Licensing Specialties Chemicals

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Licensing can play important role in corporate development; basic rules, hints given

Licensing of products or processes is a well tried and tested method of extending product ranges in many industries. It is particularly relevant in those consumer markets where product life can be short, such as in toys and games. Many companies have exploited the success of a product in one country by licensing the manufacture and marketing in another. The engineering industry also uses licensing extensively to manufacture products covered by patents. These areas epitomize the "invention" where an individual in his study or shed can develop an idea that will take the world by storm, e.g. Trivial Pursuit and the Workmate. (These examples also illustrate the need for good patent coverage, which is a separate topic and will not be dealt with in this article).

The chemicals industry has a mixed view toward licensing its products and processes. The German dyestuffs industry became world leaders by keeping their knowledge to themselves. The petrochemical industry has grown by licensing processes and reaping the benefits of further developments from the licensee. The pharmaceutical and agrochemical industry often find it necessary to license their products for manufacture overseas in order to meet the local legislation or approval requirements. Most of the Third World chemicals activity has grown through either licenses or technology transfer.

The chemical industry differs from the others illustrated in the level of the research and development content and what is offered in many instances is a "know-how" license, not a patent license. If the know-how is kept restricted it can have a longer life than a patent, but once revealed it loses its value immediately. Most of the specialty sector of the chemicals industry deals with know-how, which explains why licensing has been viewed with suspicion by many companies. However, opportunities for licensing do exist within the sector and there is an increased awareness of the potential of licensing as part of an overall growth plan. It appears that most companies expect to license in products or processes, but in order to do so someone has to license out that product or process. The matching of the two leads to the successful agreement and is frequently best achieved with the help of a third company skilled in the art.

GROWTH PLAN FOR A SPECIALTY CHEMICALS COMPANY

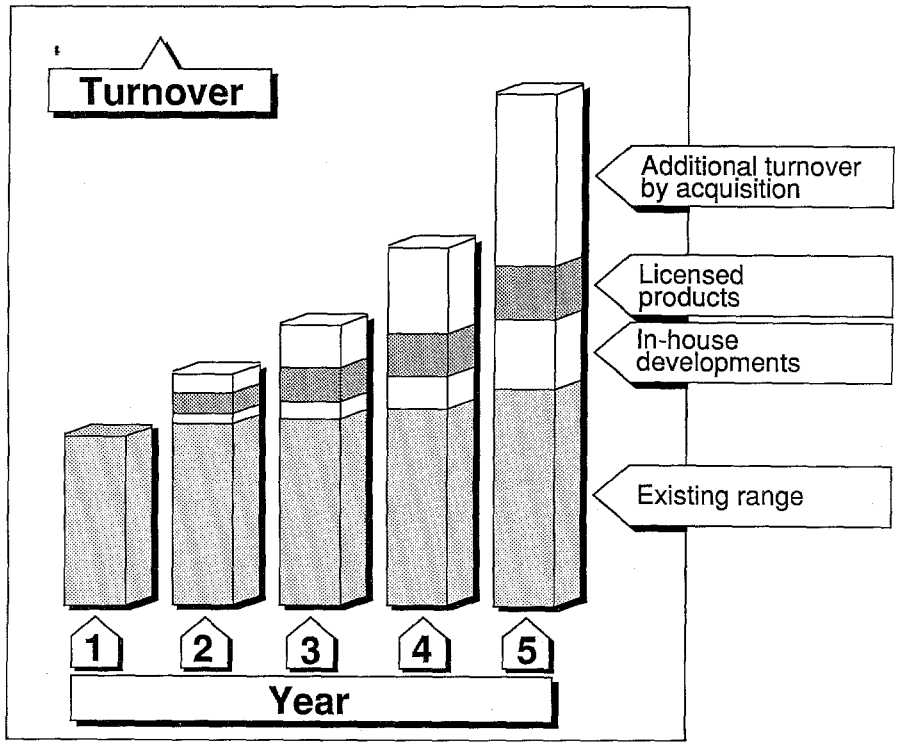

Figure 1

LICENSING AS PART OF A GROWTH PLAN

Licensing is normally sought as a means to expand the product range, but it should not be considered in isolation of alternative means of company growth. Before embarking on a search for licenses the company ought to spend time preparing a growth plan (Figure 1). This will involve a structured analysis of the company, its strengths and weaknesses, its products, processes and markets, the opportunities for internal innovation, acquisitions, licenses, etc. It should then define targets and allocate the resources to achieve those targets.

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THE BENEFIT OF LICENSING

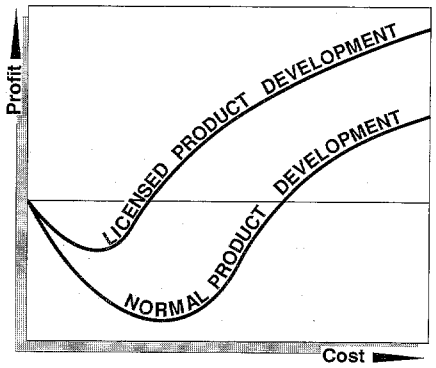

Figure 2

THE STEPWISE APPROACH TO LICENSING

Figure 3

THE BENEFITS OF LICENSING

When considering licensed product development within the growth plan there are several benefits compared to normal product development that may immediately spring to mind and others are well reported,[1] which lead to a more rapid move into profit through a shorter development route (Figure 2). However, there are added benefits to a good licensing agreement. Some follow:

1. Often no capital is required to generate the initial sales of the product.
2. Technical and marketing back-up is often available from the licensor on request.
3. Previous experience with the product or process or technology can be used to validate your claims to the new users.
4. The risk factor is reduced for everyone concerned.
5. A license is better than a distributorship for a manufacturing company since a license usually provides manufacturing rights. The right to manufacture locally usually starts when sales have developed to justify local supply.
6. Often attitudes toward quality assurance can also be transferred along with the product which helps the company generally.
7. The company is in the forefront of new development without the cost of an expensive R&D program.

APPROACH TO LICENSING

Having accepted licensing as part of the growth plan, the approach to obtaining a license should cover the following steps (Figure 3):

1. Select the team to make the decision.
2. Deciding what products, processes, technology, etc. you want.
3. Searching it out from whatever country or source.
4. Examination of the offered item under secrecy agreement.
5. Exchange of full technology package
6. Validation of the package.
7. Agreement of marketing plans.
8. Negotiating the license agreement.
9. Reviewing the progress.

THE LICENSING PLAN

Pick the Team

The internal team within the organization is an important aspect in ensuring any potential technology or product license is moved through to commercialization. The senior managers must be committed to licensing and prepared to allocate the resources, both financial and human, in order to seek and adequately screen opportunities. It is usually a great advantage to appoint product champions in the later stages, but these managers should be identified early.

Define the Products and Technology

The development of a business plan through a structured approach is likely to yield gaps in products or technology. These gaps can form the basis of defining the needs of the company. They should be further refined where necessary by identifying product needs of the market. The market needs can be assured by the selected internal team with each member taking different segments and undertaking a "needs" survey. This should lead to a clear specification of product requirement. Examples include:

1. A biocide used in control of mastisis in dairy cattle.
2. Not iodine or chlorine based.
3. Competitive with iodine on a cost/performance basis.
4. Product must have a high-value image.

This was the specification used to search out chlorhexidine for use in animal health.

Definition of technology is usually simpler, e.g. a process to produce product x at price y.

Search it out

Assessing the search team — Before searching begins the company must decide who should undertake it. Several choices are available:

-Licensing agencies.
-Company employees.
-Government agencies.
-Company consultants.

If company employees are to be used it will take 2-3 years to train them fully and a further year or two

to start hitting the targets. Government agencies are slow and often unable to understand the specific requirements. Some licensing agencies turn out a list of products that are not developed, out-of-date, and uncompetitive.

The best success is usually achieved using consultants with a knowledge of the area who are trained in the specific art of licensing and who the company management can work with on a day-to-day basis.

Prepare the ground — The company should next attempt to sell itself to potential licensors as a dynamic, responsive, efficient organization keen to bring another dimension of success to the product in question. The company should be prepared to discuss the licensing of their own products and processes as the "two-way street" approach will lead to interest from a higher number of potentials. A useful means of achieving this is to prepare a leaflet describing the company, its products, what it seeks. This forms the basis of arousing interest.

Where to go? — Obviously, this is the area of skill of the specialists and a whole paper could be devoted to this topic. However, they can be listed as:

-People.
-Companies.
-Universities.
-Professional and trade associations.
-Literature data bases.
-Suppliers of licensing information.
-Publication.
Trade fairs, conferences, etc.

Personal contacts lead to the most rapid response and the best assessment of the available technology. A higher percentage of opportunities are likely to pass through the screen. Direct contact with the innovator may also be possible and generate a speedy response, but patent agents and fellow scientists should not be overlooked.

Large companies now have licensing managers, as do some of the universities in the U.S.A. in particular, which are good points of contact to learn, what is available. Companies that have the required products or technology can be approached, but there is no guarantee that they will be interested in licensing out the technology on a single approach. The small company or R&D contract company will be only too pleased to license out its technology, and it can be a very good source.

The universities in the U.K. are becoming much more aware of the needs of industry. Many such as Salford have set up areas of cooperation with the chemical industry. They are keen to promote their own wares. The establishment of the R&D Clearing House[2] has been a recent innovative move in the U.K. to bring the activities of universities to the awareness of industry. However, normally the technology from university needs considerable further work before commercialization and a longer time scale must be accepted.

◄ Trade Associations ►

Trade associations can be a source of finding out who does what. Members also generally inform their association of products and processes they wish to promote abroad and in which areas they seek agents. Initial contact as a potential agent can lead to a manufacturing license. Within the U.K. speciality chemical industry the main contacts would be with CIA,[3] BACS,[4] or SORIS.[5]

Literature data bases such as Chemical Abstracts and Derwent World Patent Index are useful in identifying owners of specific technology. Companies with valuable patents coming to the end of their life can offer know-how to prospective manufacturers to continue to reap some benefit from their work. The example of generic pharmaceuticals springs to mind as many valuable products will soon be off patent protection.

Suppliers of licensing information do provide data from companies or individuals actively offering licensing opportunities and if the opportunity fits it is a valuable route. However, the agencies are not usually in a position to verify the extent of development or the value of the opportunities offered, but they can provide the direct contact.

Perusal of industry publication is a means of keeping abreast of developments and it yields information earlier than literature data bases. However, it is very time consuming and not exhaustive.

Trade fairs, exhibitions, conferences, etc., are very useful meeting places where licensing opportunities can be identified. There are now more ventures specifically directed toward technology transfer taking place throughout the U.S.A., Europe, and Japan.

An indication of the yield of opportunities and the time scale is given in Table 1 based on a case study by Spring Innovations Ltd.

Screen the Opportunities

The company should be able to screen the products and technologies located to find those that fit best and are likely to meet with acceptance of management. This screening process is most important and should be done as quickly as possible since speed of response is critical in the early stages of generating confidence in the company with the prospective licensor. A screen that has been found particularly useful in specialty chemicals is as follows (See Figure 4):

1. Is the product aimed at a known market need?
2. Is the cost-benefit ratio commercially appealing?
3. Is it possible to make a sample of the product in a short time, say two weeks?

ANALYSIS OF LICENSING OPPORTUNITIES

Source	Cost	Number	Useful Survivors	Development time (years)
Visiting technology fairs	High	480	2-3	3
Visiting targeted companies	Medium	12	1-2	1-2
Contacts at universities	Low	55	1	3-5
State funded laboratories	Very low	47	Nil	—

Table 1

THE SHELVING PROCESS

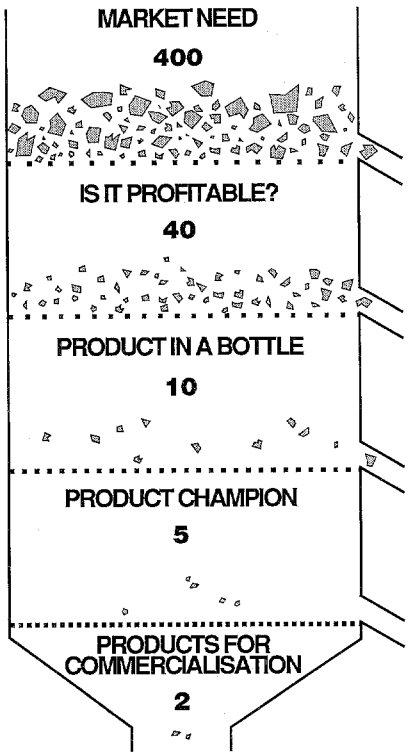

Figure 4

4. Is the company "product champion" identified?

A fall out rate of 90-95% is not uncommon in trying to locate specialty chemical opportunities that will fit into the company quite well. A normal trap for a company is to try licensing and give up because it becomes dispirited with sorting the opportunities.

Validate the Product

Having obtained the product in a bottle it can then be submitted to potential customers for assessment and evaluation. It could be that modifications are needed for the local conditions. Can these be easily achieved? Can the licensor help? Is more know-how required? These problems will need resolving before the product can be brought to full commercialization. At this stage the commitment of the product champion will be all important to overcome potential objections.

Form an Agreement

Drafting of a licensing agreement can be undertaken internally or with the help of outside agencies, depending upon the available resources. Whichever route is selected the agreement should cover the following:

1. The details of the patent or know-how.
2. Type of license covered and its limitations.
3. Arrangements between licensor and licensee for any improvements made by the licensee.
4. Start-up arrangements.
5. Royalty arrangements and other payments.
6. Reporting arrangements.
7. Litigation provisions.
8. Termination arrangements.
9. Assignment of rights to successors.
10. Formal addresses of parties.

Review

When the product is commercialized the performance should be regularly reviewed:

Is the cost-benefit ratio as anticipated?

Are the tonnage sales as predicted?

Are yields as predicted?

Has the product been further modified?

Answers to these questions can affect the royalty payments and may lead to technology exchange with the licensor that could result in licensing out agreements.

What Does it Cost?

Assuming that the company has followed the route to employing a specialty consultant, the costs for the various stages outlined in the first section are shown in Table 2.

Thus, the elapsed time for the exercise will be between one and two years, and the cost including some in-house charges, will be between £10,000 and £50,000. When this time scale and cost are compared to in-house development, the comparison is generally very favorable.

The cost of the license is also a point that is much debated, often it seems by individuals who have never had to pay a license fee. Generally, it is true to say that benefits of a manufacturing product are split approximately 80:20, the larger proportion going to the manufacturer. Thus, a licensor who expects the company to make a 10% net profit may ask for 2% on sales. If the net profit approaches 20% he will want 5% of sales.

A royalty on sales is easy to monitor as the product is commercialized. More complicated profit sharing splits tend to be more difficult to police and almost impossible to audit. Should the profitability of the product fall for very good reasons, e.g. the price of a specific raw material escalates out of proportion, then a hardship relief clause in the agreement may allow the two companies to carry on with marketing in mutual support during the difficult period. A good license usually generates goodwill and cooperation.

Net Initiatives

Recently, some important initiatives have been taken to encourage companies in the U.K. to regard Europe as their home market and to utilize the best technology to develop their product ranges. The R&D Clearing House is one particularly relevant exercise set up by the Chemicals EDC[6] to help transfer technology from our universities and larger companies into small to medium enterprises. This initiative is taking off very well indeed and shows great promise.

Nimtech[7] is another major and

COSTS OF EMPLOYING A SPECIALTY CONSULTANT

Task	Time	Cost Range (£)
1. The product or process specification	1-5 days	1,000-2,000
2. The search	1-12 months	5,000-15,000
3. Examination of opportunities	1-6 weeks	1,000-5,000
4. Technology package exchange	1-12 weeks	1,000-5,000
5. Validation of the package	6 months limit	1,000-20,000
6. Agreement of marketing plans	1-4 weeks	1,000-5,000
7. Licensing agreement	1-4 weeks	1,000
8. Progress reviews	continue	-

Table 2

worthwhile venture set up in the north west of England to transfer new and improved technology into the region in order to generate jobs and create a healthy manufacturing base. While such worthwhile initiatives exist they should be supported and full advantage taken of U.K. Government and European grants in order to fund new enterprise in a sector that the U.K. can do very well indeed, i.e. speciality chemicals.

SUMMARY

Licensing products and technology is a good way to enhance company development. The better companies in the sector tend to use licensing and they use consultants to locate the opportunities. A company needs to be committed to the approach and to integrate the new products into the business smoothly. The approach is quite cost effective if the basic rules are followed. New initiatives do exist to spread the value of technology transfer, but these at present deal mainly with U.K.-based advancements. Locating new products and technology from Europe, U.S.A., and Japan requires consultants.

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3. The Chemical Industries Association, Kings Buildings, Smith Square, London SW1P 3IJ.
4. The British Association for Chemicals Specialities, John Marshall House, 246-254, High Street, Sutton, Surrey SM1 1PA.
5. The Specialty Organics Research Information Service, 17a Queen Victoria Street, Macclesfield, Cheshire SK11 6LP.
6. The Chemicals Economic Development Committee, National Economic Development Office, Millbank Tower, Millbank, London SW1P 4QX.
7. Nimtech, PO Box 2, St. Helens, Merseyside WA10 5BR.