Chapter 2

Answers to End-Of-Chapter Discussion Questions over Chapter Concepts

1. Provide an overview of the strategic marketing planning process in high-tech firms.

Strategic market planning is the process by which a company formulates its strategic plan to guide the company's resource allocation decisions in specific technology development projects, specific market segments, and other projects and opportunities. Figure 2-2 in the text provides an overview of the steps in the process.

First, the company must assess its resources and competencies in order to identify the basis of its competitive advantage to deliver a position of sustainable superiority over time.

Second (based on its assessment of critical skills and capabilities), the company must answer three key questions in the strategy formulation process: which customers should it serve; what value should it offer customers, and how should it create and deliver that value.

Then, based on the answers to those three questions, a company can define its strategy in terms of one of four possible "strategy archetypes:" product leaders (prospectors), fast follower (analyzer), differentiated defenders (customer intimate), and operationally excellent (low cost defender). Each of the strategy archetypes has different implications for how to compete best in the market (see Question #11 below and Table 2-1 in the text).

Fourth, the company creates organizational structures and processes that affect the strategic planning process. The company may follow a formal or an emergent process, and it may utilize a market-driven structure (in contrast to a more hierarchical structure).

Finally, in order to measure the performance of the marketing planning process, the company develops a performance assessment tool, such as the marketing dashboard. The information will be used in assessing the company's resources and competencies for the next cycle of strategic marketing planning.

2. What is competitive advantage? Provide examples of resources and competencies that high-tech firms may possess. Why are resources and competencies especially important for high-tech companies?

Competitive advantage is the position where a firm is able to create more value for customers than its competitors, while earning a superior return on investment. Competitive advantage requires possession of superior tangible assets, intangible assets, or competencies.

Resources that high-tech firms possess may be physical assets, intangible assets, or competencies. Physical assets include such things as manufacturing plants, information systems, distribution facilities, and products. Intangible assets include brand equity, customer loyalty, distribution channels, market knowledge, and a company's patent portfolio. For example, a large installed base of existing customers and/or a well-developed partnership base that offers complementary products can provide an important source of competitive advantage.

Competencies are the bundles of skills that enable the firm to achieve new resource configurations as the firm and the markets it competes in evolve. Marketing competencies in high-tech firms include processes for gathering, interpreting, and using market information; the ability to manage customer relationships and establish collaborative relationships with distributors to serve customers more effectively; service delivery; product/service development; new product commercialization; and supply chain management, among others.

Resources and competencies are especially important for high-tech firms because the markets for high-tech products are typically high-growth markets. The profitability that these competencies generate is magnified by growth, which is ultimately reflected in the firm's market value. The text gives a comparison of Apple and Procter & Gamble to make this point quantitatively.

In addition, the specific type of competencies that high-technology firms need for sustainable competitive advantage likely differs from other types of firms. High-tech companies typically experience their initial success in the marketplace because of their unique competencies in a technological innovation, which, in turn, is based on underlying skills and competencies in research and development. However, in order to sustain its initial technologically-based competitive advantage, a high-tech company must augment its technological prowess with marketing-related competencies.

3. What are core competencies and their three characteristics? Give an example of a firm's core competencies. Assess your example on each of the criteria for a core competency. Draw a tree diagram and explain its interpretation for the core competencies you have identified.

Core competencies are underlying skills and capabilities that give rise to a firm's source of competitive advantage. First, they are often based in embedded knowledge, which is hard to imitate; second, they make a disproportionate contribution to customer-perceived value; and third, they allow a firm to access a wide variety of very disparate market opportunities.

As explained in the text, one of Hewlett-Packard's core competencies is in the area of transferring digital images to paper with superior quality. The skill of transferring digital images to paper in a high-quality fashion was significantly related to the benefits customers were seeking in printing their computer images. While other companies also made laser printers, HP's superior technology and production skills made the high quality very difficult to imitate.

Hewlett-Packard leveraged this core competency into a very different market: It entered the digital photography business with a digital photography package consisting of a camera, scanner, and printer. The digital photography business taps into essentially the same skills and capabilities that made HP successful in the laser printer business: transferring high-quality images to paper.

Using the analogy of a tree, a tree diagram displays a firm's core competencies. The branches or canopy of the tree represents the widely different product markets to which the core competencies have provided access. In HP's case, this would be the end markets in which it competes: laser printers, cameras, and scanners, for example. The trunk represents the core product, or the physical embodiment of the core competencies. The core product must be significantly related to the benefits the end user receives. The roots of the tree represent the underlying skills and capabilities that form the basis of the core competencies. In this case, HP's superior technology and production skills give rise to its success in transferring high-quality images to paper.

4. What are the tests/requirements for competitive advantage? Be sure to tie them to superiority and sustainability.

- **a. Explain the idea of customer value in detail, and how valuable resources enhance customers' effectiveness or efficiency.**
- **b. Explain resource rareness and how it might be developed.**
- **c. When is a competitive advantage durable?**
- **d. When is a competitive advantage made non-imitable? How is imitability affected by transparency, replicability, and transferability? (see Figure 2-4)**

There are two tests a resource must pass to lead to a position of superiority: customer *value* and *resource rareness*; there are two more tests that the resource must pass to be sustainable: *durability* and *inimitability*.

a. *Customer value* is the difference between the benefits that a customer realizes from using a product and the total life-cycle costs that the customer incurs in finding, acquiring, using, maintaining, and disposing of the product. Valuable resources enhance a customers' effectiveness (provides additional customer benefits) or efficiency (lowers their costs).

b. When the firm's *resources are sufficiently rare* that competitors or producers of substitutes are not able to offer the same, or similar, set of benefits and life-cycle costs, a company then has a position of superior competitive advantage. Rareness does not mean that only one firm can possess the valuable resource for it to be a source of superior value. As long as the number of firms in the industry that possess the resource is less than the number required for the resource to approach commodity status, the resource may be a source of advantage. One way to develop rareness, although quite difficult to accomplish, is to *create a bundle of complementary resources*—including physical assets, intangible assets, and competencies—that produce customer value.

c. A competitive advantage is *durable* when a valuable resource cannot be rendered obsolete due to innovation by current or potential competitors. The longer it takes for a resource to be rendered obsolete, the more likely it is to be a sustained source of value. Resource durability depends, in large part, on the nature of the industry. Slow-cycle industries, such as many low-tech industries, have a very slow rate of change due to low market and technological turbulence.

d. *Inimitability* means that it is difficult for a competitor to obtain or copy a valuable resource (either through internal development or purchase in the market). Barriers to imitation include patents, brand names, corporate reputations, specialized assets, network effects based on an installed base of customers and/or partners who make complementary products, and financial resources. In addition, resources that are based on complex organizational routines such as production processes, interpersonal relationships among a firm's employees, a firm's culture, or its reputation among suppliers and customers are difficult to replicate and hence, resist imitation.

As shown in Figure 2-4 in the text, three factors affect inimitability: transparency, replicability, and transferability. *Decreasing transparency* makes it difficult for competitors to observe the source of competitive advantage. *Making it hard to replicate* a firm's source of competitive advantage, say through reverse engineering, affects the inimitability of a firm's resource. *Limiting transferability* makes it difficult for competitors to acquire similar sources of competitive advantage.

5. What are the key questions that a company's strategy should answer? What is the strategy sweet spot?

The three key questions (Figure 2-5 in the text) that a company's strategy should answer are:

1. Who are our target customers?
2. What value do we offer them?
3. How can we create and deliver that value efficiently and effectively?

The *strategy sweet spot* is an ideal intersection of the answers to these three questions that effectively capitalizes on the firm's resources to achieve a position of sustainable, superior competitive advantage.

6. How does a company approach the strategy question of "which customers?"

A company approaches its decisions about "which customers" through the segmentation, targeting, and positioning process described in a later chapter in the text. In this chapter on strategy, the text focuses on three insights that companies can use to avoid disruption by outside innovators in high-tech markets. First, they should avoid the tyranny of the served market, second, they should use bifocal vision, and third, they should develop blue ocean strategies.

When companies focus primarily on the needs of its current/existing customers (the "served market"), it can suffer from the tyranny of the served market which may inhibit innovation and blind the firm to the emergence of new segments in a rapidly changing market. Avoiding this problem requires that managers ask both "Who are our current customers?" and "Who should our customers be in five years?"

Addressing the question of "which customers" with this broadened perspective requires bifocal vision, a simultaneous focus on both current and future customers.

In broadening the search for an answer to "who are our customers," companies search for new market space or "blue ocean" strategies that identify new potential customers and solve their needs in new ways. Businesses in search of new market space look "across substitute industries, across strategic groups, across buyer groups, across complementary product and service offerings, across the functional-emotional orientations of an industry, and even across time." Companies searching for new market space ask themselves, "Why are the customers who are not our customers, not our customers?"

7. What is a blue ocean strategy?

A blue ocean strategy is the search for new market space. It recognizes that industry boundaries in today's environment are fluid rather than static. A blue ocean strategy searches for new market space across substitute industries, strategic groups, buyer groups, complementary product and service offerings, functional-emotional orientations of an industry, and even across time. New market space for many high-tech firms lies in the emerging economies that conventional wisdom says are uneconomic to serve.

8. How does a company approach the question of "what value?"

For high-tech companies, answering this question requires that they abandon the notion that products or technologies themselves are intrinsically valuable. Rather, the company should consider, from the customer's perspective, "How will this create value for our customers?" It is the customer's perception and use which bestow value on the product or technology. The company must become familiar with its target market and the needs of its customers which it intends to fulfill.

Moreover, the question of value often requires that a company consider how their product/technology provides value relative to not only their direct competitors, but indirect competition as well. Because competition often arises from other technologies or products that serve similar product needs, determining how to provide customer value requires an examination of **product form competition**—competition that arises outside of an industry's existing boundaries.

9. What is the value proposition? Why is it important to understand the competitor's value proposition?

The value proposition is a company's statement, or description, of the value the company offers its customers. The value proposition must be meaningful and clearly differentiate the company from its competitors. It aligns and harmonizes all employees' efforts within the company among various departments, divisions, and initiatives.

10. How does a company approach the third strategy question of how to create and deliver the value proposition efficiently and effectively?

Creating and delivering the value proposition requires having the right competencies, appropriate structures and systems, and good decisions in distribution, pricing, and promotion arenas, and a flexible program for implementation. Rapidly changing market conditions, strategy that emerges through learning, reliances on partners, outsourcing, and strategic alliances mean that execution requirements will change as well.

11. What are the four strategy archetypes that address the three big strategy questions? How does each archetype answer the three questions (see also discussion questions 12-15)?

See Table 2.1. The four strategy archetypes are:

1. Product Leader (Prospector; Pioneer; First Mover). The product leader serves the innovators and early adopters. The value it offers its customers consists of innovative new products. This value is delivered to its customers by a focus on speed.
2. Fast Follower (Analyzer). The fast follower serves the early adopters and the early majority market segments. The value the fast follower offers its customers consists of superior products, lower prices, and new business models.
3. Customer Intimacy (Differentiated Defender). The customers of a differentiated defender are the early and late majority, specifically narrow niches and specific (individual) customers. The value it offers the customers is customized solutions and superior service. The value is delivered through relationship marketing and intimate customer knowledge.
4. Operationally Excellent (Low Cost Defender). The customers of a low cost defender are the mass market and price sensitive customers in the early and late majority segments. The value these customers perceive consists of a superior combination of quality, price, and ease of purchase. This value is created through value chain efficiency.

12. What are the advantages of being a product leader/prospector? What are the risks of being a product leader/prospector? How does the success of market prospectors tie to the contingency theory of high-tech marketing?

The advantages of being a product leader are being able to develop barriers of entry, gaining higher profits, and defining ideal product attributes.

Entry barriers include economies of scale, experience effects, reputational effects, technological leadership, and buyer switching costs. These barriers can lengthen the lead time between a firm's head start and the response by followers.

During the time when there is no competition, the first mover is, by definition, a monopolist who can gain higher profits than in a competitive marketplace. In addition, even after competitors enter, the first mover has the established market position, which may allow it to retain a dominant market share and higher margins than later entrants.

If customers know little about the importance of product attributes or their ideal combinations, a first mover can influence how attributes are valued and define the ideal attribute combination to its advantage. The first mover becomes a prototype against which all other entrants are judged, making it harder for later entrants to make competitive inroads.

The disadvantages of being a product leader lie in its pioneering nature. Prospecting is inherently risky; the market may not develop as quickly as expected. The high failure rate and high development costs associated with pioneering an innovative new product are disadvantages.

Importantly, research shows that the risk of pioneering is much lower when a company is introducing an incremental innovation rather than a breakthrough/radical innovation. Indeed, in markets pioneered by a breakthrough innovation, the first to market is often the first to fail! Therefore, matching a pioneering strategy to a breakthrough innovation lowers the odds of a company's success.

13. How does a fast follower/analyzer slow the product leader's growth?

Innovative Analyzers slow the Product Leader's growth and reduce its marketing spending effectiveness by identifying and fulfilling a superior but overlooked market position in the following ways:

1. Innovate superior products
2. Undercut the leader on prices
3. Outadvertise/outdistribute the leader, thereby beating it at its own game
4. Use innovate strategies that change the rules of the game.

Innovative late entrants, relative to Product Leaders, grow faster and have higher market potential.

14. What is the strategy type of a differentiated defender? What customers are targeted? How does customer intimacy relate to this strategy?

The strategy type of a differentiated defender focuses on delivering not what the overall market wants but what specific customers want. Companies that follow this strategy type tend to target either more narrow niches or individual customers. The differentiated defender is most successful when it targets the early and late majority customers in the market.

The differentiated defender specializes in satisfying unique needs. Since the strategy type focuses on delivering what specific customers want, the differentiated defender cultivates relationships in order to learn what the unique needs of its customer are. The differentiated defender does not pursue one-time transactions; it cultivates relationships.

15. How does the low-cost defender differ from the product leader? Why does the low-cost defender have to pursue a different strategy than the product leader?

The low-cost defender targets the mass market and price sensitive customers of the early and late majority, while the product leader targets the early adopters and innovators. The value of the low-cost defender lies in its superior combination of quality, price, and ease of purchase of products already developed, while the value of the product leader lies in creating innovative new products. In order to deliver its value, the low-cost defender focuses on efficiency in the value chain. The product leader focuses on speed in order to create its value.

The low-cost defender does not innovate or develop products. Its strength lies in bringing products to the mass market. In order to do this, it must pursue a different strategy than the product leader, which targets a different customer and offers a different value to the customer.

16. "Developing a strategy for marketing in high-technology products requires a flexible strategic posture." Explain what the implications of this statement are for innovative strategy creation.

Managers in technology-intensive situations may become overwhelmed by the complexities, and may confront these complexities by devising strategy-making processes that are more complex and unmanageable than the situations themselves. Poorly-thought-out processes produce plans that are quickly obsolete in the face of competitive actions and reactions. Confronted with complexity, strategic market planning processes must become simpler, faster, iterative, opportunity-based, team-based, and functionally integrated. Market planning and strategic action must be closely coupled. Rapidly changing market conditions and strategy that emerges through learning mean that execution requirements will change as well, also requiring a flexible strategic posture.

17. How is the formal planning approach different from the emergent planning approach? How do the formal planning approach and the emergent process complement each other for a high-tech company?

Formal planning assumes that the firm operates in a rather predictable environment and that the organization has clear and articulated intentions that can be backed up by formal controls to ensure their achievement. Leaders formulate their intentions in the written plan and then elaborate on this plan, with budgets, schedules and so on, to guide its implementation. Oftentimes, this is a step-by-step, linear process.

In contrast to the neat, orderly process implied by the formal planning approach, *the emergent process* is improvised, or emerges from lower levels of organizations -- whether through trial-and-error learning or incrementally with guidance from the top -- through a series of incremental decisions over time. A process of accretion, rather than a comprehensive search, evaluation, and selection process, creates the strategy that the firm follows.

Although the formal and the emergent planning process complement each other, there are conditions which favor one or the other. For example, the most effective Product Leaders employ a more emergent process due to the rapidly changing conditions they face and because of their focus on innovation. On the other hand, the most effective Operationally Excellent and Customer Intimate organizations place greater weight on the formal planning process due to the importance of flawless execution in a relatively stable environment.

Table 2-3 provides a planning approach advocated by a strategic marketing planning book for high-tech industry executives.

18. How does an organization develop a market-focused organizational structure? Why is this structure conducive to the high-technology markets?

An organization achieves a market-focused organizational structure by doing three things. First, rather than organizing around products, a market-focused organizational structure is organized around customers or customer groups. The shift from being product-focused to being customer-centered might be accomplished in progressive steps. A company might initially use informal coordination among departments or a matrix-type structure. Then, they might add integration functions, such as customer segment task forces or a customer segment manager, to better align the organization with the market.

Second, to achieve flexibility and speed, companies with market-focused organizational structure use relatively few formal rules and procedures, and decentralize decision-making authority.

A market-focused organizational structure works well in high-tech markets because, given the market's turbulence, companies must be able to be flexible, with rapid adaptation and response to changing market conditions. Traditional forms of organization -- which improve internal efficiency through hierarchical or purely functional structures -- cannot respond quickly enough to the market demands.

19. A popular and effective tool for reporting key metrics to senior management is the marketing dashboard. What is it? How is it used? Why is it important?

A marketing dashboard is similar to the idea of a balanced scorecard, a multidimensional report card for a firm's performance. The selection of the metrics on which the firm is evaluated should reflect leading and lagging indicators of the success of the firm's marketing strategy; these metrics must be linked very closely to specific decisions and actions in order to draw accurate conclusions.

Performance dashboards are used to organize and report key metrics to senior management from the array of information generated by corporate information systems. Dashboards are often automated and provide (close to) real-time reporting that enables users to "drill down" to program-level details. Table 2-4 in the text provides an example of the metrics and specific items that might be used to assess performance for a Customer Intimate company.

Best-practices marketing strategy explicitly –and proactively— considers performance measurement. It decides *prior to* strategy implementation exactly how marketing activities will be evaluated, and the best metrics to use in monitoring marketing strategies. Furthermore, it specifically allocates funding for such measurement processes. Firms that measure performance actually are more successful in the marketplace.

Discussion Questions from the Appendix:

20. **Name, and define, the three key ways to finance high-tech start-ups.**

Small high-tech startups have three key ways to finance their ventures:

- *Friends and family*. Financing to commercialize a new high-tech innovation is provided by an inventor's or scientist's friends and families. Some people refer to this type of financing as "friends, families, and fools," because of the inherent riskiness and low success rate of many new ventures (only fools will invest their money).

- *Bootstrapping* funds the business through early customer revenues. The business attempts to fund its financing needs through its own cash flows. This can be a very slow way to grow a new business, as the ability to finance new initiatives depends on successfully selling products and services to at least some early customers. Yet, the benefit is that the company remains in the control and ownership of the initial founders. However, internally-generated cash flows oftentimes aren't enough to sustain growth, and because banks fear the risk of issuing new loans to high-tech companies (that usually don't own much traditional collateral), many new high-tech start-ups turn to venture capitalists for financing.

- *Angels and venture capitalists*. *Formal venture capitalists* are professional investors, such as venture capital firms and some banks. They frequently seek a high-rate of return and some inventors who have felt that venture capitalists get rich off the inventors' ideas refer to them as "vulture capitalists." *Informal venture capitalists* are usually referred to as "angels" Who are usually part of network of investors, who hear about promising startups through acquaintances or friends of friends.

Venture capitalists screen high-tech companies for investment opportunities on four key factors—typically in this order: management, marketing, technology/product, and anticipated return on investment. Venture capitalists don't merely invest in a superior software code or specific technological innovation. Rather, they invest in the talented people who can transform that technology into a profitable product.

21. **What is a technology incubator? What makes an incubator successful?**

A business incubator is a facility that offers new start-up companies an array of business support and services (inexpensive rental space and flexible leases, shared basic office services and equipment, technology support services, management advice, and assistance in obtaining the financing). Incubators are often run by city or county economic development organizations to accelerate the growth and success of entrepreneurial companies. A business incubator's main goal is to produce successful firms that will leave the incubation program financially viable and freestanding. Four key elements of a successful incubation program are:

- Ready access to an educated workforce/pool of talent—possibly affiliated with a university or in a university town.
- Ready access to financing—some incubators have partnerships with the investment community.
- The support of the local business community to provide advice, potential collaborative partnerships and critical first revenues (serve as customers).
- A culture of innovation and risk taking.