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**THE ROLE OF RESEARCH STAFF IN MARKETING
COMMUNICATION AT THE INSTITUTE
OF LOGISTICS AND WAREHOUSING**

THE ROLE OF RESEARCH STAFF IN MARKETING COMMUNICATION AT THE INSTITUTE OF LOGISTICS AND WAREHOUSING

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Summary

The aim of this article is to present the findings of studies conducted on the activity of scientific research staff in the scope of marketing communication conducted by the Institute of Logistics and Warehousing (IL&W).

The author presents the activities of scientific research staff at the Institute of Logistics and Warehousing in the field of marketing communication. They serve to propagate information on the competencies of the research institute among potential business partners, solicit new projects and maintain good relationships with present clients.

The studies presented in this paper were conducted on selected managers of one of the product lines (electromagnetic compatibility) and one of several dozen products (EPC/RFID technology deployment). Particular attention has been paid to two topics of the 5th European Forum for Marketing of Scientific and Research Organizations:

- *The intellectual capital of staff/students as the source of the competitive advantage of the institution,*
- *Studies on the efficiency and the effectiveness of marketing communication.*

Keywords: business partner, client, competitive advantage, Institute of Logistics and Warehousing, intellectual capital, marketing, marketing communication, research institute

The Institute of Logistics and Warehousing Profile as a Scientific and Research Organisation

The Institute of Logistics and Warehousing in Poznan is a scientific and research organisation that comes under the Minister of Development (former Minister of Economy). Thus, in line with Article 1, item 1 of the Act of 30 April 2010 on research institutes: "...it conducts research and development work aimed at their implementation and practical application." According to its mission statement, the IL&W develops, promotes and implements in the economy innovative solutions in the field of logistics and e-economy. The performance of research and development work, consulting services, laboratory research, trainings and publishing activity along with the organisation of conferences and workshops constitutes the execution of the mission. High professional competences in many research areas have enabled the establishment of interdisciplinary project teams.

This collaboration which is advantageous for both parties between the IL&W and specific clients is particularly important in the implementation of innovative services and technologies resulting from scientific and research work. Implementation in enterprises is supported by obtained external funding from various funds and programmes mainly due to the innovative solutions themselves. Commercial cooperation with the IL&W raises the effectiveness of business operations and logistics networks.

Product management within research services

At the IL&W, the management of products comprising of research services is based on product lines and research fields to which the given products are assigned. A total 32 active products have been defined, each of which belongs to one of 15 product lines.

The core activities cover four research areas:

- Logistics,
- Digital economy,
- GS1 system,
- Information and communications technology (ICT).

The linking of eight of the fifteen product lines with four research areas has been shown in Table 1.

Table 1. Linking selected product lines with research areas

Research area	Name of product line
Logistics	Supply chains Warehousing Transport Stocks
Digital economy	Electronic communications
Gs1 system	Participation in GS1 system Use of GS1 System
ICT	Electromagnetic compatibility

Source: own elaboration.

The development of research services is connected with their commercialisation. Dialogue with the environment plays a key role in this, constituting the essence of marketing communication, which includes:

- Partnership-based reaction to information obtained from the environment;
- Shaping of the corporate identity, namely its characteristic features;
- Communicating all company values to the environment using marketing actions;
- Communication within the company¹.

The author presented the undertaken marketing actions at the Forum in 2013.

The forging and maintaining of partnership relations with the market players is one of the fundamental tasks of integrated marketing communication. It reflects the style and culture of the company through the communication of the features and values adopted as specific to the given company².

Among the many actions conducted within integrated marketing communication, the IL&W also performs the following:

- Performance of market research and obtaining information required for offer preparation;
- Preparation and execution of the visibility plan (definition of the visibility plan objectives, the target audience, the budget, the implementers, and the evaluation of the visibility actions);
- Selection of appropriate forms and measures using synergy effects;
- Linking visibility actions with other elements in the marketing mix³.

The actions of marketing communications mentioned above are implemented at the Institute in various ways and linked with specific product lines or products. They have led to the establishment of business contacts. The information about the products which has been prepared reach potential client groups. They should ultimately lead to the establishment of direct cooperation that includes business aspects.

This management of products leads to the right information reaching specific client groups through multiple channels. The specifics of the product and the effectiveness of the undertaken action is also taken into account.

The substantive content of the information conveyed was created by professional staff — usually product managers. Three products that reported the largest increase in sales have been presented in Table 2. Sales over three quarters of 2014 were compared with sales throughout 2013.

Table 2. Sales dynamics of the best products

Product	Sales in three quarters of 2014 compared to sales throughout 2013
Deployment of rfid technology	370%
Evaluation of the electromagnetic compatibility of electrical equipment	150%
European junior/senior logistician certificate	141%

Source: own elaboration.

Selected Research Services Profiles

Later, examples associated with two products constituting research services with the highest rise in sales were used:

- Deployment of RFID technology,
- Evaluation of the electromagnetic compatibility of electrical equipment

The DEPLOYMENT OF RFID (*Radio Frequency IDentyfikacja*) follows logically the design of an innovative solution that is characterised by the application of radio technologies in tracking systems. Successful implementation was achieved by ensuring the appropriate effectiveness in reading information stored on electronic RFID tags. The right selection of tags and other technical components of the systems that are determined by the environment in which they are used is a key factor. The Institute uses its own unique EPF/RFID laboratory for this purpose, enabling the optimal configuration parameters of EPC (Electronic Product Code) systems to be obtained. The full description of the service can be found at <http://www.ilim.poznan.pl/oferta/wdrazenie-technologie-epc.html>, which has been illustrated in Figure 1.

Figure 1. Screenshot of Deployment of RFID technology product website

The screenshot displays the website for the Institute of Logistics and Warehousing (ILIM). The main navigation bar includes 'Branże', 'Rozwiązania i usługi', 'Wiedza', 'e-sklep', and 'Nasi konsultanci'. The central content area is titled 'Wdrażanie technologii EPC' and features an image of two hands holding RFID tags. Below this, the text describes the service: 'Projektowanie i wdrażanie rozwiązań w technologii EPC'. The text explains that the service involves the deployment of innovative solutions using radio technology in tracking systems, addressing issues like low reading accuracy of RFID tags. It mentions the institute's unique laboratory for EPC/RFID systems and offers research and optimal configuration. A sidebar on the left lists 'Inne rozwiązania i usługi' (including EPC/RFID research and MaGS1 management) and 'Kursy Szkolenia Wydawnictwa' (including logistics training and standard implementation). A sidebar on the right provides contact information for Michał Grabia and a 'Pobierz ulotkę produktu' section.

Source: <http://www.ilim.poznan.pl/oferta/wdrazenie-technologie-epc.html> (21.10.2014 r.)

The EVALUATION OF THE ELECTROMAGNETIC COMPATIBILITY OF ELECTRICAL EQUIPMENT is used to confirm the capacity of an electrical or electronic device to operate correctly in a given electromagnetic environment. This can be achieved once the appropriate level of resistance is obtained and by limiting the level of disturbance that are not tolerated by other devices and equipment in operation. Compatible devices are resistant to voltage surges and changes in the electricity grid, electrostatic discharge, radio waves and other electromagnetic phenomena. A positive outcome of the evaluation of the electromagnetic compatibility permits the use of CE markings on products or the drawing up the EC declaration of conformity in line with Directive 2004/108/EEC. The evaluations are also used indirectly when adjusting devices in order to achieve the status of electromagnetic compatibility.

The offer for evaluations of electromagnetic compatibility for electrical devices can be found on the website: <http://www.ilim.poznan.pl/oferta/badania-kompatybilnosci-elektromagnetycznej.html>, which has been shown in Fig. 2.

Figure 2. Screenshot from the Evaluation of electromagnetic compatibility of electrical devices product website

The screenshot shows the website for the Laboratory of Electromagnetic Compatibility (EMC) at the Institute of Logistics and Warehousing (ILIM). The page layout includes a header with logos for GSI Polska and ILIM, and the text 'Instytut Logistyki i Magazynowania Wiedza Rozwiązania Usługi'. A navigation menu is located below the header. The main content area is divided into a sidebar on the left, a central content area, and a right-hand sidebar. The central content area features a diagram of electromagnetic waves with electric field (E) and magnetic field (B) vectors, and text describing EMC testing services. The right-hand sidebar contains a contact form and a 'Napisz do nas' section.

Source: <http://www.ilim.poznan.pl/oferta/badania-kompatybilnosci-elektromagnetycznej.html> (21.10.2014 r.)

The role and activity of scientific research staff

The role of scientific research staff — managers of the aforementioned products was analysed in the research undertaken as was their input in the process of transmitting relevant information to target groups and potential clients. The flow of information occurs concurrently in many communication channels. The specific nature of the channels forces various approaches to content editing and to the manner and pace of action.

Product managers:

- Deployment of RFID technology, and
- Evaluation of the electromagnetic compatibility of electrical equipment are comprised of:
 - Michał Grabia, PhD, Eng, and
 - Krzysztof Sieczkarek, PhD, Eng, respectively.

Both managers were focused on the following market communication actions in 2013 and 2014:

- Publications in scored journals;
- Publications in non-scored journals;
- Publications in electronic media;
- Contributions to IL&W newsletter,
- Participation in conferences, trade fairs and workshops;
- Contacts with potential clients.

The communication activity of both managers of selected products have been shown in Table 3.

The type of communication activity of the manager of the product RFID technology deployment is associated with the specific nature of the project implemented by him the unit value of which compared to the evaluation of the electromagnetic compatibility of electrical equipment is almost 50 times bigger.

Since the product is innovative and each deployment is unique, Michał Grabia pays particular attention to close cooperation with technological partners. This is facilitated by his active involvement in the works of the organisation and in working groups dealing with the development of new standards of EPC/RFID technologies. These groups or organisations include:

Table 3. Communication activity of product managers

Communication action	Product	
	Deployment of RFID technology	Evaluation of the electromagnetic compatibility of electrical equipment
Publications in scored journals	1	5
Publications in non-scored journals	6	5
Publications in electronic media	5	5
e-mail marketing (contributions to IL&W newsletter)	1	2
Participation in conferences, trade fairs and workshops	2	12
Contacts with potential clients (monthly average)	3	15
Other	<ul style="list-style-type: none"> • Membership in 7 organisations and working groups, • Close collaboration with technological partners 	<ul style="list-style-type: none"> • Membership in 4 organisations and working groups, • initiation of other forms of communication: films, video clips, guided tours of the Laboratory

Source: own elaboration.

- KT 162 of the Polish Committee for Standardization — PCS;
- KT 225 WG5 European Committee for Standardization — CEN,
- IEEE Communications Society;
- IEEE Computer Society;
- IEEE Antennas and Propagation Society;
- IEEE Information Theory Society;
- GS1/EPCglobal working group.

Engineer M. Grabia also acts within the established European EPC — GS1 Lab Network.

Technological partners frequently participate in the establishment of contacts with potential clients. It usually takes many months before the stage of contact execution for the deployment of RFID technology is reached and this is due to the following, among others:

- Forging close relationships with potential clients;
- Presenting the advantages of the deployment;

- Convincing the client of the high and unique competencies of IL&W staff.

These main result of these actions is the implementation of large projects. During the first three quarters of 2014, the value of two projects constituted 82% of the revenue in this field of IL&W activity.

The fact that the client receives professional, substantive input on the part of the research organisation in client applications for funding for the deployment of the innovative technologies also is of great significance.

The communication activity of the manager of the product Evaluation of the electromagnetic compatibility of electronic and electrical devices is affected by the relatively low unit value of the service. This is why it is important to take an active part in numerous conferences, trade fairs and workshops (12 in the studied period). The value of the services is also reflected in the number of contacts with potential customers (15 per month on average). Reaching a broad group of purchasers of research services is both possible and effective due to e-marketing, especially publications in electronic media. The use of this communications channel is linked to the product Evaluation of the electromagnetic compatibility of electronic and electrical devices has been discussed in the next part of this article. The actions undertaken were presented:

- Publication of ten articles or contributions to <http://elektronikab2b.pl> website;
- Publication of three articles on Elektroda.pl portal;
- Participating in campaign in connection with the "Innovation Voucher" competition;
- Use of the IL&W newsletter.

Harnessing e-marketing

In the period from 1.1.2014 to 28.10.2014, a total of 10 article and contribution publications were made on the <http://elektronikab2b.pl> website. The number of sessions on the product Evaluation of the electromagnetic compatibility of electronic and electrical devices website at <http://www.ilim.poznan.pl/oferta/badania-kompatybilnosci-elektromagnetycznej.html>, generated by 7 articles or contributions

has been presented in Table 4. The remaining two articles and one contribution generated 2 sessions each.

Over the period considered, a total 169 entries were recorded to product website from <http://elektronikab2b.pl>, made by a total 132 users. A traffic diagram from referring websites has been presented in Figure 3.

Table 4. Session statistics on product website, generated on elektronikab2b.pl website

Reference path	Acquisition		
	Sessions	Share of new sessions	New users
/biznes/22101-dyrektwa-emc---bezpлатne-badania-urzedzen-elektronicznych-na-znak-ce	129	76,74%	99
/katalog-firm	10	90,00%	9
/biznes/16933-parp-dofinansowuje-badania--kompatybilnosci-elektromagnetycznej-na-znak-ce	6	66,67%	4
/kalendarium/03-2014/12/22064-bezpлатne-seminarium-z-kompatybilnosci-elektromagnetycznej	5	60,00%	3
/prezentacja-artykul/21541-nowa-komora-bezodbiciowa-do-badan-kompatybilnosci-elektromagnetycznej-w-instytucie-logistyki-i-magazynowania-w-poznaniu	5	100%	5
/katalog-firm/608-biura-inzynierskie	4	100%	4
/kalendarium/3-2014/12/22064-bezpлатne-seminarium-z-kompatybilnosci-elektromagnetycznej	4	66,67%	2
Other	6	66,67%	6
Total:	169	78,11%	132

Source: own elaboration.

A total 3 articles were published during the first 10 months of 2014 on the Elektroda.pl forum. The number of sessions associated with this on the page dedicated to the evaluation of the electromagnetic compatibility of electronic and electrical devices has been shown in Figure 4 and collected in Table 5.

Figure 3. Elektronikab2b.pl traffic diagram from referring websites

Ruch z witryn odsyłających

1 sty 2014 - 28 paź 2014

WSZYSTKIE » ŹRÓDŁO: elektronikab2b.pl

Wszystkie sesje
0,50%

+ Dodaj segment

Eksplorator

Podsumowanie



Source: Google Analytics (29.10.2014 r.).

Figure 4. Elektroda.pl traffic diagram from referring websites

Eksplorator

Podsumowanie



Source: Google Analytics (29.10.2014 r.).

Table 5. Session statistics on product website, generated on elektroda.pl website

Reference path	Acquisition		
	Sessions	Share of new sessions	New users
/rtvforum/topic226104.html	70	65,71%	46
/rtvforum/topic584309-240.html	34	79,41%	27
/rtvforum/viewtopic.php	11	81,82%	9
Total:	115	70,30%	82

Source: own elaboration.

Transfers were distributed evenly over time. Most of them — as many as 70, which makes up 60%, came from the article posted on the <http://elektroda.pl/rtvforum/topic226104.html> website.

At the turn of February and March 2014, for the benefit of the service Evaluation of the electromagnetic compatibility of electronic and electrical devices, Engineer K. Siarczek actively participated in the campaign associated with the "Innovation Voucher" competition. It included the following elements and tasks:

- Advertising campaign — banner on 11 subpages of elektronikab2b.pl;
- Publication of the article "EMC Directive — gratuitous CE marking evaluations of electronic equipment" on the elektronikab2b.pl/biznes website;
- Contribution to the elektronikab2b.pl/katalog-firm catalogue;
- Publication of the article "PARP to finance CE marking evaluation of electromagnetic compatibility" on the elektronikab2b.pl/biznes website;
- Contributions to the forum on the elektronikab2b.pl website;
- Posting of banner on ilim.poznan.pl website;
- Posting of banner on product website.

From 24 February to 3 March 2014 a total 3,531 users come into contact with the campaign on 11 elektronikab2b.pl subpages.

A total 26 persons were redirected to the product page via the banner presented in Figure 5.

Figure 5. Banner ad posted on elektronikab2b.pl subpages



Source: <http://www.elektronikab2b.pl> (2.3.2014 r.).

A clear rise in visits to the product pages (48 sessions) was generated on 27 February 2014 after the publication on the <http://elektronikab2b.pl/biznes/22101-dyrektwa-emc---bezp-latne-badania-ur-zadzen-elektronicznych-na-znak-ce#.VE-KyhZy4mV> portal of

the "EMC Directive — gratuitous CE marking evaluations of electronic equipment" article. An illustration of the article posted on the website has been shown in Fig. 6.

Figure 6. Article posted on elektronikab2b.pl website

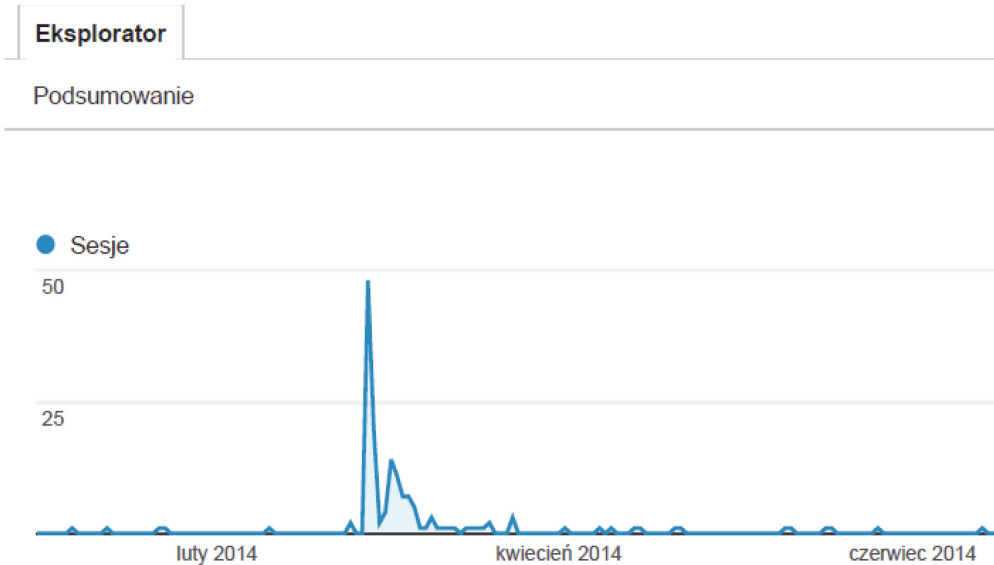
The screenshot shows the homepage of elektronikab2b.pl. At the top, there is a navigation bar with the 'ElektronikaB2B' logo, a search bar, and a menu with categories like 'Rynek', 'Firmy', 'Produkty', 'Biznes', 'Raporty', 'Wywiady', 'Technika', 'Blog', 'Prezentacje', and 'Kalendarium'. Below the navigation bar, there is a banner for 'electronica 2014 inside tomorrow' with a 'Kup bilet już teraz' button. The main content area features an article titled 'Dyrektywa EMC - bezpłatne badania urządzeń elektronicznych na znak CE' dated 'czwartek, 27 lutego 2014 11:28'. The article text mentions 'Instytut Logistyki i Magazynowania' and 'Programu "Bon na innowacje edycja 2014"'. Below the article is a banner for 'Komponenty elektroniczne' and another for 'EAE ELEKTRONIK' advertising 'Montaż kontraktowy SMT i THT'. The footer includes 'World News 24h' and a date 'środa, 29 października 2014 16:05'.

Source: <http://www.elektronikab2b.pl> (29.10.2014 r.).

A total 129 sessions were recorded which were initiated by the mentioned article (first position in Table 2), which constitutes 76% of all the visits made by 99 (75%) of new users. The described influx is clearly visible in Fig. 7., which constitutes a fragment of Figure 3.

Visits to the product page by potential clients interested by the gratuitous evaluations of electronic equipment in view of CE marking within the Innovation Voucher were reflected in the establishment of telephone or e-mail contacts. An entry form was also used, which was available on the website. The campaign resulted in soliciting 10 orders for evaluations within the advertised programme, the value of which exceeded 25% of the revenue from this kind of service.

Figure 7. Rise in the number of sessions initiated by the article "EMC Directive — gratuitous CE marking evaluations of electronic equipment"



Source: *Google Analytics* (29.10.2014 r.).

Harnessing e-marketing

E-mail marketing is used by IL&W to dispatch IL&W newsletters. The information concerning the Evaluation of the electromagnetic compatibility of electronic and electrical devices for CE marking purposes was posted in seventh place in the Newsletter dated 2.4.2014 (Figure 8).

The newsletter was received by 13,222 subscribers. The e-mail was opened by 1,108 persons, which constitutes 8.4% of the subscribers. 151 of them, making up 1.1% of the total, clicked on all the links.

A chart showing the sessions connected with the newsletter has been shown in Figure 9. The described influx is clearly visible in Fig. 7., which constitutes a fragment of Figure 3 (Wednesday, 2.4.2014). It is clear that the majority of the sessions took place on the day the newsletter was sent

out. The day of the week on which the information was sent out is highly significant. Based on the results of earlier research, IL&W avoids sending out newsletters on Mondays and Fridays.

Figure 8. Newsletter dated 2.4.2014



Kwietniowy newsletter ILM GS1 Polska

1. XII Polski Kongres Logistyczny Logistics już w maju.

3 dniowe Święto Polskiej Logistyki to:

75 eksperckich wystąpień w 11 sesji tematycznych,

4 warsztaty oraz 4 wizyty studyjne w firmach, wystawa

"Rynek Logistyczny 2014" oraz lubiane przez wszystkich LOGISTICS party

[Czytaj więcej >>](#)

2. Sprawdź poprawność swoich oznaczeń – przygotuj się na Unikalną Identyfikację Wyrobów Medycznych.

[Czytaj więcej >>](#)

3. Skanuj, wiem co kupuję - Skamij kody kreskowe na produktach dzięki darmowej aplikacji MOBIT GS1.

[Czytaj więcej >>](#)

4. Tworzenie etykiety logistycznej - prostsze niż myślisz dzięki oprogramowaniu EdLog

[Czytaj więcej >>](#)

5. GS1 członkiem światowego konsorcjum World Wide Web - W3C

[Czytaj więcej >>](#)

6. Szlifuj swój angielski z nowym e-szkoleniem GS1 Barcode Certificate

[Czytaj więcej >>](#)

7. Badania na znak CE

[Czytaj więcej >>](#)

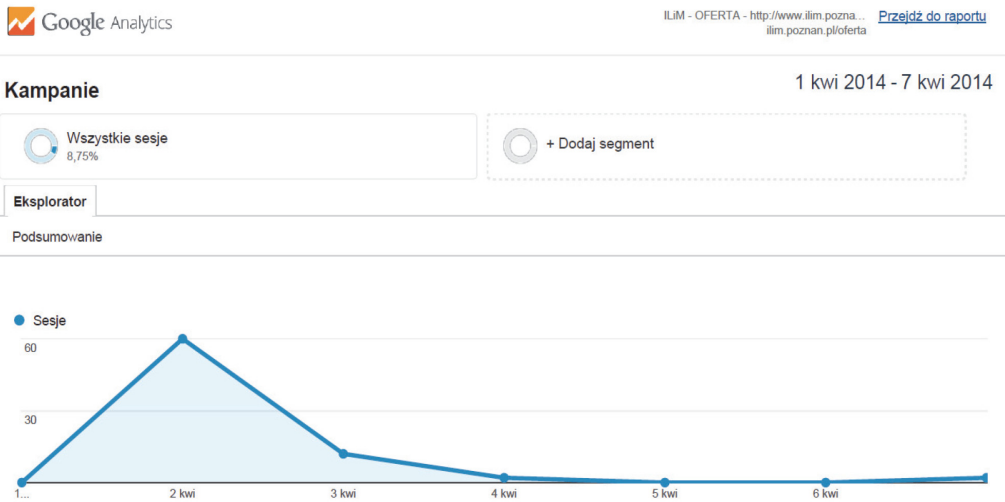
Source: <https://www.salesmanago.pl/=mail/messageView.htm?conversation...> (12.10.2014 r.).

A total 25 entries to the newsletter were recorded over a period of 6 days on the product website www.ilim.poznan.pl/oferta/badania-kompatybilnosci-elektromagnetycznej.html. These entries were made by 15 subscribers, whose e-mail addresses are known. The author managed to identify the companies whose employees showed initial interest in the information in 14 cases. The companies included manufacturing firms in the food industry, companies trading in construction materials or fire

protection equipment and one involved in consulting.

Unfortunately, none of these Internet users took up the offer.

Figure 9. Rise in the number of sessions initiated by the article "EMC Directive — gratuitous CE marking evaluations of electronic equipment"



Source: Google Analytics (29.10.2014 r.).

Sources of Success

In the author's opinion, the successful soliciting of clients for research services and retention of the competitive advantage is possible through the implementation of multichannel outreach with suitable information to specific client groups. The specific nature of the product and the results of evaluations of effectiveness of actions undertaken earlier are also taken into account.

The sources of success in the case of both products include:

- The intellectual capital of the product managers, who possess extremely high substantive professional competencies and easily establish interpersonal contacts with clients;
- Innovative, highly specialised products that include the research

services presented herein;

- A targeted and profiled communication;
- Harnessing of personal marketing with former and current clients.

The following factors also contributed to the success of the product Evaluation of the electromagnetic compatibility of electronic and electrical devices:

- Use of sector Internet media;
 - Multichannel outreach with information, also through the campaign
- And in relation to the deployment of RFID technology — close collaboration with technological partners and organisations.

References

- ¹ Smalec, A. (2005). Komunikacja marketingowa w usługach. In: J. Perenc (ed.), *Marketing usług*, (213). Szczecin: Szczecin University Press.
- ² Szymańska, A. (2007). Zintegrowane komunikowanie marketingowe. In: J. Olędzki, D. Tworzydło (ed.), *Public relations. Znaczenie społeczne i kierunki rozwoju*, (170). Warszawa: PWN Scientific Publishing House.
- ³ Staszewska, J. (2005). Komunikacja marketingowa obszarem współpracy przedsiębiorstw usługowych. In: K. Rogoziński (ed.), *Marketing usług profesjonalnych*, (94). Poznań: Akademia Ekonomiczna Publishing House in Poznan.

Bibliography

1. Smalec, A. (2005). Komunikacja marketingowa w usługach. In: J. Perenc (ed.), *Marketing usług*, (213). Szczecin: Szczecin University Press.
2. Staszewska, J. (2005). Komunikacja marketingowa obszarem współpracy przedsiębiorstw usługowych. In: K. Rogoziński (ed.), *Marketing usług profesjonalnych*, (94). Poznań: Akademia Ekonomiczna Publishing House in Poznan.
3. Szymańska, A. (2007). Zintegrowane komunikowanie marketingowe. In: J. Olędzki, D. Tworzydło (ed.), *Public relations. Znaczenie społeczne i kierunki rozwoju*, (170). Warszawa: PWN Scientific Publishing House.

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