Information to High-Technology Industry in Otaniemi Science Park

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1. Introduction

Otaniemi Science Park Ltd was founded in 1984. It is located next to the Helsinki University of Technology and only 10 km from the City of Helsinki. Today the Otaniemi Science Park provides facilities to some 50 small high-technology firms, the first of which moved into the Science Park in the spring of 1987. At that time the Helsinki University of Technology Library started a 1½-year information service project which aimed to make the firms of the Otaniemi Science Park well aware of the library and information services available. The Technology Development Centre (TEKES) in Finland supported the project with 200 000 Fmk (about US$ 45 000).

During the project, all library and information services were offered free to all participating companies. Services included reference service, document delivery, circulation of periodicals, the monthly, new acquisitions bulletin of the library and information service which included both online searches and SDI-service; also a free password to the TENTTU system was offered. TENTTU is the online information retrieval system of the Helsinki University of Technology Library. It contains four different databases: BOOKS, the OPAC of the library; TALI, the index to articles in Finnish technical journals; INSSI, Master's and licentiate theses of the University; and SERIALS, a catalogue of periodicals holdings in the library.

An information specialist at the Helsinki University of Technology Library was assigned to the project, and each participating firm nominated a contact person for the project. The information specialist could be contacted in the library throughout the project and visited the Science Park while doing interviews at the start and in the middle of the project.

Otaniemi Science Park is an incubator for industry where only very small-scale production is possible, so some of the firms are meant to grow out of the Science Park and give room to high-technology companies.[1] At the start of the information service project there were 24 participating firms, and by the end of the project a total of 35 firms had taken part in the project. The participating companies represented electronics (including both computer hardware and software), control and measurement techniques, biotechnology, food technology, conference- and creativity consultation. Nearly all participating companies were established in the mid-1980s and employed an

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average of 3 to 8 persons. Many of the entrepreneurs were either graduates or students of the Helsinki University of Technology.

2. Information service project

To start the project, the information specialist formulated a questionnaire and interviewed all the 24 contact persons of the participating firms. The results of the questionnaire showed that the most frequently used daily information sources were personal collections, colleagues, scientific journals, and handbooks. Advertisements, brochures, and scientific journals were used on a weekly basis. Visits to the library occurred monthly, as well as attendances at meetings or conferences. Information service was used either monthly, yearly, or never. Over 70% of the interviewed persons said they devoted more than four hours a week to acquiring information.

The information specialist was thus prepared to promote the use of information services as well as to deliver all information materials requested. For instance, twelve new journals were subscribed to by the library because of requests from the firms. Furthermore, not only technical information was offered but also business information, since the high-technology companies need, and value, commercial information as well.[2]

Table 1 Usage of chargeable library and information services

	Total amount of requests	*Number of firms that used the service*
Document delivery	1069	17
Monthly, new aquisitions bulletin	33 copies per month	33
Circulation of periodicals	37 journal volumes	13
Copies of contents pages of periodicals	36 journal volume	9
Online searches from various databanks	55 sessions	21
SDI service	24 profiles	17
Searching in the TENTTU system	269 contacts	

3. Project statistics

At the end of the project period, the chargeable library and information services offered had been used as shown in Table 1. The information specialist used approximately one day a week, and the secretary at the information service department two days a week, working with the project, including reference service and consultation in addition to that shown in the table.

When examining the use of chargeable library and information services by the firms (Fig. 1) a very clear division into three groups can be seen: fifteen of the participating firms were very active, ten used the services to some extent, and ten firms were hardly ever heard from.

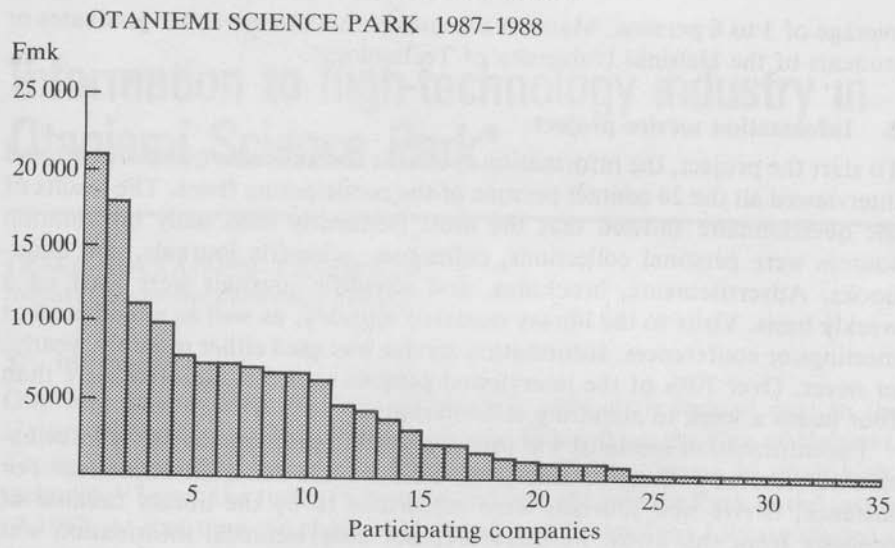

Fig. 1 The use of chargeable library and information services by companies.

4. Project evaluation

The second questionnaire was given to the contact persons in the summer of 1988. The main emphasis was in the evaluation of the offered services from the user's point of view. Of the participating 30 firms, 12 contact persons answered the questionnaire and they all belonged to the active, or fairly active, user groups. The contact persons of the firms with the least use of the services never answered our mail or returned our calls. These firms were as a rule the smallest, one- or two-men enterprises.

The marketing of the information service project was carried out using interviews and additional telephone contacts. Marketing was not done on a regular basis, e.g. monthly. There was, however, always a peak in the requests coming from the Science Park after the questionnaires, interviews, or phone calls.

The number of delivered documents, 1069, was large indeed. Of all the documents delivered (Fig. 2) (excluding the requests within biomedicine, for which the library has no national responsibility nor any holdings) 36% were found in the collections of the library, 42% were delivered from abroad, and 22% were found in other Finnish libraries. Comparing these results with those of Toivonen's 1986 study about requests for loans and copies from medium- and small-sized industry,[3] clear differences are seen: in the Otaniemi Science Park project deliveries from the library's own collections were fewer, and both numbers of documents delivered from abroad and from other Finnish libraries were of larger percentage than those in the 1986 study. When interpreting these differences a conclusion that high-technology firms need more obscure literature than small- and medium-sized companies in general, is too freely put. One must remember that the companies of the Otaniemi Science Park had easy access to foreign references through both online searches and SDI service. Also, part of the difference between the amount of documents delivered from

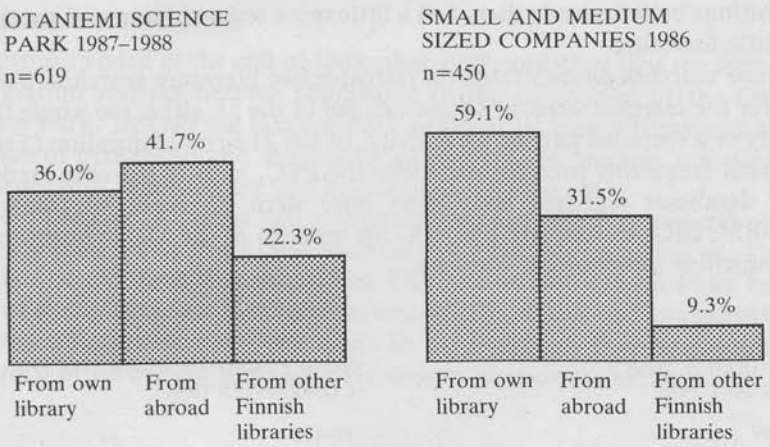

Fig. 2 Documents delivered by the Helsinki University of Technology Library.

other Finnish libraries may result from the need for non-technical information on the part of the Science Park firms.

The percentage distribution of requests for document delivery by the type of document are shown in Fig. 3. In the Otaniemi Science Park Information Service Project, 71% of the requests were for copies of journal articles and 22% were for conferences proceedings or papers, whereas reports, monographs, and miscellaneous requests totalled 7% only. Comparing the results again with Toivonen's study it seems that high-technology firms are interested even more in articles and conference proceedings and less in reports and monographs than small- and medium-sized companies in general. The fact remains that the latest information on new technology is often first published in either scientific journals or in conference papers. There is also an interesting difference in the amount of miscellaneous items requested, which included many patent requests; this is probably due to the new technical information presented in patents.

All those answering the questionnaire were satisifed with the speed of the document delivery, and in their opinion the references matched with the actual documents in terms of the perceived importance.

Of all the requests for document delivery, nearly 100% could be satisfied, thanks to the excellent, experienced staff of the interlending department of the library and to the fact that most of the requests were made from the references from online database searches with complete bibliographic information.

The monthly, new acquisitions bulletin was sent to all but two participating firms (the two represented biosciences, with little interest in technical book and report information) after each update of the TENTTU BOOKS database. The second questionnaire revealed that the bulletin was circulated round one to three persons in each firm. In spite of the fact that six out of eight contact persons considered the bulletin as a less important source in their monitoring of professional interests, more than half of them admitted that reading the new

acquisitions bulletin made them feel a little more secure in terms of monitoring scientific literature.

Online searches concentrated on retrospective literature searches. The subjects for the searches were, in 38 sessions out of the 55, either the whole field of activity or a specified part of the activity, of the 21 firms in question (Table 1). The most frequently used database was INSPEC, with 29 searches made, and other databases searched more than once were Chemical Abstracts, ABI INFORM, BIOSIS, and METADEX. Six sessions of the 55 can be interpreted as competitor information searches.

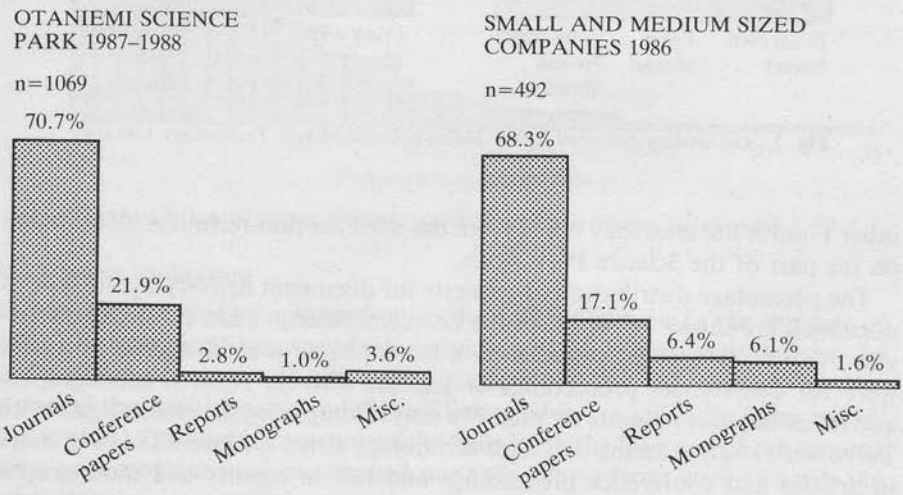

Fig. 3 Document delivery requests by type of document.

SDI service was available to the Otaniemi Science Park firms through the Swedish EPOS/VIRA system of the Information and Document Centre of the Royal Institute of Technology in Stockholm: the system has 24 different databases. Seventeen firms wanted their profiles entered. Again, INSPEC was the most popular database, and again, most of the profiles (11 out of 17) followed the field of activity of the firm in question. Six firms monitored another subject of interest with their profiles. Worth mentioning here is that one contact person complained that the SDI references were 'old on arrival', i.e. he had already read the important articles before the biweekly SDI references even reached his desk.

The number of searches made in the TENTTU information retrieval system of the library during the project (269, average connect time 15 minutes) was a very pleasant surprise. There is an optical cable connection between the University of Technology and Otaniemi Science Park. In the first interview 18 out of 24 contact persons showed interest in the TENTTU system, and they were trained at the library's free, user-training seminars.

5. The present situation

The project ended at the end of December 1988, and after that the library and information services became chargeable to the companies of the Otaniemi Science Park. In 1989 the Science Park provides its tenant firms with the circulation of periodicals and, depending on the possible funding, it may support the firms with other library and information services, too.

There has been a drastic fall in information requests since the end of 1988. Even the most active users seem to think twice before contacting us. The user statistics of the three first months of 1989 show that only six firms have requested documents, one firm has renewed its SDI service, and one has cancelled it. No online search has been made in 1989 and no firm has requested a password of its own to the TENTTU system, despite the active use in 1988.

6. Conclusions

About the 15 firms who actively participated in the project, it can well be said that the library succeeded in its aim to make the firms of the Otaniemi Science Park well aware of its services. If a company which used the library and information services very little during the project contacts the library later, e.g. next year, it is a sign of success in that they are aware of the library's services.

After the Otaniemi Science Park Information Service Project the information specialist assigned to the project was left with the impression that the participating firms, certainly the actively participating firms, used the project to create and update their personal files and collections. The large amount of documents delivered, the retrospective literature searches, and SDI profiles covering mainly the fields of their activity, and the fact that the present use of the library and information services by the firms is very low, support this conclusion. In my opinion, conclusions on the actual continuing information demand of small high-technology industry cannot be made on the basis of this study. The project does, however, imply strongly that document supply is very important indeed in serving high-technology industry.

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