercialization strategy* refers to the series of financing options that a company entertains to move its technology/product from concept to the marketplace. As was discussed in the previous chapter, an increasing number of financing options become available to a firm as a product approaches completion, as collateral is developed, and as market risk is decreased.

The financing options available to your firm also depend upon *your vision for the future*. Do you envision your company remaining a contract research and development firm? Will you commercialize by licensing your technology to others, or do you wish to perform most business functions within your own firm? Are you willing to share control of your enterprise with equity investors, or is your goal to develop a closely held firm? These are important considerations that will affect the preliminary shape of your commercialization strategy. Your vision acts as an anchor point.

A commercialization strategy will also be affected by *personal philosophies* about business. It is not uncommon for founders to start a firm with the following premise: “*I want to grow this company without giving up any equity.*” Others may decide, “*I don’t care who else gets rich off my business, as long as I retain the right to do what I enjoy and make good money in the process.*” Still others may assume, “*I am going to pay for the best help available. I don’t believe in getting something for nothing.*” Such philosophies may not be expressed in so many words, but be aware that such underlying philosophies may influence your choices for a commercialization strategy.

If you are developing a technology platform with the ability to affect multiple industries, you will also need to include an assessment of which applications you believe will develop first. This should be discussed in their commercialization strategy, and potential markets should be rank ordered in terms of their readiness. A company should position itself to hit *windows of opportunity* on time.

Vision, business philosophies, and a logical assessment of market opportunities are all-important considerations when developing a commercialization strategy. However, when positioning a firm to be a high-potential venture, the ultimate strategic choices made will be decisions that keep you ahead of the competition and enable you to hit the window of opportunity. You must estimate when your product will be commercially available, when your principal competitors are likely to enter the market, and when your target customers will become responsive to your technology/product. Work backward from this target date, setting your firm’s

By the time a company submits an ATP proposal, it has already selected one or more commercialization strategies to pursue. However, the complexity of the task at hand requires constant re-evaluation of one’s strategy.

A commercialization strategy is affected by:

- ▶ *your vision,*
- ▶ *your business philosophy,*
- ▶ *the stage of technology development,*
- ▶ *market risk,*
- ▶ *competitive activities,*
- ▶ *window of opportunity.*

marketing, research, and financing milestones on the timeline necessary for you to hit the projected date of market entry. Seizing your market advantage will increase the likelihood of realizing the objective of becoming a fast-growth firm—one that will create value for you, your commercial partners, and your investors.

Prototypical Commercialization Strategies

This chapter introduces you to a variety of commercialization strategies that advanced technology firms have used successfully:

Licensing with developmental funds

Strategic alliances

Equity investment in the parent company

Equity investment in a spin-off

Initial Public Offerings

Each of these strategies usually involves several stages of financing. Although the last step used is the one that lends each strategy its name, the other modes of financing are included, too, in the tables that follow. These tables also list the type of “vision” for each of the hypothetical enterprises described, as well as a statement of each one’s “philosophy.”

Strategy #1: Licensing with Developmental Funds

Many life-style firms use *licensing* as the commercialization strategy of choice. With this strategy, the advanced technology firm specializes in technology development and limits its marketing and sales activities to the overtures it makes to potential licensees. The licensees, in turn, perform all of the other tasks associated with commercialization—marketing, sales and distribution, engineering, manufacturing, and the like. In this day of shrinking research and development budgets in large corporations, *licensing-in* is increasingly a strategy of choice if the technology enables the licensee to enter new markets or retain market position without having to make costly investments in the original R&D, skilled personnel, and/or equipment.

Table 3-1 provides a thumbnail sketch of the commercialization strategy used by a small, advanced technology firm (not an ATP awardee) using a licensing strategy. This table is followed by an excerpt from an interview with a company president describing why his firm used this strategy and how the firm made it work.

Licensing-in is the term used to describe the process of obtaining rights to use the intellectual property of others, external to a company.

By contrast, the inventor or small company which is granting the license, *licenses-out*.

TABLE 3 - 1: LICENSING WITH DEVELOPMENTAL FUNDS

Vision: **Life-style company**

Philosophy: **"I want to enjoy what I do best."**

Financing methods:

- **For preliminary R&D, participated in a Federal contract for R&D; paid careful attention to intellectual property.**
- **Periodically used revolving line of credit for working capital (debt financing).**
- **Approached another company to complete commercialization of technology.**
- **Procured a private contract for application-specific R&D. Retained some rights within other markets.**

Under the Federal Acquisition Regulations (FAR), a small business such as ours retains the rights to the technology it develops for the government outside the government arena. As a result, we have quite a few undeveloped, patented technologies "on the shelf." We generate 4-5 patented technologies each year.

Large corporations become familiar with both our expertise and our technologies through our technical literature and conference presentations. Later, they approach us to solve a problem in one of our demonstrated areas of expertise. This usually involves developing one of our undeveloped technologies to solve a specific problem of interest to them. Many of the technologies, though patented by us, are still at quite an early stage of development. A great deal of inventing must still take place during the development process to adapt our technology to our client's specific application needs.

Summary

The party interviewed clearly leveraged the R&D developed under a Federal R&D contract. The company paid careful attention to intellectual property; was mindful of the importance of developing and maintaining relationships with champions; and entered contractual arrangements with corporations on a realistic basis.

Strategy #2: Strategic Alliances

Soul-searching often leads company founders to decide that they don't wish to assume certain business functions. This often happens, for example, when the company makes a component for, or an enhancement to, a system. After weighing the pros and cons of manufacturing and marketing the component to a limited number of system integrators, it may seem more appropriate to form a strategic alliance with an entity in the supplier chain. The immediate customer could become a site for testing the technology/product, a potential licensee, or an investor in the firm. When a company makes a decision to mutually align itself with a customer, it has developed a strategic ally or teaming partner. Many types of strategic alliances can be formed for purposes of marketing, R&D, manufacture, equity, joint ventures, and/or licensing.

TABLE 3 - 2: STRATEGIC ALLIANCES

Vision: **Foundation company (R&D and manufacturing)**

Philosophy: **"Conservative"**

Financing methods:

- **For preliminary R&D, participated in a Federal R&D program (not ATP); paid careful attention to intellectual property.**
- **Obtained equity investment from foreign investor, later converted to debt.**
- **Formed strategic alliance with customer (To supply our component for his system).**

Zentech received its first Federal funding in 1986. Its decision to respond to RFPs has traditionally been driven by the company's marketing and financial strategies. Routinely, Zentech examines the market looking for "market-pull" opportunities for its technologies and products. If it sees opportunities to commercialize a particular application, the company then examines RFPs from the various Federal agencies to determine if there is a good strategic fit. Zentech will not bid on RFPs for which it has not independently assessed a market need that fits with the company's mission.

Zentech manufactures a widget that is sold to manufacturers of a high-tech system. In 1986, Zentech employed 42 people. Today, it employs 135. Its growth has been primarily

dependent upon a philosophy that can only be characterized as “getting close to the customer.” This trial-and-error approach has been of great value.

Zentech initially spent a lot of time knocking on doors, presenting its idea of what the customer wanted, and then receiving corrections from the customer. Through the process of “getting close to the customer” it has developed a strategic alliance. When initially assessing the market, Zentech realized that the opportunity for a return on its investment would only come if the widget were successfully integrated into its customer’s high-tech system. Therefore, in mapping out the R & D and marketing strategies, it anticipated the final goal not as production of the widget, but as utilization of the widget as a critical component of the customer’s high-tech system. That last phase of the plan has been financed by the customer. The customer’s motivation in this process was sparked by the fact that the use of the widget in a new high-tech system would open up new markets.

Funding has always been a challenge to Zentech. The company initially received equity financing from an overseas firm. The foreign investor provided the cash and Zentech provided the technology. This initial funding enabled the company to conduct its preliminary work with customers. However, funding problems on the part of the investor, coupled with its early success, led Zentech to buy back its equity.

For Zentech, the hardest part of the commercialization process has been obtaining good data on performance in actual field locations. The company had to expend a lot of effort to gain permission from potential customers to install the equipment, obtain good field data, and convince them to continue running the tests.

At one point, when reviewing its strategies for growth, Zentech considered getting into the manufacturing of the high-tech instrument. However, when it assessed this market it learned that 20-24% of the gross sales of the instrument market was spent on sales promotion and service. Upon reflection, Zentech decided that it did not wish to develop a large sales force or customer service department or pay for the costs involved with developing the high tech item itself. It made a strategic decision to continue manufacturing the widget and not get into the high tech instrument business. It only spends 5% of gross dollars on sales and services, has a smaller staff, and needs only one location.

Zentech presently has 14 ongoing programs, including one (non-ATP) federally funded program. It must ramp staff up and down quickly and plan shifts for its staff between programs, sometimes anticipated over a year in advance. Staff members are shifted to support funded programs. Zentech has commercialized one model of widget, obtained a “design win” on another, and applied for three patents. Its management feels that the strategies being followed are allowing company growth while staying within the constraints of prudent financial management.”

Summary

Strategic relationships are on the increase, intertwining the future of companies in a sequence of customer-supplier relationships (Hanan, 1992). A good alliance is like a good marriage, and requires that respect and fair play characterize the relationships. Ohmae (1989) recommends that participants do the following in order to develop successful collaborations:

- ▶ make a personal commitment to the alliance;
- ▶ have mutual respect and trust;
- ▶ take time to develop and maintain the relationship;
- ▶ clarify the relationship in a contractual form and then quickly put the contract away;
- ▶ clarify mutual expectations and timeframes;
- ▶ maintain an awareness of the partner's problems;
- ▶ learn to interpret particular responses in a culturally appropriate way;
- ▶ recognize a partner's independence; and
- ▶ celebrate success together

Some ideas about how to maintain good relationships are expressed in the interview excerpt below:

We put a lot of effort into establishing and maintaining relationships, keeping each other informed of travel plans to conferences—so that opportunities to interact remain constant. You have to work the relationships up and down the ladder. Management needs to dialog with management, and technical people in both firms need to interact with one another.

Networking is important. Our people attend approximately 20 conferences a year. It is a major investment of time and resources, but enables us to develop and maintain relationships, and to keep interested parties aware of our new research efforts through the conference presentations that we make.

Strategy #3: Equity Investment in the Parent Company

Often times the founder knows at the outset what type of firm he/she wishes to develop. If the founder has the vision to become a high-potential venture, he/she will begin to make decisions from day one that will position the company for rapid growth. An example of such planning follows:

TABLE 3 - 3: EQUITY INVESTMENT IN THE PARENT COMPANY

Vision: **High-potential venture**

Philosophy: **"Rich is good!" "Selling is like shaving.
If you don't do it every day, you're a bum!"**

Financing methods:

- Sweat equity
- Federal SBIR funding
- A private placement
- Debt financing from an equity investor

FastTrack had its eyes on becoming a fast-growth company from the get-go. The founder had both a business and a technical background, and was very familiar with federally-funded R&D partnership programs. After investing sweat equity to get the company started, the founder applied for SBIR funding. After winning both a Phase I and Phase II award, he quickly assembled a multi-disciplinary team. Vested in the vision of becoming a high-potential venture, the team worked diligently on issues related to business planing, leveraging their time to complete this task by utilizing assistance from a local university.

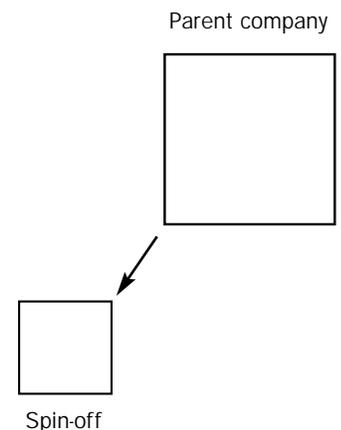
To accelerate the rate of market entry and to allow the company to gear up for manufacturing, the founder decided to conduct a private placement. Equity investors were courted for a couple of years, but only became involved once market risk had decreased and sales were doing well. The team negotiated a loan from an institutional investment firm.

Summary

The vision a founder has for the future of a company directs and focuses the firm's activities. In the example provided above, FastTrack, knowing that it wanted to position itself to be a high-potential venture, relied on a wide variety of financing options.

Strategy #4: Equity Investment in a Spin-Off

A complex strategy, but one which can be exercised successfully, equity investment in a spin-off is a hybrid of the approaches already discussed. The founder of the technology firm decides that he or she wishes to keep the company fairly small,



Human resources, intellectual property, and non-compete arrangements need to be artfully addressed.

focused on research and development, and privately held. However, the founder entertains spinning off a related company in which equity investments could be made, the intent being to grow the spin-off as a high-potential venture. In order to make this strategy succeed, issues related to *human resources, intellectual property,* and *non-compete arrangements* need to be artfully addressed.

With respect to *human resources*, any entity seeking equity investment must have an excellent management team in place. The dilemma should be apparent. The founder of the parent company should not be in both the parent firm and the spin-off, because of split loyalties. Because an equity investor wants to be assured that the management team is fully committed to making the venture a success, such an arrangement is generally unacceptable. The technology entrepreneur, therefore, tends to stay with the parent firm. This requires that another management team be assembled to drive the growth of the spin-off. Most companies contemplating this strategy do not have the resources available to hire a management team for another firm prior to receiving an equity investment. They therefore have to grapple with how to address this requirement.

One strategy is to have a phantom management team in the wings that could step in once equity financing is obtained. This is not an optimal alternative for an equity investor, but one that is understandable.

A second strategy is to groom a vice president from the parent company to become the president of the spin-off. This has benefits to the spin-off, but creates a hole in the management team of the parent company. Some technology firms, strapped for resources, utilize a third strategy and offer the position of president to a retiring executive, often from a large firm. This is done because the executive may have a golden parachute that he is willing to invest in the spin-off, or because it is believed that his contacts should attract capital. This strategy is risky, however, as executives from a corporate environment usually do not have experience growing a high-potential venture. There is a big difference between building a car (i.e., working in an entrepreneurial environment) and driving a car (i.e., working for a large corporation).

You will be best served by involving a management team that has had experience in growing a company—a team that has contacts in the market of interest and has a pedigree that will satisfy the needs of equity investors. The bottom line: If you want to form a spin-off, you must grapple with how to best proceed to put a capable, dedicated team in place to drive the growth of the venture.

The *intellectual property issues* must also be adequately addressed. Formal arrangements that license or sell the intellectual property to the spin-off must be drafted. The terms need to be appropriate to allow an incentive for the management team and the equity investors, while still providing a return to the parent company. If there are restrictions on market applications to which the technology may be applied, these must be discussed and clarified.

A related issue is *non-compete arrangements*. You must decide if any R&D will be conducted in the spin-off or if it will take place only in the parent company. You must clarify whether the spin-off will have the right to obtain intellectual property from other sources in order to expand its intellectual property estate, or whether all intellectual property will have to come from the parent company.

Summary

A spin-off strategy can work well. However, issues related to human resources, intellectual property, and non-compete issues need to be addressed. An equity investor will have no interest in the spin-off if it is unduly fettered or if it is a sham.

Strategy #5: The Initial Public Offering

Perhaps the most glamorous commercialization strategy is an Initial Public Offering (IPO). Going public is the ultimate sign that you have arrived. It is a means of recapitalizing your firm, appreciating the value of stock, and the most common means for allowing equity investors to cash out. It brings lots of attention to your company and is a good strategy to use if you are positioning to be acquired or merge with another firm. It is also by far the most expensive commercialization strategy, requiring large amounts of money to be paid to underwriters, attorneys, accountants, public relations firms, printers, and state and Federal organizations. A company that goes this route will never be the same. In exchange for the glamour and the rapid capitalization of the company, one acquires a public of owners who have the right to full disclosure from that time forward.

TABLE 3 - 4: THE INITIAL PUBLIC OFFERING

Vision: High-potential venture

Philosophy: I want to do it, I want to do all of it!

Financing methods used:

- Sweat equity and owner's equity
- A Federal R&D partnership
- Seed financing from venture capitalists and angels
- Equity investment from a Fortune 500 company
- Second round financing from venture capitalists
- A private placement
- A line of credit from bank
- Profits plowed back into the company
- Initial Public Offering

As can be seen from the list of financing methods, a company positioning itself for this future will spend considerable time working on financial planning. The technology entrepreneur has to be mindful from the start that every time equity is given away, the return for subsequent investors and the founders must be anticipated. As cited at the beginning of this chapter, *“You read a book from the beginning to the end. You run a business in the opposite way. You start with the end, and then do everything you must to reach it.”*

Reaching the goals set requires planning—business planning made in light of your vision for the company’s future. The examples provided in this chapter have been fairly straightforward. However, often the richness of a technology platform dictates a far more complex approach to issues of commercialization. In such instances, the technology entrepreneur must step back, look at the potential impact the technology could have on multiple industries, and develop a constellation of strategies to realize the opportunity. The purpose of the next chapter is to provide guidance on how to develop a constellation of commercialization strategies.

Conclusion

A commercialization strategy refers to the series of financing options that a founder or management team chooses to pursue in order to bring a technology from concept to the marketplace. Attention to a commercialization strategy must be ongoing because the strategy selected is dynamic and should evolve over time. Commercialization strategies are affected by many factors, including (1) the vision and business philosophy of the founder, (2) the stage of technology development, and (3) industry and market conditions. The degree of technology risk, market risk, a competitor’s activities, and the window of opportunity should all affect a company’s commercialization strategy.