



institute of aviation
warsaw, since 1926

minib 7

marketing of scientific
and research organizations

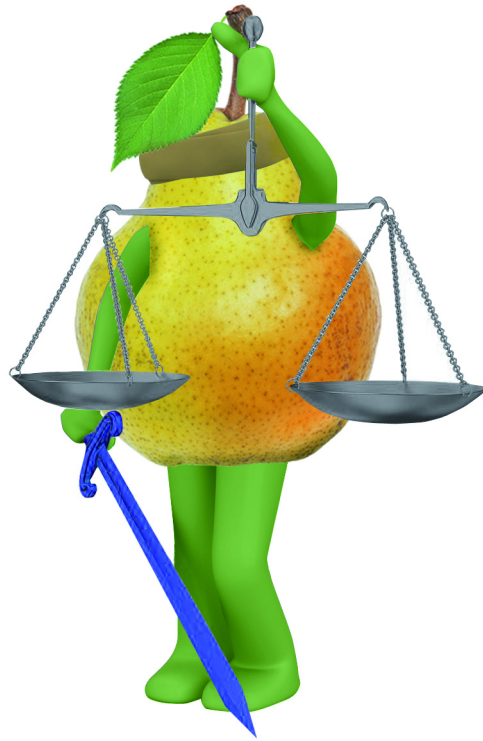
no. 1(7)/2013



research
for future



march 2013



**MARKETING OF RESEARCH INSTITUTES
IN VIEW OF CURRENT ORGANIZATIONAL
AND LEGAL REGULATIONS**

MARKETING OF RESEARCH INSTITUTES IN VIEW OF CURRENT ORGANIZATIONAL AND LEGAL REGULATIONS

Anna Slotorsz, M.Sc.
Waldemar Cichoń, M.Sc.
The Institute of Innovative Technologies EMAG, Poland



Abstract

The paper aims to describe in a synthetic way some issues related to the marketing activity of R&D organizations in view of legal acts regulating the functioning of the state owned R&D organizations. The authors have analyzed some regulations related to research institutes and their activities, regulations specifying criteria and procedures of granting of a scientific category to a R&D unit as well as principals of financing of the science and regulations related to the operations of certifying units.

Basing on this analysis the authors have elaborated a set of marketing goals of the R&D organizations, a list of their stakeholders and of specific marketing tools both accessible in view of the rules and regulations in force and effective from the point of view of parametric evaluation of the R&D organizations. Among the analyzed tools there are the following: issues related to publications, organization of conferences, seminars and popularizing events, organization of education and training courses, internal policies related to intellectual property protection, internal policies related to technology transfer, membership in international organizations and applied quality policies.

Keywords: marketing, research institute, legal regulations, technology transfer, marketing tools

An R&D organization: what is it and what do its evaluation and the resulting category depend on?

R&D organizations are state-owned institutions established in order to conduct scientific research and developmental work aimed at the implementation and application of research outcomes. The activity of research centres is regulated by the Act on Research Organizations of 30 April 2010¹. What is the purpose in establishing research institutions? Is it to achieve the tangible goal of equity maximization? Or, rather, to attain some intangible goals like, say, the enhancement of a given field of science? Or perhaps a research centre ought to strive to secure a top position in the ranking of similar organizations? The present paper attempts to answer these questions. In analysing the goals, including marketing goals, of a research organization it is hardly possible to ignore the issue of the parametric evaluation, which has recently given rise to much controversy among those with a stake in R&D organizations in general, and among research centres' staff in particular. According to Art. 18 of the Act of the 30 April 2010 on the Principles of Financing Science the amount of funding granted to maintain an Institution's research potential will depend on a category assigned in the process of parametric evaluation. What does this category depend on? There is no simple answer as a category granted depends on a number of factors detailed in the regulations concerning the functioning of research organizations.

Art. 42 Item 3 of the Act on the Principles of Financing Science specifies four categories awarded to science institutions:

- 1) A+ — outstanding level;
- 2) A — very good level;
- 3) B — satisfactory level, with a recommendation to strengthen science, research and development activities or activities stimulating economic innovation;
- 4) C — unsatisfactory level.

The evaluation procedure takes into account the size, character and scientific profile of a science unit, with parameters adjusted to reflect the specificity of each of the four groups of scientific fields. There are separate evaluation procedures for different types of scientific institutions: scientific units of the Polish Academy of Sciences, the Polish Academy of Skills, basic organizational units of higher education institutions, research institutions and other organizations with the status of an R&D centre granted pursuant to the Act of 30 May 2008 on Certain Forms of Support for Innovative Activities.

The analysis of marketing goals and priorities should be complemented with the

¹ *Komercjalizacja B+R dla praktyków 2013*, red. M. Barszcz, NCBiR, Warszawa 2013, p. 41.

examination of the provisions set forth in the Regulation of the Minister of Science and Higher Education of 13 July 2012 concerning the criteria and procedures for awarding scientific categories to research institutes.

According to the Regulation there are four groups of sciences subject to parametric evaluation:

- 1) humanities and social sciences;
- 2) exact and engineering (technical) sciences including the artistic discipline of design work;
- 3) life sciences — natural sciences, agriculture, forestry, veterinary, medical and health sciences and sciences about physical wellbeing;
- 4) arts and artistic creativity.

On account of the authors' affiliations the present paper focuses primarily on the criteria concerning exact and engineering sciences.

The Regulation sets forth the following criteria for the evaluation of research organizations:

- 1) scientific and creative achievements;
- 2) scientific potential;
- 3) material effects of scientific activity;
- 4) other effects of scientific activity.

The total score is calculated by means of the algorithm given in the Regulation based on the number of points obtained by a research centre and benchmark comparison with an assigned reference unit.

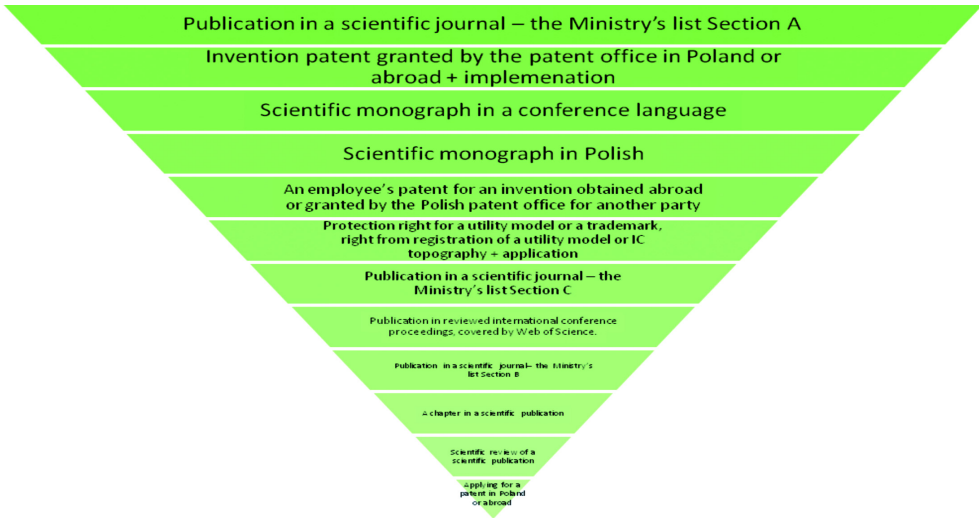
Picture 1. shows criteria considered in evaluating scientific and creative achievements. It should be noted that the total number of points scored for scientific and design achievements is the total number of points awarded for particular achievements divided by the number of staff engaged in research and development work.

Picture 2. presents points awarded for the scientific potential of an organization. The total number of points scored is the sum total of points awarded for individual elements and is not divided by the number of employees engaged in research and development work.

Table 1. presents criteria considered in evaluating tangible effects of scientific activity. The total number of points awarded is divided by the number of employees engaged in research or development work.

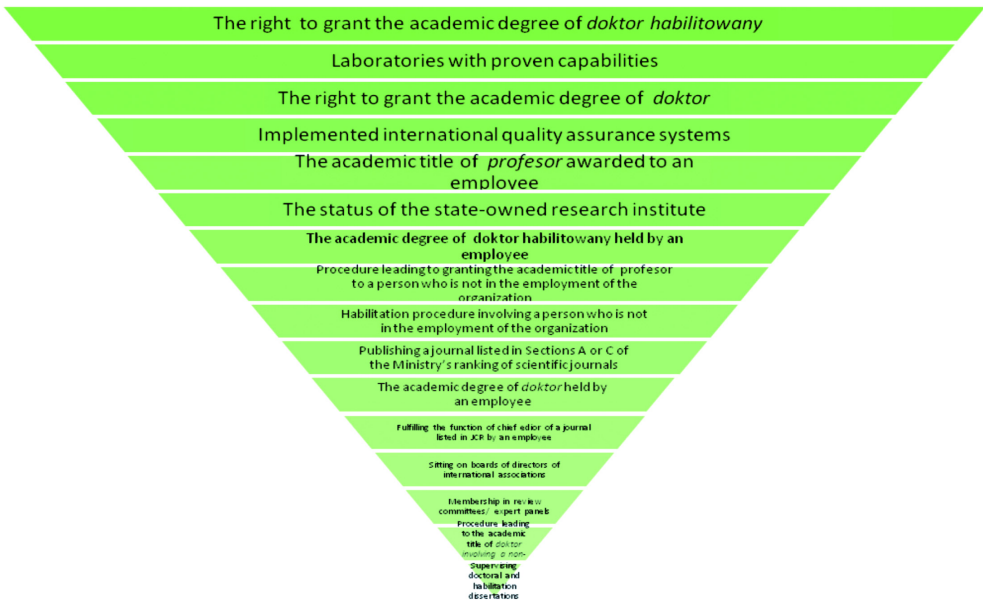
The fourth and last group of criteria considered in evaluating research organizations represents other effects of scientific activity. This group may be comprised of up to ten achievements of general social or economic significance related to research or creative activity. The total number of points scored shall not exceed 100 points. The following types of achievements are considered in the evaluation:

Picture 1. Evaluation criteria for scientific and creative achievements of research organizations



Source: Developed by the authors based on the Resolution of the Minister of Science and Higher Education of 13 July 2012 on the criteria and procedures for awarding scientific categories to research organizations.

Picture 2. Evaluation criteria for the scientific potential of an organization



Source: Developed by the authors based on the Resolution of the Minister of Science and Higher Education of 13 July 2012 on the criteria and procedures for awarding scientific categories to R&D organizations.

Table 1. Evaluation criteria for tangible effects

Financial results of scientific and research activity
Remuneration for carrying out scientific research and development work Documented expenditure on development of research facilities incurred from own resources or financial resources allocated for delivery of R&D projects
Sale of R&D outcomes
New technologies, materials, products, methods and software developed for other entities based on commercial contracts Licence sale and commercial transfer of rights to know-how Expertise and scientific assessment contracted by enterprises, business companies, state institutions, entrepreneurs, local authorities, and foreign and international organizations
Implementation of R&D outcomes – only referring to research institutes and scientific units (within other organizational units)
Revenues from the sale of products being the effect of the implementation R&D results

Source: Developed by the authors based on the Regulation of the Minister of Science and Higher Education of 13 July 2012 on the criteria and procedures for awarding scientific categories to research organizations.

- 1) applications of outcomes of research or development work of great public significance, particularly in the area of health care, environment conservation, public safety and order, protection of cultural heritage and historical monuments, job protection, food quality and safety; or of economic importance, including in the area of new technologies and products, implementations, licenses and activities boosting innovation.
- 2) impacts arising from the development of research infrastructure at the national or international level, and its exploitation also by entities other than an organization in question, including with reference to scientific databases.
- 3) organizing or co-organizing conferences at the national level with at least five participating science institutes, or organizing international conferences with a minimum of one-third of speakers affiliated with foreign research centres.
- 4) dissemination of knowledge, including organization of science festivals and other forms of promoting and popularising science including organizing or co-organizing science and arts events for the general public such as festivals, competitions and exhibitions;
- 5) scientific publications including monographs of special significance for the national heritage and the development of culture and science.

The parametric evaluation is performed within the Common Evaluation Groups (CEGs), while categories awarded have a relative character. The make-up of individual CEGs takes into account the specific character of each of the four groups of sciences as well as the size, type and scientific profile of a research organization. There is one referential unit assigned to each of the common Evaluation Groups for Categories A and B. Based on the algorithm specified in Regulation, and specifically in its Appendix No. 8, an organization's position within the Common Evaluation Group is evaluated and, subsequently, a scientific category is assigned.

Stakeholders of a research organization

Stakeholders of an organization are entities (people, communities, institutions, organizations, official bodies), which may influence or be influenced by this organization's operations. Stakeholders include not only people and organizations who are directly engaged in the activities of an entity in question, such as its employees, competitors, customers and suppliers but also organizations who are not directly engaged in the entity's operations but whose activities affect the success or failure of the entity in question. In this category belong, for example, regulatory bodies. In other words, an organization's indirect stakeholders are entities with which an organization in question does not interact directly but whose activities should be monitored and considered in developing a marketing strategy.

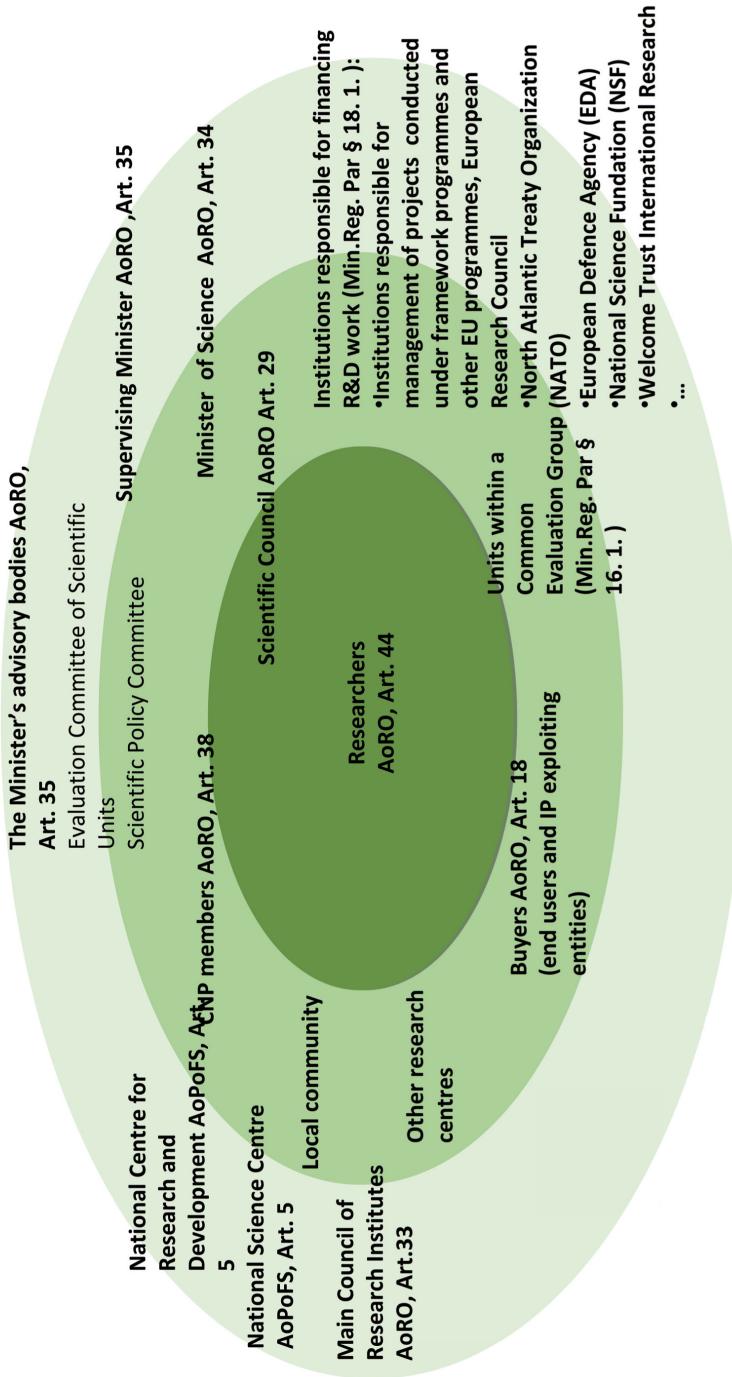
Picture 3. presents selected stakeholders of research organizations and shows how closely they interact with the entity in question.

The first group of a research organization's stakeholders comprises its employees. The Act on Research Organizations details seven staff categories including: researchers, research technicians, technical engineers, administration and finance staff, library and scientific documentation staff, physical workers and maintenance personnel.

Different categories of employees are engaged in different tasks and, consequently, require different approaches. The Act sets forth the responsibilities of research staff as the most important category of employees from the point of view of an organization's operations. According to the Act research staff are responsible for:

- 1) creative research activity aimed at finding solutions to scientific problems;
- 2) implementing in practice outcomes of research and development work;
- 3) raising their qualifications;
- 4) disseminating scientific achievements including through publications and active involvement in scientific life;

Picture 3. Stakeholders of research organizations



Source: Developed by the authors based on the Act of 30 April 2010 on Research Organizations and the Resolution of the Minister of Science and Higher Education of 13 July 2012 on the Criteria and Procedure for Awarding Scientific Categories to Research Organizations.

- 5) educating scientific staff;
- 6) participating in organizational works relating to scientific and research work and didactic activity conducted by research organization.

Analysing the above list in the context of the scope of tasks of a research organization it is worth emphasizing that an R&D organization's most valuable asset is its employees including in particular researchers. An R&D organization's competence scope will be only as wide as the sum total of individual employees' competencies. Consequently, employees' competencies should become a focus and a starting point for a major proportion of promotional activity. A competence-driven approach to marketing activities of an organization will make it easier for consortia involved in R&D projects to find its offer. It is also important to remember that the activities of employees, researchers in particular, contribute to the points awarded within the system of parametric evaluation. Of importance is the fact that researchers are awarded points for publications in scientific journals and for holding academic degrees and titles.

Defining subsequent groups of stakeholders of an R&D organization it is important to mention members of the Scientific Council, a body with the responsibility for drawing up opinions and scientific assessments, taking decisions and initiatives and advising an organization in the area of its statutory activities and matters relating to development of scientific staff and research and technical staff. The tasks and make-up of the Scientific Council are set forth in Article 29 of the Act on Research Organizations. Members of the Scientific Council link a research institute with its environment — as 30 to 50 per cent of members are not in the employment of a given research institute.

Further on, it is worthwhile to have a closer look at the regulations concerning fundamental objectives of research institutes as set forth in the Act on Research Organizations. Article 1 of the Act emphasises the need for aligning research and development work with implementation and application possibilities. Likewise, Article 2 of the Act says that one of the basic tasks of a research organization, alongside conducting research and development work, is to adapt and implement research outcomes in industrial practice.

To carry out research and development work focused on future implementation possibilities a research organization needs to develop a marketing strategy that takes into account entrepreneurs operating on the market. So, entrepreneurs are another important group of stakeholders of research organizations. Are they the end users of innovative solutions developed by research organizations? In a way, they are, with reference to at least three dimensions. Firstly, according to the *laboratory to industry* concept, all research conducted by an R&D organization should be firmly grounded in

real needs and preferences of end users. Secondly, broadly-understood image and reputation enhancement efforts of an organization should focus on end users. Thirdly, one pathway for commercialisation of research outcomes involves creating spin-off and spin-out companies with the right to exploit a given technology. In this case we can talk about a growing importance of direct contacts with end users, who become customers of a spin out/off company.

Is it right to confine the discussion of implementation of research and development outcomes to end users of a given technology? The authors of this paper don't think so. Since legal regulations restrict the production capability of research institutes, it is practical to regard the process of research outcomes commercialisation — the implementation and application in practice of solutions developed, as transfer of technology to business entities with production and distribution capabilities. This means that the most important group of stakeholders from the commercialization perspective are prospective licensees or prospective buyers of intangible and legal assets.

To digress from the main subject, research institutions are encouraged to establish contacts with commercial organizations, regardless whether they are perceived as end users of technologies or intermediaries in technology transfer. Co-operation between research organizations and business is fostered by institutions responsible for financing science, the National Centre for Research and Development (NCBiR) in particular, as evidenced by a growing role of consortia made up of state-owned research organizations and commercial partners in the programmes initiated by the above institutions. These initiatives are primarily aimed at improving the effectiveness of knowledge transfer among state-owned research institutes and the private sector.

A publication of the Ministry of Science and Higher Education, *Commercialization of Research and Development for Practitioners 2013* stipulates three basic pathways for technology transfer from research institutes to industry. The first pathway, entailing the lowest engagement level on the part of an R&D organization, the lowest risk connected with commercialization but also the lowest financial benefits, is the sale of a technology developed. An alternative to selling would be technology licensing, which allows for controlling the results of further developmental work. The third pathway provided is creating a spin off/out company that would commercialise a given technology.

Possibility to form companies and to acquire or purchase shares is governed by Article 17 of the Act on Research Organizations. The activity of commercialisation companies must be related to research and development work conducted by the parent organization. The objectives in establishing commercialization companies are to commercialize outcomes of research and development work, to promote activity in the

area of technology transfer and popularization of science and to obtain funding for statutory activities. This law is important in that it permits for transferring a considerable proportion of marketing activities (including their costs!) to spin off companies. Moreover, it is worth noting that marketing activity conducted by a spin-off company can focus on a specific technology offered by this company, which is very likely to improve the effectiveness of marketing efforts.

Chapter 8 of the Act on Research Organizations provides for a form of activity interesting from the point of view of the marketing strategy, which is co-operation of a research organization with at least one commercial entity in the form of a science and industry centre.

Article 38 Item 5 sets forth the following tasks of science and industry centres:

- 1) to support and coordinate the activities of member entities;
- 2) to co-operate in the area of the implementation of research and development work results;
- 3) to initiate the establishment and exploitation of large research infrastructure;
- 4) to organize employee and student exchange programmes involving research institutes, universities and enterprises;
- 5) to organize internship programmes for PhD qualified researchers conducted by the units of the Centre, with a special emphasis on entrepreneurs;
- 6) to initiate and coordinate the participation of research organizations, entrepreneurs and universities in international research programmes;
- 7) to acquire and run international research projects, national joint research projects and EU-financed research projects.

It is important to stress that the synergy effects arising from functioning within the structure of a science and industry centre lead to improved efficiency of a number of processes including marketing activities. The obvious advantages of conducting marketing activities within science and industry centres include:

- reducing marketing and promotion activity costs,
- offering a range of complementary products (full satisfaction of customer needs),
- competence efficiencies — e.g. conducting export activities by one of member entities.

Moreover, co-operation with research institutes within science and industry centres enables business companies to benefit from the positive image effects.

An example of successful co-operation based on the science-and-industry centre model is provided by the activity of the Industrial and Scientific Centre EMAG (CNP EMAG), a group of producers of safety systems for the mining industry associated

with the Institute of Innovative Technologies EMAG. The Centre is a consortium engaged in complex development and provision of innovative processes and tools — starting from research to design and production to implementation and customer service. The Centre was established in 2010, in compliance with the Act on Research Organizations, to facilitate commercialization of innovative solutions developed at the Institute of Innovative Technologies EMAG and other science entities. Picture 4. presents member organizations of CNP EMAG and the photos from the film promoting the Centre, produced as a joint marketing effort of member organizations.

Picture 4. Member organizations of the Science and Industry Centre EMAG and the photos from the promotion film



To continue listing further groups of stakeholders, it is important to look at the bodies supervising a research organization's activity. Articles 34 and 35 of the Act on Research Organizations provide for a minister responsible for evaluating the scientific level of an organization and the quality of research conducted, and another minister responsible for, among other matters, controlling whether an institute conducts its

activity in compliance with the legal and statutory regulations and supervising the delivery of the core objectives and the expenditure of public funds. Other stakeholders include the Minister's opinion-giving and advisory bodies, Scientific Unit Evaluation Committee and the Scientific Policy Committee referred to in Chapter 4 of the Act on the Principles of Financing Science.

As well as conducting the parametric evaluation of scientific organizations, the Scientific Unit Evaluation Committee also fulfils a number of other functions important for the evaluation of the scientific quality and R&D potential of scientific organizations.

According to Article 51 of the Act on the Principles of Financing Science the tasks of the Scientific Policy Committee include:

- 1) assisting the Minister in the drawing up of documents concerning the science development strategy and scientific and innovation policy;
- 2) assisting the Minister in the drafting of the state budget and of the financial plan referred to in Article 6 Section 1;
- 3) delivering opinions on the activity plans of the Science Centre and the Development Centre;
- 4) the substantive evaluation of reports on the activities of the Science Centre and the Development Centre;
- 5) delivering opinions on draft legislative acts concerning development of science and innovation;
- 6) drawing up opinions and assessments in matters indicated by the Minister or on its own initiative;
- 7) assisting the Minister in establishing domestic and foreign investment priorities from the point of view of the development of science within the framework of the medium-term plan and the resources available;
- 8) analysing maintenance costs and the utilization efficiency of large research infrastructure;
- 9) drawing up proposals for linking the Polish research infrastructure with European research infrastructure.

Products offered by a research organization

The question about what products can be offered by a research organization requires a complex answer. According to the Polish law, a research institute may offer different categories of product including unique outcomes of research and development work.

Revenue sources available to research organizations are specified by Articles 18 and 19 of the Act on Research Organizations (Picture 5).

Picture 5. Revenue sources available to research organizations



Source: Developed by the author based on the Act of 30 April 2010 on Research Organizations.

The basic tasks of research organizations as defined in Articles 1 and 2 of the Act on Research Organizations point to R&D results as the most important product offered by a research organization.

From the marketing point of view, of special significance is Article 17 Item 2 of the Act which says that the sale of fixed assets are sold in the public tender according to the regulations issued pursuant to Article 46 Item 4 of the Act of 25 September 1981 on State-Owned Enterprises. It is interesting to note that although research institutes are only marginally concerned with the sale of any types of movable and immovable properties, this regulation also governs the sale of research results, e. g. technologies developed by a research institute, and as such it is a major influence on the strategy of reaching out to prospective buyers of intangible and legal assets created by a research institute.

Article 2 Items 2 and 3 of the Act on Research Organizations point to still another type of products offered by a research institute: testing, analysis, opinion, and expertise in the area of research and development work conducted by an organization as well as assessments of the state and development of particular fields of science and technology and industries that exploit R&D results and with respect to exploiting in Poland the achievements of the world's science and technology. In this context, it is worth looking again at audiences targeted by marketing activities of a research institute. The above types of products justify a market-driven approach and are primarily directed to enterprises.

Still another type of product provided by a research organization is related to its activity in the area of standardisation, certification, and technical assessment. This type of activity is carried out by a number of research institutes as the natural consequence of having access to suitable research infrastructure on the one hand and employing top-class specialists connected with the object of quality assessment or certification on the other. Having a certification unit within a research organization has marketing implications. The activity of product certification bodies

is governed by the Act on the Product Conformity Assessment (2010 Journal of Laws No. 138, Item 935 with further amendments). Accredited certification units must also comply with the requirements set forth in the criteria documents such as PN-EN 45011:2000. According to the above documents accreditation for a product certification unit is granted to a legal person meaning a research organization as opposed to its organizational unit involved in certification process. The regulations demand that neither the certification process nor the image of a certifying body shall be influenced by any part of an organization. A certifying body should guarantee its impartiality and declare that there is no conflict of interests. A certifying body cannot offer certification services for products of the same type as those designed, manufactured or appraised by the accredited certification organization or by units related to it. A unit can be related to an accredited certification body by capital, person, name or location. Likewise, laboratories operating in compliance with PN-EN ISO/IEC 17025:2005, must observe the impartiality requirement. In practice, the impartiality requirement implies the necessity to act with special caution when promoting certification services or the offer of laboratories belonging to the research organization simultaneously with the activities related to the development and commercialisation of its products.

Another type of products is the educational offer of a research organization. Article 2 of the Act on Research Organizations provides for the possibility of running by research institutes post-graduate and PhD programmes of studies related to research and development work conducted. There is no doubt that offering post-graduate and PhD programmes of studies carries a great image enhancement potential, raises an organization's prestige and allows for reaching out to crucial stakeholders — technical staff employed by client companies or licensees, and academic staff. The organization of studies entails, however, the necessity to be entitled to grant academic degrees. It is important to note that the right to grant the academic titles of *doktor* and *doktor habilitowany* plays a role in parametric evaluation in the category of scientific potential. A research organization will score more points in parametric evaluation if it has the capability to run procedures leading to doctoral and habilitation degrees involving researchers from outside the organization in question or to supervise doctoral or habilitation dissertations.

It seems that similar marketing effects, at least in terms of reaching out to key stakeholders, could be achieved by taking advantage of the possibility provided for by the Act, of organizing other forms of education including workshops and training courses. It is worth emphasising that both programmes of studies and

courses allow for direct contact between a research institute's staff and its stakeholders and facilitate obtaining feedback information about market expectations as to new technologies and new exploitation possibilities of already implemented products.

Item 5 of Article 2 of the Act again speaks of activities that can be used in the marketing strategy of a research organization. Building databases should be perceived in the context of bringing a specific product to market as well as the image enhancement tool for raising an organization's prestige on the one hand and attracting the attention of numerous groups of stakeholders who use those databases on the other. Item 7 of Article 2 of the Act on Research Organizations provides that a market offer of a research organization may include services based on validation of research or measurement methods and commercial calibration of equipment. Of considerable marketing and PR potential are the activities of research organizations detailed in Item 6 of Article 2, which provides that research organizations can conduct activities in the area of scientific, technical and economic information, innovation and protection of industrial and intellectual property as well as activities supporting innovation in enterprises. Conducting these activities allows for initiating contact with many groups of direct stakeholders. Picture 6 presents product categories offered by research institutes defined in accordance with the Act on Research Organizations.

Picture 6. Product categories offered by research organizations



Source: Developed by the authors based on the Act of 30 April 2010 on Research Organizations.

Marketing tools available to a research organization

Article 2 of the Act on Research Organizations catalogues types of activities that can be undertaken by a research organization. It is worth analysing possible types of activities firstly in terms of their potential for enhancing an organization's image and, secondly, in the context of identifying potential sources of funding and earning research staff engagement.

Interesting possibilities for building an organization's image, brand and visibility both in the science world and among the general public are offered by activities relating to dissemination of R&D results. Dissemination activities can be interpreted as entailing science popularisation initiatives. With this in mind, it might be useful to remember that popularisation of science is important from the point of view of the parametric evaluation criteria and is awarded points in Category 4 in connection with additional effects of scientific activity.

An example of using science popularisation as a marketing tool is the participation of The Institute of Innovative Technologies EMAG in the initiative of the Ministry of Science and Higher Education, *Ścieżki Kopernika* (Copernicus's Paths), co-financed by the EU from the European Regional Development Fund. The goal of the project was to popularise science among local community. Noticing the potential for the positive PR effect through improving recognisability of the EMAG brand among local community and, above all, for enhancing its presence in the national media, EMAG together with the consortium partner, the Guido historical coal mine at Zabrze, suggested developing a cycle of interactive classes for young people combining scientific research with didactic and science popularisation elements. The formula of the educational cycle called "*Górnictwo na fali*" (loosely translated as "Mining in vogue") created by the Institute combined mining issues and elements of physics while the classes were conducted underground in the astounding surroundings of the Guido historical coal mine. The idea won approval and the consortium was granted funding (as the only consortium of the Silesia Voievodship) for conducting the project.

Disseminating R&D results is also an integral part of event marketing. As well as serving the purposes of communication with diverse groups of stakeholders, the organization of seminars and conferences also entails the possibility of scoring points in the parametric evaluation if at least five entities participate in an event co/organized by a research institute or if at least one-third of speakers are affiliated with foreign institutions in the case of international events.

Activities related to the organization of events aimed at dissemination of R&D results and similarly widely used for marketing purposes are publishing activities of a research organization referred to in Item 8 of Article 2. As is the case with the organization of seminars and conferences, the publishing activity can be used as a tool in communication with diverse stakeholders and, additionally, it represents an element of the parametric evaluation, although of minor importance in terms of points assignable.

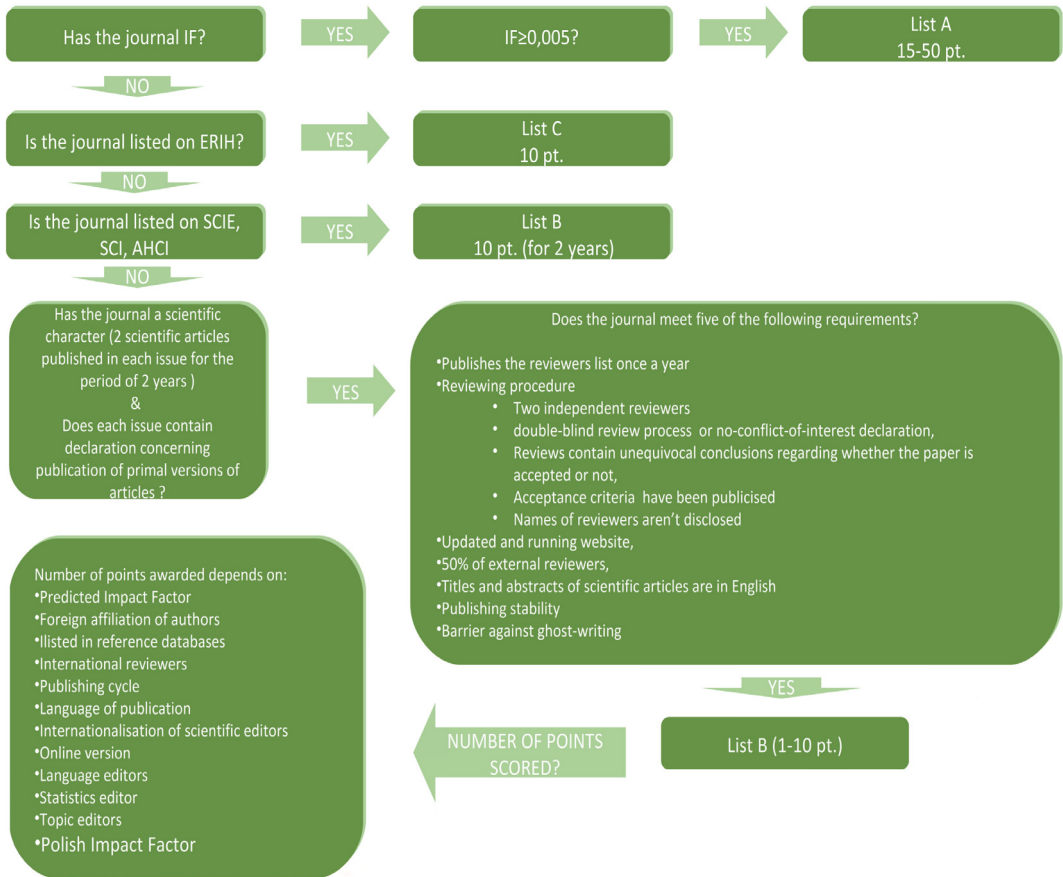
In terms of the parametric evaluation criteria, of greatest importance are scientific papers published in highly-ranked journals or monographs, particularly if they are written in any of the following languages: English, German, French, Spanish, Russian or Italian. Periodic publications of scientific articles which are not publishing series or collections of monographs, and are published under the title of scientific journal with an ISSN identification number, represent an important marketing tool and are also subject to evaluation by the Ministry of Science and Higher Education. The criteria and evaluation procedure are communicated via the Public Information Bulletin on the Ministry's website. Publications in highly-ranked scientific journals are awarded a certain number of points based on the above mentioned criteria, which raises the attractiveness of a journal for potential contributors and its credibility in the eyes of the readers. It is important to bear it in mind when planning marketing activities related to publishing activity. Figure 7. presents criteria used in evaluating scientific journals including point values, in accordance with the regulations of the Ministry of Science and Higher Education dated 29 May 2013.

As the result of the evaluation procedure the Minister publishes the ranking of scientific journals composed of three sections:

- 1) Section A — containing point values for publications in scientific journals with impact factors (IF), listed in the database of Journal Citation Reports (JCR);
- 2) Section B — containing point values for publications in scientific journals without impact factors (IF);
- 3) Section C — containing point values for publications in scientific journals listed in the European Reference Index for the Humanities (ERIH).

An important issue connected with marketing of research organizations is the policy of protecting intellectual property. It is worth noting that obtaining and implementation of patents ranks highly among the parametric evaluation criteria in category 1 — scientific and creative achievements. Slightly lower point values are assigned to obtained protection rights to a utility model or a trademark and a registered industrial design or IC topography and their application as part of implementation.

Picture 7. Procedure for evaluation of scientific journals



Source: Developed by the author based on the regulations of the Ministry of Science and Higher Education dated 29 May 2013.

Membership in international associations often leads to establishing valuable contacts among researchers and is important from the point of view of parametric evaluation but only if an organization's employees sit on the board of directors of the above mentioned international associations, particularly in the role of president.

A crucial element of the marketing and image policies of any organization is the implementation of the quality assurance system. The parametric evaluation criteria award relatively high point values in the category of scientific potential for implementing international quality assurance systems.

Summary

It is a common practice to discuss marketing of scientific organizations in terms of issues related to marketing of commercial companies. The present paper questions the validity of this approach as marketing activity of research organizations is governed by quite different principles. The authors feel that marketing of research organizations should be viewed as more complex compared to marketing of commercial entities. This is mainly due to the laws governing the functioning of scientific institutions and their objectives.

Firstly, the functioning of state-owned research organizations as beneficiaries of public funding is governed by highly specific legal regulations. Obviously, commercial entities are also subject to various legal regulations, some of which directly or indirectly affecting their marketing strategies. Still, the legal situation of state-owned research organizations is definitely more complex.

Secondly, the objectives of research organizations are substantially different to those set for commercial companies, which is reflected in different groups of stakeholders and marketing strategies. The basic marketing issues such as market orientation, product, product life cycle or competitive advantage should be redefined for research organizations.

Bibliography

1. *Komercjalizacja B+R dla praktyków 2013*, (ed.) M. Barszcz, Narodowe Centrum Badań i Rozwoju, Warszawa 2013.

Acts of law

2. The Act of 30 April 2010 on the Principles of Financing Science.
3. The Act of 30 April 2010 on Research Organizations.
4. The Regulation of the Minister of Science and Higher Education on the Criteria and Procedure of Awarding Scientific Categories to Research Organizations dated 13 July 2012.
5. The communication of the Minister of Science and Higher Education dated 29 May 2013 concerning the criteria and procedure of evaluating scientific journals.
6. The Act of 30 August 2002 on the Product Conformity Assessment.
7. Standard PN-EN 45011:2000.
8. Standard PN-EN ISO/IEC 17025:2005.

Anna Slotorsz, M.Sc. — graduated from the Faculty of Management at the University of Economics in Poznań and the Department of Modern Languages at the Silesia University. She finished post-graduate studies in Innovation Management at the Warsaw School of Economics. Since 2009 she has been employed by the Institute of Innovative Technologies EMAG, currently holding the position of Head of Research Commercialization. She researches foreign markets with particular emphasis on the mining industry. She has authored a number of articles on the mining industry in South America. She specializes in transfer of technologies developed at the Institute of Innovative Technologies EMAG.

Waldemar Cichoń, M.Sc. — graduated from the Faculty of Social Sciences and Journalism at the University of Silesia in Katowice. A former local press journalist, he served as chief editor of the monthly magazines *Koncern*, *Gospodarka Śląska*, and *Raport*. After a spell of working in the media, he worked as PR specialist in advertising and PR agencies offering services to businesses and institutions connected with the so-called traditional industries (primarily energy and mining). Since 2008 he has been employed at the Institute of Innovative Technologies EMAG, where he serves the roles of head of the Department of Promotion and Scientific Publications, spokesman and secretary of the editorial team of the monthly journal *Mechanization and Automation of Mining* published by the Institute. Author of a dozen or so articles published in regional and national newspapers, numerous advertising screenplays, PR guidebooks and books for children.



Institute of Aviation
Scientific Publishers
al. Krakowska 110/114
02-256 Warsaw, Poland
phone: (+48 22) 846 00 11 ext. 551
e-mail: minib@ilot.edu.pl

www.minib.pl