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THE INFORMATION DETERMINANTS IN MARKETING OF A RESEARCH AND SCIENTIFIC INSTITUTION

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*Information is a tool the real potential
of which we are only beginning to discover
(P. Drucker)¹*



Abstract

The article deals with information — based marketing of scientific research institutes, which has been named SAVE (Solution — Access — Value — Education). A proper use of marketing instruments requires information assets which are defined in terms of the essence, the scope and the form of the defined information needs. The essence, the form and the pattern of information needs in reference to SAVE has been defined and described in the case of scientific research institute. The specification of needs for each instrument and for various market participants has been included into the description.

Keywords: product, information, education, marketing, value, solution, SAVE

Introduction

Marketing activity of an organization operating in any market is today a necessary requirement for building a lasting presence on the market and raising its competitiveness. In addition, challenges posed by contemporary markets related to global trends and local transformations are actually forcing organizations to rely on an ever widening range of marketing tools in order to seek new strategic solutions in the dimensions of both demand and supply. The basis for creating any marketing solution is access to information assets that allow for preparing proposals of solutions subject to different types of analysis and evaluation before they can be implemented. Such information assets should include all information captured through a systematic verification of information needs regarding present and anticipated solutions reflected in the current and anticipated marketing strategy of a service provider. The first step in building such resources is to prepare a set of market values representing clearly defined business objectives of an organization formulated based on the organization's knowledge and experience of different areas of its activity on the market. These objectives will inform the process of building an organization's strategy (including the marketing strategy), which will enable their realisation with regard to the needs and expectations of customers and existing market mechanisms. The practical dimension of realisation and the final attainment of an organization's values are not easy in the light of the above mentioned globalization processes, dynamic growth of IT, the volatility and complexity of market conditions, relationships between stakeholders/actors on the market as well as recurrent crises with both local and global reach.² Hence enormous challenges facing participants of any product market, and service market in particular, who aspire to effectively and efficiently implement a marketing strategy, with special requirements and expectations in this area applicable to research organizations. This is due to the fact that market values inherent to the development and implementation of re/innovation processes require a non-standard approach because they satisfy unknown and often new needs of customers. It is necessary to precisely describe innovative solutions offered, point to and clarify their utility (controversies around CO₂, GMO and nanotechnologies) as well as, in many cases, conduct a carefully thought-out intensive education campaign of target customers in order to create new dimensions of needs and new forms and techniques of accessing and exploiting the solutions offered.³ This typically requires adopting a different approach to the marketing of research

organizations, which used to be firmly grounded in the traditional marketing mix of 4Ps or 4Cs and focused mainly on understanding the existing target market infrastructure, exploiting effective and efficient marketing instruments and creating new market/ing relationships with entities with a stake in development of innovative processes. Current market mechanisms remodeled by changes in the infrastructure of service/product providers and the appearance of new tools and forms of communication between market players coupled with the revolutionary changes in consumer needs and expectations are forcing research organizations to redefine marketing tools at their disposal.

Marketing instruments available to research organizations

Marketing of research organizations is typically understood in terms of the traditional 4Ps of product, price, place (distribution) and promotion. Alternatively, marketers may use the four Cs approach where customer proposition is built around values delivered by an organization. These classic marketing instruments have both their advocates as well as steadfast opponents who consider the traditional marketing mix as incompatible with the contemporary market due to the changing nature of relationships between market players and new developments in the communication process. Hence the suggestions to extend the four Ps to seven Ps to accommodate a more service-oriented market model with a stronger focus on people engaged in service provision (People), process standardisation in service provision (Process/Procedure), and, finally the physical environment of where the service is offered (Physical evidence). Other approaches take into account both evolutionary and revolutionary changes in marketing structures, e.g. the 5Is concept (Identification, Individualization, Interaction, Integration, Integrity)⁴ proposed by D. Peppers and M. Rogers or SAVE (Solution, Access, Value, Education)⁵. In the 5Is concept the first *I* corresponds to the *identification* of target customers. *Individualization* is associated with tailoring the offer to a consumer's individual needs while *interaction* refers to establishing relationship with customers and a better understanding of their needs. *Integration* means the coordination of internal and external activities towards the attainment of marketing objectives. Finally, an organization's handling of its business operations and customer relationship must reveal a high level of *integrity* in order to secure a customer's trust and loyalty. As can be seen, the range of marketing approaches, concepts and tools is relatively wide allowing diversified treatment of marketing functions. Still, all these diverse approaches agree that the identification of consumer needs and behaviours is a starting point for all marketing efforts.

Picture 1. Marketing approaches and corresponding instruments

Approach	Marketing instruments			
4 P	Product	Place	Price	Promotion
4C	Consumer value	Convenience	Cost	Communication
SAVE	Solution	Access	Value	Education

Source: Developed by the author.

It is important to note that some marketing approaches declare that it is imperative to depart from the traditional 4Ps concept to be able to accommodate more specific consumer behaviours for example on the B2B market and changes due to globalization, advancement of information technologies and the increasing multi-dimensionality of consumer expectations. This perspective is reflected in the SAVE model of marketing mix,⁶ which represents a marked change in presenting the customer proposition as well as in marketing and sales instruments that support it. The essentials of the SAVE model are as follows:

- **Solution** — instead of on product focus on solutions; define the offerings by the needs they meet, not by their features, functions or technical superiority;
- **Access** — instead of on place focus on access; develop an integrated cross-channel presence that considers customers' entire purchase journey instead of emphasizing individual purchase locations and channels;
- **Value** — instead of on price, focus on value: articulate the benefit relative to price rather than stressing how price relates to production costs, profit margins or competitors' prices;
- **Education** — instead of on promotion focus on education: provide information relevant to customers' specific needs at each point in the purchase cycle.

As well as changing the nature and dimensions of marketing instruments available to an organization, the SAVE model also substantially raises expectations as to the object, scope and form of information needs, which are of vital importance for undertaking marketing activities on the B2B market. Marketing activities on the B2B market should result in increased company equity and other short- and long-term

benefits not only for a research organization providing an innovative solution but above all for prospective buyers, for whom the product offer should be a source of information about tangible benefits associated with the future use of the solution they intend to buy.⁷ However, due to, in many cases, considerable difficulties in explaining benefits of a technology offered and financial and economic consequences associated with its use, and because of difficulties in the demonstration of a solution and related distribution problems, it is necessary to define and create procedures for capturing and presenting information needs adapted to marketing instruments used by a given research organization.⁸ Since information needs are reported at different levels of management, by functional units or individuals, and since they are identified using diverse techniques and methods, it is necessary to take into account their specificity, structure, ranges and relevance for individual elements of the decision-making process. At the same time it is important to remember that the object, range and form of information needs are determined by a combination of organizational, infrastructural and economic factors that keep changing in time and space. This poses a considerable challenge in terms of developing a universal method for capturing, identification, satisfaction and presentation of information needs.

Marketing information needs and their background

The process of satisfying information needs comes down to an on-going assessment and modification of identified needs to ensure they are up-to-date and reflecting changes in consumer needs and expectations, new information technologies, and changes in a given industry. Information needs are often reassessed as a result of changed conditioning factors such as competition, economic and financial conditions, and sustainable development models.

On the B2B market, the four marketing instruments proposed in the SAVE marketing mix model can be aligned with four relevant groups of information needs that describe variables affecting decisions taken by the marketer in developing a marketing strategy of a research organization. The starting point is the customer proposition of a research organization or in other words specific solutions it offers that create value for the customer by being able to satisfy universal and individual customer needs. Customer proposition created by a research organization may range from a demonstration of co-operation capabilities in running joint projects to a sales offer of a solution (innovation/improvement). The sales offer should specifically

Table 1. Marketing information needs in the product-solution range

I. PRODUCT	I. SOLUTION
<ol style="list-style-type: none"> 1. Market product portfolio 2. Product/brand life cycle 3. Product components and production technology 4. Physical, functional and structural attributes 5. Product image 6. Consumer product assessment 7. Product perception and positioning 8. Product category management 9. Brand (identity, image) 10. Own brands 11. Additional maintenance and repair services 12. Quality indicators 13. Certification 14. Product packaging and its modifications 15. Product labelling 16. Product innovation 17. Complaints about products 	<ol style="list-style-type: none"> 1. Needs vs. values created by market 2. Market values sought by market players uczestników 3. Solution (project/innovation) life cycle 4. Dimensions of customer value offered by a solution (functional, symbolic, emotional, ergonomic, esthetic, economic — financial, etc.) 5. Complementary services increasing value of a solution 6. Potential stakeholders of solutions offered 7. Technical quality indicators 8. Market quality indicators 9. Certification and accreditation

Source: Developed by the author.

highlight value for the customer and growth and development factors resulting from using the solution offered while at the same time it should provide clear information about a product offered, potential users, terms and conditions and, above all, value in terms of economic, financial, organizational benefits and potential for sustainable development (environmental friendliness, social responsibility). Table 1 compares the range of information needs corresponding to the Solution of the SAVE marketing mix model and that relevant to the radically different product-driven approach in B2B marketing. In general, the range of information needs necessary for preparing a market offer focuses on defining and clarifying all aspects of the product portfolio with special emphasis placed on benefits presented as short- and long-term values deliverable to prospective customers. It is important to present value from the multi-dimensional point of view as:

- value for the customer understood mainly in terms of short- and long-term financial and economic benefits resulting from using the solution offered;
- functional value presenting a new approach to the solution and building its development potential while in the long-term perspective increasing a research organization's equity;

- image value (emotional, symbolic) proving competitive advantage, modern character and innovativeness of both a product offered and an organization offering the product;
- value reflecting care for sustainable development;
- value for buyers and other stakeholders.

A market offer proposed by a research organization should include complementary services that increase the offer's real value. All solutions offered should conform to the highest technical quality standards and their market quality should be confirmed by relevant certification, accreditation and tests.

Table 2. Marketing information needs in the distribution-access range

II. DISTRIBUTION AND SALES	II. ACCESS
<ol style="list-style-type: none"> 1. Distribution channels — network structure and its assessment 2. Quantity and value of sales in channels 3. Sales seasonality 4. Profitability Analysis 5. Organization of sales 6. Loyalty programmes 7. Sales personnel efficiency 8. Numerical ratios of distribution 9. Inventory turnover 10. Own sales network 11. Actual flow of goods 12. Co-operation and conflicts in channels 13. Distribution contracts 14. Sales monitoring 15. Sales forecasts 	<ol style="list-style-type: none"> 1. Supporting infrastructure (science and technology parks, technology platforms, technology transfer centres) — networking 2. R&D information centres 3. Innovation portals 4. Innovation brokers 5. Potential business models -possible variants

Source: Developed by the author.

Another marketing instrument that a research organization has at its disposal is access to a solution, which should be understood in terms of building integrated cross-channel network for access to a solution (Tab. 2). To achieve this, it is necessary to build business relations based on integrity, trust and commitment that would lead to building a network or entering existing networks generated by other market entities or prospective stakeholders.⁹ While remaining an autonomous entity, a research organization should build lasting business relations leading to undertaking joint initiatives not only in the area of marketing

but also with regard to sales, production and research and development work. Joint projects are likely to bring benefits resulting from aggregate partner experience and economies of scale. Moreover, accessibility development (establishing and development of new networks) can now be co-financed under a number of new programmes and competitions organized by the NCBiR, local authorities and EU initiatives.

Table 3. Marketing information needs in the price-value range

II. PRICE	II. (VALUE)
<ol style="list-style-type: none"> 1. Product price calculation 2. Unit cost calculation 3. Cost structure 4. Profitability analysis 5. Pricing sensitivity and flexibility 6. Downsizing, upsizing, JND 7. Discounting 8. Forms of payment 9. Pricing segments 10. Pricing strategies 	<ol style="list-style-type: none"> 1. Value calculation in terms of financial benefits 2. Benefits vs. unit costs calculation 3. Cost structure 4. Benefits vs. price 5. Profitability analysis 6. Economies of proposed solutions 7. Forms of settlement 8. Pricing strategies

Source: Developed by the author.

The range of information needs related to “value” should be considered in pricing-cost terms but with reference to benefits generated by proposed solutions (Tab. 3). This information is of special importance for the purchase decision process, where attention should be paid to long-term consequences of potential increase in value for the buyer. Hence it is proper to treat expenditure incurred in purchasing a solution not only as a cost but first and foremost as an investment that will bring unquestionable financial benefits in the future. It is important to include in particular the description of solutions in terms of long-term financial results based on the Total Cost of Ownership (TCO).¹⁰ TCO requires cost analysis in terms of a solution's life cycle including easily identifiable purchase costs and costs of complementary services provision. Considerably more difficult to identify are hidden costs (typically non-standard) such as acquisition costs: (identification, selection, ordering, acceptance and stocktaking), modernisation costs, site configuration costs (transport, installation, development, integration with other assets, external services), overheads (labour, energy), change

management costs (training, proposals of processes modifications, implementation); environmental impact costs; insurance costs; costs of safety systems and financing costs (interest on loans, upfront fees). As can be seen, the catalogue of cost categories requires precise analytical approach to the issue of projected life cycle.

Table 4. Marketing information needs in the promotion-education range

IV. PROMOTION	IV. EDUCATION
<ol style="list-style-type: none"> 1. Promotion mix 2. Media in stimulating demand 3. Modern communications tools 4. Promotion budget 5. Merchandising 6. Terms of co-operation with agencies 7. Effectiveness and efficiency of promotional activities (relative and absolute measures) 	<ol style="list-style-type: none"> 1. Information channels as a form of supporting education 2. Communication/education strategy 3. Promotion mix 4. Modern communications tools 5. Co-operation with supporting institutions and agencies 6. Methods for control and evaluation of promotion components 7. Effectiveness and efficiency of communication activities (relative and absolute measures)

Source: Developed by the author.

Finally, the last marketing instrument within the SAVE marketing mix model is education understood on the one hand as communication between partners on the B2B market resulting in acquiring knowledge indispensable for both sides of the sales process and, on the other hand, clarifying (educating about) technological and utility aspects of the solutions offered (Tab. 4). Of vital importance are information needs that must concentrate on the data that permit formulating messages emphasizing individualised content rather than the communication process itself. Further on, of special significance is knowledge about the communication channels that are the most effective and most efficient in transmitting content of educational value. This is connected with profiling the range of information directed to particular market participants highlighting values of proposed solutions that are important for potential stakeholders. Communications directed to market entities should be formulated in terms of added value based on reliable and useful information. In other words, marketing messages should consistently accentuate possible benefits to be derived from using the experience, research outcomes, analysis or expertise of a research organization. Consequently, it is important to satisfy information needs through the

analysis of content and form of messages sent and the analysis of communications tools shaping the right reception of the message (recall). Moreover, communications directed to market entities should suggest possible organizational solutions that could be adopted to deliver a solution, such as co-operation, alliance agreements or joint projects. In other words, it is important to stress the value of co-operation for building competitive advantage through acquiring new knowledge, using the support of highly-qualified advisors or consultants and technology transfer. As far as education and communication tools are concerned, information needs can be divided into direct and indirect with reference to communication tools used. This often results from the necessity to select the tools that really educate buyers such as giving explanations, presentations, training courses and demonstrations clarifying the role and value of the solutions offered. Therefore it is desirable to have knowledge about the effectiveness of the following: meetings with market participants, participation in seminars, conferences, and symposia on the key aspects of technology transfer and associated technological nuances; organizing information meetings; meetings for institutions from the business environment and participation in international, national and regional trade fairs.

As well as allowing direct communication with the environment and presenting an organization's offer, regional trade fairs also enable an organization to become familiar with competitors' offers, to confront the market participants and to benchmark its market position and offer against the competition. Trade fairs offer opportunities for organizing support events that educate fair audiences about solutions presented and contribute to building customer relationship, such as conferences, demonstrations for selected groups of prospective customers, scientific symposia informing about the latest trends in a given industry and development directions, presentations of specific solutions, expert panels, and interactive marketing events.¹¹ Of special importance is active involvement in events such as science festivals, science nights and science picnics, which play the dual role in presenting the product offer to prospective customers and enhancing social responsibility of an organization. It is necessary to satisfy information needs concerning expectations of a research organization's website and those regarding an organization's activities that are of interest for prospective customers. This can be achieved by using indirect tools such as a portal created to present offers of solutions and to function as a discussion forum promoting values of particular solutions, articles and advertisements in trade magazines, broadcasts in media,

informational and educational materials including leaflets, posters, folders and brochures. From time perspective, it is important to clearly distinguish between short- and long-term strategies for conducting education/communication activities. Of equal importance for research organizations is maintaining regular contact with their environment, which will allow for systematic transmission of information about new solutions. Furthermore, the effectiveness of activities undertaken is guaranteed by continuous monitoring of results and analysis of performance indicators such as the number of entities involved in co-operation or the level of clarity of communications sent.

The object and scope of information needs of research organizations correlate with specific marketing instruments used on the B2B market. But this correlation can hardly be considered permanent and unchanging given the volatility of the R&D market, challenges involved in commercialisation of R&D results, dynamic and multi-dimensional growth of innovative technologies as well as associated complexities, contexts and relations. In contemporary reality, the above discussed information needs and correlated marketing tools should only be treated as signposts indicating a direction of measures taken to implement a marketing strategy of a research organization.

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