

11 UNIVERSITY OF OXFORD SCIENCE PARKS

There are two science parks that are connected to the University of Oxford, Oxford Science Park which is owned by Magdalen College and Begbroke Science Park which is owned by the University. This section considers how university science parks can contribute to growth in the economy as well as the magnitude of the economic activity at the science parks connected to the University of Oxford.

11.1 Role of Science Parks

Science parks can contribute to the economic growth of an area by increasing the level of economic activity and the productivity of the companies once they have moved into that area. Due to the recognised positive effects of science parks, their number in the UK has increased from just 2 in 1982 to over 100 in 2014.

Universities and research centres are key, because they often form the core of science parks, acting as an anchor tenant. One of the principal ways that science parks, and universities in particular, can contribute to knowledge creation processes is by developing an environment with a strong focus on collaboration and innovation. This is aided by communal spaces and shared activities, such as cafes, sports clubs and societies. These and other services improve the work-life balance, increasing the site's attractiveness, and increase the potential for chance interactions and relationships between academia and industry, which can in turn lead to more formal collaboration.

Science parks can also complete a knowledge ecosystem, with the Universities generating knowledge, which can then be transferred to or commercialised by companies on the science park. Science parks also frequently offer significant services and support to the new companies that are formed based on this research.

Universities, by acting as anchor institutions, can shape the context and direction of science parks through their research. They can provide representation on behalf of companies in the science park, and by attracting companies involved in relevant sectors they can create synergies, such as attracting suppliers and other companies. This also has the advantage of attracting more talented workers and researchers to the area, as well as providing a source of employment for the University's graduates, ensuring that they remain in the area. As the concentration of employees and researchers increases, the positive effects of clustering become more pronounced.

An evaluation of the economic contribution of UK science parks⁴², commissioned by the UK Science Park Association (UKSPA) found that:

- companies located on science parks have higher growth rates than similar companies at other locations;
- companies based on science parks report less problems regarding access to finance;
- new technology based firms based on science parks launched significantly more new services than similar companies at other locations; and

⁴² ANGLE Technology (2003), *Evaluation of the past & future economic contribution of UK Science Park Movement*, UKSPA

- new technology based firms based on science parks were able to attract a greater proportion of qualified scientists and engineers than similar companies at other locations.

11.2 Oxford Science Park

The larger of the two science parks is Oxford Science Park, which was founded in 1991. It is located four miles to the south of Oxford City, and is owned and operated by Magdalen College, which has a tradition of academic excellence and entrepreneurship.

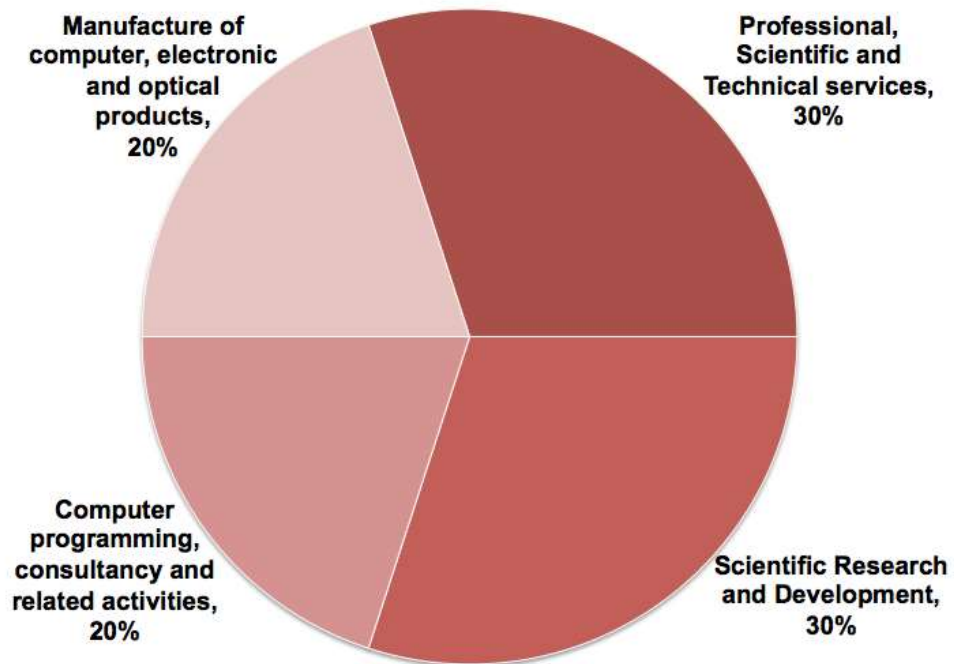
Oxford Science Park is one of the UK's leading centres for growth in research-led employment. By meeting demand for high quality laboratory office space and enabling more Oxford alumni to stay in the region, as well as attracting skilled workers to the region, the Science Park has had a significant impact on the growth of Oxford City. This has helped Oxford City to adapt and develop as global centre of excellence in education, research and leadership.

Since its development in 1991 Oxford Science Park has grown considerably, and 2,400 people are now employed at the site, across 450,000 square feet (sq ft) of real estate. The Park has plans for continued expansion, and aims to create an additional 300,000 sq ft of laboratory and office space over the next five to seven years. This includes a recent planning submission for a new 61,500 sq ft building, which can accommodate nearly 500 people.⁴³

The 65 companies located at Oxford Science Park operate in a diverse range of sectors, including Energy, Communications, Consulting and Bioscience. A breakdown of companies by broad sector is provided in Figure 11.1.

⁴³ The Oxford Science Park (Aug 2016), The Oxford Science Park submits new speculative office building designs to accommodate nearly 500 people.
<http://www.oxfordsp.com/2016/08/oxford-science-park-submits-new-speculative-office-building-designs-accommodate-nearly-500-people/>

Figure 11.1 – Oxford Science Park Companies by Sector



Source: Oxford Science Park

11.3 Begbroke Science Park

Begbroke Science Park, which is located five miles to the north of Oxford City, is owned and operated by the University of Oxford. The site, which has been used for research purposes since 1960, was acquired by the University in 1998 and was formally launched in 2000.

At the core of the Science Park is university-business interaction, and it acts as an interface between start-ups and spin-outs, the University's world-leading research and industrial research. As a result, there are more than 20 University research groups located at the Science Park, and about one third of the company tenants are spin-outs.

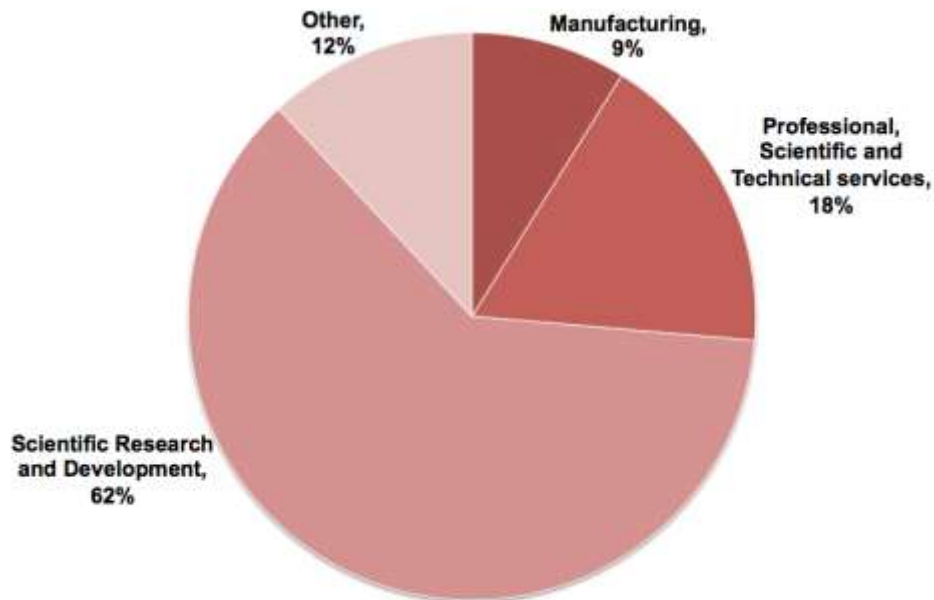
Part of the appeal of Begbroke Science Park is that it is not just a collection of organisations, but that it represents a shared space, which encourages academics and businesses to network and interact, sharing ideas and experiences. This is achieved through everything from shared lunchtime activities, to networking events and lectures, and travelling to work in the same minibus.

Scientists and businesses are also attracted to the high quality facilities on offer; the University's first investment in the site was a £7.8 million installation of advanced atomic engineering and analysis equipment. Many of the facilities are operated by Oxford Materials Characterisation Service (OMCS), a University consultancy, which provides specialist services to industry.

Since its first tenants moved in, the Begbroke Science Park has grown to have 560 people employed on site, of which 230 are employed by on-site companies. In 2014, the Science Park received £4.2 million in Government funding for the construction of the Begbroke Innovation Accelerator to support incubator space.

Based on analysis of figures provided by Begbroke Science Park, a breakdown of companies at the Park has been provided in Figure 11.2, with the majority (62%) of companies involved in Scientific Research and Development.

Figure 11.2 – Begbroke Science Park Companies by Sector



Source: BiGGAR Economics Analysis of Begbroke Science Park Figures

11.4 Economic Contribution

In order to estimate the economic contribution of the University's science parks it was necessary to know how many people are employed at each science park. Begbroke Science Park provided the total number of staff employed in on-site companies, and assumptions were then made about how many were employed at each company (excluding spin-outs), and in what sectors these companies operate. Oxford Science Park also provided the total number of staff employed at its site, as well as the sector in which they operate.

In order to avoid double counting it was necessary to account for spin-out companies located on the Science Parks as their contribution has been considered in Chapter 8. Assumptions were then made about the additionality of the Science Parks to each study area (i.e. the proportion of their contribution that would have happened without the Science Parks). GVA/employee ratios were multiplied to the number of additional employees to calculate the direct GVA contribution of the Science Parks. Sector appropriate economic multipliers were then applied to estimate the indirect impact.

In this way it was estimated that the University's science parks contributed £135.0 million GVA and 2,382 jobs in Oxford City, £155.4 million GVA and 2,762 jobs in Oxfordshire, and £166.7 million GVA and 3,043 jobs in the UK.

Table 11.1 – Science Park Contribution in 2014/15

	Oxford City	Oxfordshire	UK
GVA (£m)			
Oxford Science Park	135.0	145.1	153.4
Begbroke Science Park	-	10.3	11.3
Total GVA	135.0	155.4	166.7
Employment			
Oxford Science Park	2,382	2,585	2,850
Begbroke Science Park	-	177	193
Total Employment	2,382	2,762	3,043

Source: BiGGAR Economics