

**Main Case Study Sidler GmbH & Co – sourcing innovation<sup>63</sup>**

Before reading this case, consider the following generic innovation management issues:

- ▶ What role can outsourcing play in a company's innovation strategy?
- ▶ How can companies access and exploit external expert knowledge?
- ▶ What criteria should be used for selecting partners?
- ▶ How can confidentiality be managed for innovation projects involving interorganizational collaborations?

All companies need a vision. For Sidler, a German automotive component manufacturer, it is to supply 'a Sidler component in every car world-wide'. Although it is an ambitious target, the company, which specialises in the design, development and manufacture of car interior lighting systems and interior trim, already supplies many of the major manufacturers. These include Volkswagen, the Fiat company, along with the American giants Ford and General Motors, and a number of the Japanese assemblers. In the competitive and technology-driven field of car interior lighting systems, Sidler is market leader in Europe (with a 35 per cent share) and worldwide has a 12 per cent share. Sidler managers say 'innovation has to be a way of life to stay competitive. However, with limited resources we cannot do everything ourselves'.

Originally founded in 1925 to make metal parts, the company moved into the design, development and manufacture of synthetic parts – mainly interior lighting components – for the automotive industry during the 1970s. Over recent years the market for its primary product has changed significantly. Customers – car manufacturers – are no longer simply looking for a supplier to produce parts to their specifications. Instead, the market has changed to one in which complete lighting systems are designed, developed and manufactured by suppliers. In total Sidler employs 650 people and has a turnover of over 90 million euros, of which over 40 per cent is generated from worldwide exports.

A major part of the company's success is down to its research and development capability, in particular the development of tooling and injection moulding technology. This is used to produce interior lighting with specific surfaces, e.g. rhomboid line structures, which give plastic car interior light covers the characteristics of lenses (focusing light to the required area of a car). However, unlike many of the giants that it supplies, the company is not big enough to maintain a large in-house R&D facility. Instead, the company has developed a policy of leveraging the best knowledge available through outsourcing a significant proportion of its R&D work. This includes a whole range of approaches: using universities for specialist long term research; technology centres in Austria and Germany for undertaking materials analysis; and establishing joint projects with other companies for developing specialist products.

**Main Case Study** *continued*

'For instance', explains Herr Dr. Helmut Rapp, the company's managing director, 'Our in-house technology monitoring recognized that a university was working on laser holographic lenses. We need lenses, and so after assessing their initial research, we have given them a project to specifically look at whether the technology they are developing can be used in our products. If this project proves that their technology is relevant, then we will give them the task of industrializing it.'

'In fact, outsourcing is often much more efficient than trying to do everything in-house. Universities often have the equipment and the expert research staff, that most companies – including ourselves – cannot afford. They are also often looking for funding and support. Similarly, other research organizations have the staff and the dedicated processes that ensure that they can do specific jobs, such as materials testing and analysis, better and often cheaper than we could if we tried to do it in-house. Therefore, a whole range of research activities is not considered by us to be core activities. Where we can find an external source who is capable, we outsource the work', states Rapp.

**Managing Risk and Intellectual Property**

Admittedly there are risks involved with this outsourcing approach, and one that many companies fear is the loss of competencies and lack of control over intellectual property. Since Sidler understands this concern, it balances the risks by taking steps to maintain control over outsourced development.

As Rapp notes 'when it comes to R&D for smaller companies, such as ourselves, the simple choice is between the risk of losing a lot of money if you invest in developing a technology in-house that ultimately doesn't work, or the risk of losing a bit of know-how if an outside organization develops it and it does work. Anyway, there are ways to maintain some control over the process, and what we always try to do when more than one area of research is involved – which is quite often – is that we do not bring all the experts together. We coordinate the development, and so in this way it is our coordinators who communicate with all the experts involved and pull all the possible different strands of a research project together . . . we actually develop the overall expertise, the competency that is most appropriate to Sidler.'

A prime example of managed outsourcing is a testing programme undertaken in cooperation between Sidler and another manufacturing company. Together, the two companies have developed a new process (not previously technically possible), which enables laser etching on pale coloured paints. However, rather than invest in in-house testing facilities, both Sidler and their partner decided to outsource the testing to a specialist paint shop and a separate laser etching business. This network of companies was used to solve the application problems, but with the work co-ordinated and project

**Main Case Study** *continued*

managed by Sidler technologists. While this meant that the external testers developed certain knowledge, it was the Sidler engineers who effectively controlled all the pieces of the jigsaw. After a two-year effort, the process was perfected and now the partners are making a 1.5 million Euro investment in the special painting and laser etching process. And, because they now can offer this specific technical solution, Sidler has achieved 'sole supplier status' with a major German motor manufacturer.

In many companies technical outsourcing is often hindered by an internal culture that refuses to accept the need for such an approach. Engineers in particular are susceptible to the desire to do all the new development themselves, and this often permeates throughout R&D, where something not developed by the group is frowned upon. Sidler managers say they are not completely immune from the 'not invented here' syndrome. To ensure that this negative influence is minimized, Sidler always ensures that people know what is going on and why, and always assigns someone from R&D to oversee an outside project. So while they may not be doing the research themselves, they are actually project managing the effort.

Another problem that many companies perceive with outsourcing is confidentiality. But this is not a factor as far as Sidler is concerned. This is for two reasons. One is that Sidler's research co-ordinators control all the pieces of the puzzle that is important to them, including the industrial application of the research. The other reason is that rapid implementation cycles do not give anyone the chance to break any confidences.

'So far we've never made confidentiality agreements', says Rapp. 'It's not worth the paperwork. You create it, you sign it and you file it. Who is really going to do the follow up? It's a waste of time. The important thing is to work with those external experts to get the problem solved, to get the process going, and then to go rapidly into industrial application with that process. You only have to be slightly in front at this stage, because within the industrial application you gain experience day by day, and it is this unique application knowledge that provides the real competitive advantage.' But such approaches mean that selecting partners is a key process.

**Selecting Partners**

The first step in effective use of outside research agencies is to identify opportunities. At Sidler, the internal R&D team has the brief to monitor technological developments in many areas. As well as reading journals, at least one member of the team visits relevant conferences and exhibitions and reports back. If anything of interest is seen, such as a new high pressure moulding process, this is followed up through investigations to evaluate its usefulness. This typically includes team members visiting the company or research institute that has developed the technology. If it is an existing technology and it seems applicable, then Sidler simply test it. If it is just a research idea, then

**Main Case Study** *continued*

the head of the R&D team will initially visit the outside organization, to instigate discussion on a possible collaboration project.

There is also the issue of finding the right outsourcing partners. According to Rapp, 'If we are looking to become part of a long-term research project, it is not just a matter of finding a relevant project, as there are often a number of different organizations working along the same lines. The decision to work with an external research organization is as much about that organization's style and approach – and how they fit with our non-bureaucratic style of working – as it is about its project and competency. We also do not put too much emphasis on performance and time schedules as we recognize that these projects need time to find the answers we want'. 'Whereas', he adds, 'when we're working with companies who do all our materials testing and analysis, we are looking primarily for on-time performance and professionalism. If we send a sample out and request an answer within two days, we expect it within two days. If we get it in three weeks, that's no good.'

**University-Based Research**

An example of where Sidler's approach to outsourcing has helped solve one of its 'long-term' technical problems is its current work with a German university. Sidler's internal R&D team had already developed, through a combination of specialist tooling, material additives, control techniques and the usual trial and error, a special purpose machine for producing high quality 'in-mould decorated' parts. While many companies can do in-mould decoration (the process is used extensively by the furniture trade to produce fake wood panelling and doors), Sidler is the only company who can at present meet the quality standards required by the automotive industry. As a result, the company is now building up a factory in the UK, which will start with 10 million euros turnover, of which 80 per cent is based on orders for in-mould decorated parts for the automotive industry.

However, the existing manufacturing process requires all parameters to be tightly controlled in order to be stable. While this means it is hard for competitors to copy, it also means that it requires very skilled operators. In looking for ways to overcome this operator dependence, the company came across a university project to create an intelligent moulding process. In this, the injection moulding machine's control system gets feedback about the pressure and temperature in the tool, and then automatically makes the necessary process changes.

'Our in-mould decoration process ideally needs a self-regulating feedback system which we do not have yet. But our internal technology monitoring highlighted the university research and having looked at the work they are doing we decided to join the project', explains Rapp.

Sidler has provided the university with moulding equipment, into which the researchers will be putting the in-tool measurement devices. Also, one

**Main Case Study** *continued*

member of the company's R&D team is working on the project. In return, Sidler will gain the knowledge it needs to improve its own processes and an added benefit. As Rapp concludes, 'there is now a young engineer who is doing his PhD on this project – and I know where this guy is going to work when he has finished his studies!'