

Technology Marketing

Chapter 1: Concept & Characteristics of Technology Marketing

Basic concepts and characteristics of technology marketing are explained in this chapter. In this chapter, readers will learn the concept of marketing & technology marketing, characteristics of the technology as the technology subject, technology marketing characteristics etc.

Part 1: The Concept of Marketing & Technology Marketing

If marketing is seen as an act of exchange, technology is the subject of exchange in technology marketing. Recently in our society, with the increase in the recognition of the importance of intangible assets such as services, the marketing research domain of special fields including hotel marketing, culture marketing, event marketing etc. is becoming wider. Together with the term technology management, technology marketing is also gradually more frequently used.

If the name of all products and industries are added as the subjects of marketing activities, such as motor vehicle marketing, university marketing, soap marketing, watch marketing etc. there will be an infinite number of marketing classifications. Even so, the term “marketing” is being misused with a negative meaning in many cases, and it is not something that can be expressed as XX marketing whenever some new offerings get attention. Despite this, in technology marketing there are many cases where involvement of transfer parties and the level of risk is not common place due to the characteristics, complexity, and intangibility of the technology itself. As a result, the general marketing principles are not well applied to technology but it has established a separate research domain.

Like all other faculties, the concept of the term “technology marketing” is diverse depending on the user. In western countries, technology marketing is seen as “marketing for high tech. products,” 1). That is, it is not seen as the marketing of technology but the marketing of technology intensive products.

However, NTTC (National Technology Transfer Center) defines technology marketing as “the effort to efficiently transfer & transact technology.” On the other hand, research results and literature relating to technology marketing are very scarce in Korea, and there is a tendency to define the concept very narrowly. As a matter of fact, technology marketing is regarded as technology transfer, technology sales etc. in Korea, so it is sales-oriented rather than being marketing-oriented, and often there are cases where it partly overlaps with commercialization of technology.

The technology marketing concept in this text sees technology as a product and defines it as the various efforts for its efficient and effective marketing. Originally, marketing is widely known to have the following concept structure. (1985. American Marketing Association)

Marketing is a process involving planning/executing of conception/pricing/distribution/promotion of products/services/ideas for the accomplishment of individual/organizational goals so that exchange can take place.

If this is applied to technology marketing, the subjects of exchange such as “products, service, ideas” etc. are compressed into technology. Thus, technology marketing can be defined as follows.

A process involving the planning & executing of conceptioning, pricing, distribution, promotion of technology so that exchange activity can take place.

In this text, the technology devising process, that is, the activities involving demand analysis, technology forecast, new technology prospects etc. for the development of the technology is omitted due to lack of space. However, it includes the evaluation of the product, which is the technology as the transfer subject.

1) Texts representing this concept definition are as follows. Kathleen R. Allen(2003), "Bringing New Technology to Market," Prentice Hall, Robert A Rexrdodd(1983), "High Technology marketing management," JOHN WILEY & SONS. Marlene Shigekawa(1987), "Succeeding in high tech," JOHN WILEY & SONS. Daul Miller(1989), "e marketing des produits High-Tech," es Editions d, organization, Michael E. Mc Grath(1995), "Product Strategy for High-Technology Companies," McGraw-Hill

So, the main contents in this text can be summarized as follows.

valuation of technology as the marketing subject
technology customer analysis
market analysis
planning of technology marketing
executing of technology marketing

Part 2: Characteristics of Technology Marketing

With marketing activities targeting technology, the first priority in terms of establishing and executing the marketing strategy is to examine what characteristics it has compared to general marketing. To do this, the features of technology will be examined first.

Characteristics of the Technology as the Transfer Subject

Technologies subject to transfer are mostly new technologies and advanced technologies. The characteristics of this kind of technology include ingenuity, complexity, innovativeness, non-standardization etc.

- Uncertainty: technology cannot be touched or tapped, and its usefulness is difficult to predict precisely. In view of the technology purchaser it cannot be known whether the technology can be properly utilized.
- Ingenuity: as there are many advanced science research results, it is ingenious, complex and in cases still being developed.
- Innovativeness: there are cases where technology or products, which are the results of technology, drive out existing technology or other products from the market. The appearance of new technology speeds up the decline of existing technology, and in the case where the scope is wide it can suddenly transform the condition of a particular industry.
- Reduced development period & short life cycle: the speeding up of development and the shortened life cycle of today's technology is the general trend. New technology is quickly developed and replaced.

- Complexity: in accordance with the fusion with other technologies and advancement, technology development has high complexity with diverse technological factors and technology solutions in

relation to buyers.

Characteristics of Technology Marketing 2)

In accordance with the above technology characteristics, technology marketing also has different characteristics to the marketing in other areas.

- High risk : burden of high risk is felt by the decision maker in relation to technology marketing. With technology itself being intangible, the risk becomes greater the more complex and elaborate the technology, and the shorter the life cycle.
- Long transfer period & procedural complexity: technology transfer are more complex than the transfer procedure of general products and often take a long period of time.
- Importance of time management: with the shortening of technology life cycles and the rapid increase in development speed, efficient time management is more important. This means that if there is hesitation after technology development, it can be soon weeded out from the market.
- Importance of opinion adjustments between transfer parties: technology buyers and sellers are all comprised of many sections, and there are many cases where their attitudes differ. Differences in opinion often occur between the research personnel and the marketing manager within the selling organization, and between the high level management and the technology director within the purchasing organization. This is an obstacle factor in technology transfer and transactions.

Characteristics of technology and technology marketing have been explained above. As the technology is an intangible asset, it is closer to a service than a product, and the transfer type is more industrial rather than consumable. Thus, the application of a marketing strategy for services and industrial property would be the most favorable. On the other hand, there is a need to devise a advanced venture product marketing technique in accordance with the complex, high risk, innovative characteristics of the technology. Finally, the technology can be simply transferred, but can also be utilized through licensing, strategic alliance, venture enterprise etc. 3)

2) Sang-hyeok Seo, "A study on the actual situation & promotion plan for technology utilization by advanced venture enterprises," Science & Technology Policy Institute, 2000, Hak-yun Kim, "Venture Marketing," Trade Management History, 2002

3) Kathlee R Allen, op.cit

characteristics of technology marketing

product

tangible assets

intangible assets

transfer type

consumer goods

industrial goods

type of application

license

sales

alliance

venture business