

# University of Warwick Science Park - Case Study

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## Science Park Strategy

The Science Park has followed the classical development of the more successful Science Parks in Europe. In its early years (1984-89) the Science Park concentrated on the development of buildings and infrastructure and building up a client base of International, National and startup businesses. During this period the Science Park also worked on developing systems to establish and maintain good working relations between these companies and the University.

In its second phase (1988-96) , the Science Park developed a wide range of business support and start up programmes for its on-site companies. These included a Business Angels programme, TechMark - helping early stage high-tech companies to break into European markets, Student Projects assisting companies with technical issues and TeamStart which brings corporate managers together helping them to form new technology businesses.

Then from 1996 - 2001 the Science Park took its skills and initiatives into the broader region through:

- The development of a number of innovation / incubator centres at other locations in the region which it is managing and integrating into its business support programmes.
- Extending its business support programmes to other technology based businesses in the region and working with other regional agencies to improve their support of the SME high tech sector.

### Current Strategy

The forward plans of the Science Park for the period 2000 – 2005 are based on the idea that the single most significant strategic idea for the next few years is the opportunity for the Science Park to take a significant role in the development of the “Coventry, Solihull and Warwickshire Technology Corridor”.

In addition, there is a clear recognition that the Science Park has a new opportunity to develop business ideas and teams emerging from the University in a partnership with Warwick Ventures and the Enterprise Fellowship Scheme which is seen as an increasingly significant thrust of its business start up and support activities, while recognising that the skills developed in assisting business to gain access to risk finance should also be fostered.

Conceptually, the business start up activity and the property development are linked through the process of taking significant numbers of start ups into incubators and providing them with the infrastructure which accelerates the growth of those that prove to have the greatest potential. This process thereby providing the occupiers for the next larger level of premises and so on. Since the covenants of these business is not strong at either the incubator or the first grow-on stages of their existence, the long standing experience of the Science Park of working with these businesses as a Landlord puts it in a particularly strong

position to create, broker and manage public / private developments to bridge the gap between the demands of the commercial property development sector and the reality of the covenant strengths.

The remainder of this Case Study on Warwick is designed to provide facts and figures about the structure of the Science Park in terms of its ownership, management and finance and secondly about its operations, including its extensive business support and creation programme.

### **Ownership Structure**

The University of Warwick Science Park is a close company limited by shares with four shareholders as follows:

- University of Warwick 35%
- Coventry City Council 47%
- Warwickshire County Council 10%
- West Midlands Enterprise 8%

The shareholders have a binding agreement between themselves that they will not dispose of their shares to any party other than a University or Local Authority without the unanimous agreement of the other shareholders to an alternative disposal.

### **Board of Directors**

The Board of the Science Park is regulated by the Articles of the company. The shareholders each have the right to appoint Directors as follows:

- University of Warwick 3 Directors including the Chairman
- Coventry City Council 2 Directors
- Warwickshire Count Council 2 Directors
- West Midlands Enterprise 2 Directors

Only the shareholders can appoint and remove **their** Directors and not the Board. The Articles prevent any other Director(s) appointed by the Board from having a vote.

The above construction of the company's constitution places the control of the company squarely with the shareholders in a regulated balance of power. This balance of power has been effective and instrumental in the success of the Science Park. *It has also been instrumental in forging much improved working relationships between the Local Authorities and the University.*

The Board appoints the Science Park Director, who reports to them. The Director is responsible for developing strategic options for the Board to consider, developing plans to implement agreed strategy for Board consideration, raising finance and for the overall control of operations. As the operational complexity rose a Deputy Director was appointed who takes a substantial part of the responsibility for the management of the business support and creation programme as well as deputising for the Director.

### **Management of the Science Park**

Figure 1 shows the management structure of the Science Park. Certain staff are almost wholly devoted to the management of the property component of the Science Park, while others are involved wholly in technology transfer, business support and creation and innovation initiatives. Today, broadly there are 16.5 staff devoted to the property aspects of

the Science Park and 15.5 devoted to business support, technology transfer and innovation initiatives.

The 9.5 staff involved in property management include:

• Science Park Director / Deputy Director	1.00
• Admin. support to above	0.75
• Manager(s) for satellite innovation centres	1.50
• Reception / admin staff for innovation centres	7.50
• Administrator for building maintenance and services	1.00
• Finance and Administration Manager	1.00
• Invoice / billing officer and admin. support	1.50
• Marketing Officer	0.75
• IT Officer	0.50

These 16.5 staff run a main site of 42 acres with 18 buildings (350,000 sq. ft) and 70 tenants, plus three additional innovation centres at Warwick, Binley and Blythe Valley, each having from 25 – 35 occupiers. The rental, service charge and business service turnover they control is about £5.0 million pa.

When the Science Park started, and for the 9 months when it only had its first Innovation Centre operational it had a team of 4 staff as follows:

• Director	1
• Secretary	1
• Receptionist	1
• Finance / Admin. assistant.	1

The finance / administration assistant was essential because the Director had to spend more than 50% of his time developing additional projects for the Science Park. Furthermore, unlike many other joint venture Science Parks, the management team was responsible for rent collection and management of the building service charges right from the outset. Warwick Science Park only grew its management team beyond the above level when it had 5 buildings / 100,000 sq. ft under management.

In addition to the above direct staffing there have always been many other staff providing managed services under contract to the Science Park. Thus, Warwick has never employed its own: handyman, security guards, gardeners, cleaners, plumber, electrician etc., preferring always to let contracts through competitive tender for these categories of work.

There are three other noteworthy and important aspects to the management of the Science Park:

- The Committee of shareholder senior officers
- Professional advice from shareholder officers.
- Use of the partners service structures

#### **Senior Officer Committee**

From the very beginning each of the shareholders nominated a lead senior Officer to work on the establishment and then continuing development of the Science Park. This Committee worked at the level of University Registrar and Finance Officer, and for Local Authorities at the level of Chief Planning and Economic Development Officer etc. In the case of Coventry City it was usual for up to three senior Officers to attend in the early days from Property, Legal and Planning / Economic Development departments.

This Committee was, and still is invaluable. It is the forum where all complex and strategic thinking is carried out. Potential 'political' problems are also flagged at this level, before any matter gets to the Board. The result is that matters put the Board have been well thought through from the stance of all the parties and it has led to most matters getting through the Board quickly. When a problem does arise, it is also the forum where matters are resolved. Such is the usefulness of this Committee that it always meets about 2 - 3 weeks ahead of a Board meeting to review the more critical agenda matters.

### **Professional Advice**

For the first 7 - 8 years of its existence, when the management team of the Science Park was very small, it relied heavily on key officers from the shareholders for professional advice in matters such as: property management, building contract management, certain aspects of local PR / marketing, establishment of accounting systems etc. This time was given freely by relevant Officers from the shareholder group to the management of the Science Park and was invaluable. Today, having built up a team of considerable experience, the amount of such assistance is slight.

### **Partner Service Structures**

In addition to advice, the shareholders opened their service departments to the Science Park management team. In particular the City Engineers design and project management team, The University Estates Office building project management staff, the graphics / PR departments of the City and University and so on. However, the Science Park was always required to pay for all services taken from these departments costed on an arms length trading basis. Over time the Science Park has become more independent of these service operations, securing services from wherever is most appropriate. However, in the early days, these services from the shareholders were invaluable in reducing management time finding appropriate service providers.

### **Admissions Policy**

The Science Park has a strict admissions policy for tenants accepted into its land and buildings. This policy requires that organisations admitted can show:

- Actual or anticipated mutually beneficial relations with the University of Warwick. If the relations fall into the "anticipated" category then there needs to be a basis on which such relations can be built.
- Prospects for employment generation through the growth of the business.
- Financial viability through a business plan, or otherwise, over an initial period of about 1 year or more. The degree of viability often dictates the length of lease offered in the first instance.

In addition, the nature of the activities on the Science Park are expected to show innovation through the use of knowledge and intellectual competence. While some small scale assembly is permitted, manufacturing, warehousing and other large scale industrial activities are specifically prohibited.

### **Financial Structures**

In addition to the shares three of the owners have debentures as follows:

- |                               |            |
|-------------------------------|------------|
| • University of Warwick       | £820,000   |
| • Coventry City Council       | £1,313,000 |
| • Warwickshire County Council | £178,000   |

These debentures represent the value of land and 'loans' made by the shareholder partners (over 80% land value) made to the Science Park when it was formed. The debentures are 'soft', and mostly requiring repayment after 30 years and bearing a 1% interest rate. Indeed, for the first 7 years of the Science Park's existence the shareholders voted to 'recycle' the debenture interest back to the company by way of an additional subscription for shares. There is no doubt that this mechanism for putting land into a company did not represent 'full value' in terms of Local Authority regulations and therefore the Secretary of State's approval was required. This approval took 9 months to achieve both in 1982, and then again in 1987 when additional land was purchased using a further tranche of debenture funds.

These debentures give the holders full control over the company's ability to dispose of the land, mortgage or charge it. So far, this right has never been exercised in any way that has hindered the development of the Science Park, even though, at times the debenture holders have had to give up their security in favour of a Bank when the Science Park has sought commercial loans. Because the Science Park has substantially increased its balance sheet net asset worth through the investments and developments made on site, the debenture holders have effectively reduced their risk through the support they have given in stepping aside in favour of the Bank.

## **Developing the Science Park**

### **Land and Infrastructure**

The Science Park was initiated by the shareholder partners assembling the land (14 acres from the University and 10 acres from Coventry City Council), and by making the 'soft' loans, by way of the above mentioned debentures, of about £600,000 to pay for infrastructure to open up Phase I of the site (10 acres) at a cost of £500,000. The balance of funds were to pay for initial management operations.

In parallel with the construction of the first phase of infrastructure the Innovation Centre was built.

### **Investment in Buildings and the Barclays Venture Centre**

In addition to their involvement in the Science Park as shareholders and debenture holders, the Local Authorities have also invested in buildings on the Park. This has taken the form of a lease of the land to the Local Authority from the Science Park at a peppercorn rent, with an automatic lease back. The lease back carries a rental sharing agreement which has historically been defined by the relative inputs into the project by way of land and cash of the two parties. (The land being valued at its open market value).

In this way the Science Park is in effective control of the buildings being responsible for their management, lettings policy, maintenance etc., with the main obligations to the co-investor being to operate within the norms of good estate management practice for a Science Park, and to pay the rents.

In each case the Science Park has also undertaken the role of developer being responsible for the construction of the building to a pre agreed specification and design. The returns derived by the Local Authorities from these investments has been greater than the capital / debt charges they incurred in making the capital available to the Science Park for the building. Thus, in addition to the economic development / employment gains derived from the project there has also been a net financial advantage. The availability of European Union grant in aid from the European Regional Development Fund has materially assisted the viability of several of these projects. Ironically the earliest buildings which needed this help most were not assisted because at the time the West Midlands did not have Objective 2 status.

In the case of the Innovation Centre, it was Barclays Bank that invested in the Science Park's Innovation Centre (The Barclays Venture Centre) and not the Local Authorities. However, the nature of the investment was exactly as described as above. Barclays did not lend the money, it was an investment and they accepted a far lower financial return than the Local Authorities. Initially less than 5% on their capital invested. This was because in 1983/84 when Barclays Bank invested they did so for reasons other than pure financial return. Today, as a result of rental growth, the effective rate of return earned by the Bank is approaching 20% pa. Furthermore, the management costs of operating the Innovation Centre were always born in full by the Science Park and not by Barclays other than for a notional 5% of rent which was largely to cover rent collection. Under their agreement with Barclays, the Science Park only received 20% (representing the value of the Science Park's land input) of rents and this never came anywhere near covering the real management costs of the Centre. As a consequence, even though the Science Park took its Innovation Centre up to full occupancy within 6 months of opening, the Park operated at a loss. As the Science Park developed further buildings, surpluses of rent from these other developments were used to cross subsidise the management of the Innovation Centre and eventually (by about year 5) all costs were covered and the Science Park as a whole became profitable.

The more recent building projects, namely the satellite innovation centres have been developed through joint venture companies formed between the Science Park, Local Authorities and the Chamber of Commerce. The structure of these companies has proved to be complex in order to accommodate legal and regulatory matters concerning the degree of involvement a Local Authority can have in a company and the manner in which it can dispose of land, other than for cash at full market value. In each of its two satellite innovation centres the Science has input cash to acquire an interest of between 25% and 35% in the joint venture company. The Science Park has also sought and taken the full management responsibility for the projects.

### **Science Park Operations**

This section examines various operational issues related to the University of Warwick Science Park. These include:

- Marketing and rents
- The operation of the first innovation centre
- Links with the University
- Business Creation and Support Programme
- Basic Business Services

### **Marketing the Science Park**

An important aspect of establishing a successful Science Park is good marketing. A key ingredient is establishing a concept of quality of environment tailored to a specific client group who will recognise themselves when they see the message in any medium, whether mailed, in a newspaper, in advertising, at exhibitions or on radio or TV or over the Internet. In its marketing, the University of Warwick Science Park relied heavily on the University name to give it image and credibility in the early days.

In 1984 when the University of Warwick Science Park launched its first project - the Barclays Venture Centre, its first Innovation Centre, few knew what a Science Park was and the novelty gave the project immediate appeal to the media. The novelty factor has

largely died away, but even in those early days Warwick did not rely upon novelty. The early marketing was high profile events including:

- A London launch with Sir Keith Joseph, then Secretary of State for Education
- A University led seminar to attract and inform all the regional 'multipliers'
- A high profile opening event with Margaret Thatcher, the then Prime Minister.

Interspersed between these events were many press releases with relevant stories, mailshots, attendance at technology oriented exhibitions, a little advertising and many public speaking engagements at regional fora. In addition the Property Services, Inward Investment and Economic Development departments of the partner Local Authorities at Coventry Warwickshire and the West Midlands were all enthused about the Science Park's role in developing the high tech sector of the local economy and distributed copious quantities of glossy brochures and leaflets about the Science Park.

In retrospect, the marketing initiatives which produced most of the results in terms of relevant company enquiries were:

- The 3 high profile events
- The stories published in the local press as a result of press releases
- Networking with the Local Authorities.

Today, with its established site and a reputation in the region the Science Park has changed the emphasis of its marketing towards:

- Conventional property advertising and agents to ensure that high tech companies in the region that are starting up or expanding come across the Science Park. (Training a conventional property agent to recognise the right type of client / project for an Innovation Centre took about 2 years)
- Creating an extensive database of regional high tech companies who the Science Park interacts with through newsletters and mailings to promote the technology transfer / innovation initiatives, and to a lesser extent property.
- Regular news stories in the local media to stimulate the word of mouth contacts. (You cannot get start ups onto a database !!)
- Maintaining the networks with the Local Authorities and local Inward Investment agency.

At all times the Science Park has always prepared and kept up to date brochures, annual reports and other printed materials all produced to a high standard in terms of graphic design and text, using this material as part of its marketing mix to get its message across to the potential client group.

### **Rents and Service Charges**

Rents at the University of Warwick Science Park generally stand at a small premium of about 5 - 15% over the local "B1" Business Parks (one of which is only half a mile away) and 30 - 40% above office rents in Coventry City Centre just three and a half miles away. These figures relate to new buildings with a high office standard content. The Innovation Centre, which is now 12 years old stands at a small discount of about 10% to the best rents achievable in the newest of the Science Parks buildings for units of around 1000 sq. ft. This is purely because the specification of the Innovation Centre is starting to show its age. However, a recent substantial refurbishment of the common parts of the building have enabled the Science Park to reduce this discount factor.

In addition to rents, tenants pay a service charge of about £5.00 psf in the innovation centres and about £2.00 psf in other buildings which have fewer common areas and common services. The service charge covers: building insurance, maintenance, security, water rates, landscaping, cleaning of common areas, refuse collection etc.( See the following for further details). All tenants also pay business rates (property taxes) linked to the rental value of the units they occupy. This tax is paid directly to the relevant local authority.

## **Links with the University**

The most obvious formal links with the University are its shareholding and Board representation. From the beginning, although the Local Authorities have been the main providers of finance to help get the Science Park going, they have always insisted the University took the intellectual lead. As a former leader of the Coventry Council put it to the Vice Chancellor in the early days - *"We want to see you up front and pedalling fast"* The other aspect of the Links with the University is the establishment of useful working relationships between the companies on the Science Park and the various parts of the University, whether academic or service departments.

Both the University and the Science Park went about assisting the formation of these relationships in a structured way. Before the Science Park opened its Innovation Centre, the Park Director was given an office in the University from which he established a good working knowledge of all the key academics and services of the University. Indeed, at this stage many of the academics mistook the Park Director for a University Industrial liaison officer !

For several years the Park Director undertook all the responsibility of bringing the University to the companies on the Park and for taking the Park companies to the University. This involved repeated meetings, seminars, events both social and business and special initiatives. No one type of approach worked best. Some companies rapidly become involved with the University and maintained their relationships, but most needed to be brought gradually into a relationship. It is the constant mixing of University and company staff in different contexts that eventually produces results. It takes years not months and at Warwick we never give up unless a company leaves the Park.

Once the Park became too large for the Director to maintain the constant flow of contact between the two sides it was decided that the Park should pay the University to provide 30% of an industrial liaison officer who would report to the Director in a programme of stimulating company university relations. This has worked well for over 7 years.

## **Professional Business Creation and Support Services**

Although it is important to provide these services and to operate them to a high level of efficiency and quality, even more important are the growing range of programmes that the Science Park has developed to assist the high tech business formation process and to provide support to high growth technology based companies by removing some of the barriers to the growth of those business. These barriers were identified through studies initiated by the UK Science Park Association and carried out in conjunction with the DTI and KPMG and published by HMSO (*"An Assessment of Firms Located on and off Science*

Parks in the UK). These types of project are costly to mount and are generally not cost effective if applied only to the companies in an Innovation Centre or Science Park. Therefore at Warwick Science Park these additional services operate on a region wide basis for the SME high tech business community. The objective has been to create of a full range of services which add up to a complete incubation programme able to take entrepreneurs from before start up and through the early years of company development and growth.

The specific business support programmes operated by the Science Park include:

### **Venture Capital and Business Angels**

The Science Park runs a Business Angel Club which has successfully raised over £5.0million of risk capital for its client SME companies since 1996. This involves not only the private capital of the Business Angels but additional venture capital syndicated through the intervention of the Science Park and the Business Angel. It is the most successful Business Angel network in the UK for technology based businesses. Over the years this work with Business Angels has been augmented with introductions to Venture Capitalists and Corporate Venturing programme, and most recently by the creation of an intensive investment readiness programme designed to help entrepreneurs develop their investment offering and get their business into shape ready for risk investment by third parties. This programme is paralleled by a small "proof of concept" seed fund.

### **TechMark - European Marketing**

The Science Park has a team of professional international marketing experts and EU students (non UK) who take on the task of identifying the market opportunities for client companies' high tech products in European markets outside the UK. The Science Park undertakes market research, secures joint venture partners, finds licensees for client technologies and will also sell client products acting as Agent. This project was created from experience gained under the EU financed SPRINT programme. Since 1995 this project has helped about 200 businesses by developing marketing strategies, finding partners in Europe, undertaking market research, securing customers / sales to prove a market or securing licensees. The programme has been gaining in popularity and momentum in recent years as other regional programmes have introduced the European Marketing team to their growth minded clients.

### **Student and Graduate Placement Projects**

The Student Project scheme is designed to take bright undergraduates into SME businesses during their Summer vacation period to help the host company solve a specific problem associated with the development or implementation of technology or the implementation of new business processes. The Scheme has been operating for about 10 years and places 50 - 60 students each year. Both companies and students have benefited significantly from this programme, resulting in many innovations which would not otherwise have occurred, and several of the students are offered employment as a consequence. Given the high level of appeal this programme has for SMEs, from the end of 1999 the Science Park is starting an additional programme designed to take recent graduates into SMEs for slightly longer periods, again on a project related basis. The two programmes have helped over 500 businesses to innovate.

### **“TeamStart”**

The “TeamStart” programme is designed for experienced business people from the corporate sector who, for whatever reason, become interested in forming their own businesses. Under “TeamStart”, groups of 20 - 25 carefully selected individuals receive training in the skills necessary to successfully run a small business, they are helped to form teams and a portfolio of licensable high tech products is offered to the new teams around which they develop their business plans and launch their new business. This new business formation process produces high growth, high survival rate businesses. The Science Park successfully ran two programmes in the period 1997 - 1998 from which 9 new businesses were formed, then secured finance for a further four programmes in the period 1999 to 2001 when a further 20 start ups were created and has most recently been awarded a contract to extend the project across the region in association with the West Midlands “Mustard” programme for high growth businesses.

### **Technology Transfer**

The Science Park finances an Industrial liaison officer post at the University of Warwick for the specific purpose of maintaining working relations between the University and the companies on the Science Park. This person works closely with the Science Park management to create basic opportunities for collaboration between the companies on the Science Park and the University. These opportunities are then often enlarged through student projects, graduate employment, consultancy assignments, contract research etc. The same person also works with our client companies to create research and development projects under the EU Craft programme.

### **Creating Networks and Clusters**

The Science Park has started a new project (February 1999) to bring together technology based businesses into Clusters and Networks. In the networking activity the aim is to help SMEs to identify common problems and get them to learn from each other. In the cluster generation project the aim is to identify complementary skills within a group of high tech businesses working in a common sector and to get the companies to “pool” their skills in order to develop new market and business opportunities from their joint skills which they would not be able to secure as individual organisations. The first cluster being created is in the field of Internet and web technology and the second in laser machining and processing technologies. In these projects the Science Park as an “honest broker” and facilitator, and will bring in other organisations, such as the University, as and when additional skills are required.

### **Financing the Business Support Programme**

In the year 1999 - 2000 the total cost of the above Science Park’s programme of initiatives to create and support technology based businesses is nearly £750,000. It is financed as follows:

<b>Source of Finance</b>	<b>Percentage of Total</b>
Subsidy from the Science Park	21.7%
European Union - mainly ERDF	40.8%
Chamber / Business Link	11.9%
Local Authorities	2.7%
Companies / SMEs	22.9%

By 2003, budgets have risen to over £1 million and there has been some shift away from dependence on ERDF finance with the balance coming increasingly from the Regional development agency (Advantage West Midlands)

### **Basic Business Services**

As the University of Warwick Science Park developed so its range of services to tenants has become increasingly sophisticated. When the Innovation Centre opened the only services were:

- Reception / telephone answering
- Secretarial - word processing
- Telex
- Conference room hire
- Audio Visual presentation and training equipment hire
- Data links to the University
- Technology transfer activities with the University
- Business planning advice for start up companies provided by Barclays Bank and the Science Park Director acting together.

Apart from telex which was abandoned in favour of fax many years ago, there is no doubt that these are still amongst the most important services to offer. Other basic business services which have proved valuable as the Science Park developed were:

- Digital PABX system based on ISDN technology.
- More sophisticated AV equipment with electronic whiteboards and multi media
- Cafe / restaurant for tea / coffee, snacks and lunches
- Mail franking etc.
- Colour photocopying
- Office cleaning
- Handyman services
- Address / post-box / telephone line service for high tech companies who may become tenants in due course.
- Hire of general office equipment
- Sale of office materials and furniture

### **A Round Up of Facts and Figures on the Science Park**

- Total land under ownership is 21 hectares (50 acres)
- Total floor area of buildings on site 38,000 sq. m (410,000 sq. ft)
- Total area of incubator space 13,700 sq. m (147,000 sq. ft)
- Buildings under construction 4,000 sq. m additional grow on space.
- Number of tenant companies in Science Park managed properties is approx 130
- Number of companies who have been through Science Park premises > 250.
- Number of companies assisted by one or more of the Science Park's business support measures (excluding property) > 700 SMEs
- Turnover of Science Park is approx £5 million pa.
- Financing of Business Support Measures approx. £1.0 million pa
- Financing of basic Business Services approx £0.5 million pa.
- Business Support Initiative Outputs:
  - 500+ student projects completed / active
  - 220+ companies assisted with technical marketing in export markets

£7.0 million invested by Business Angel network programme in 42 businesses

96 entrepreneurs trained through the TeamStart Programme who have started 20+ businesses

3 niche market clusters of businesses created