

Attract, Retain, Grow – building the skills and talent pipeline for Oxfordshire’s innovation ecosystem

Background and introduction

Advanced Oxford members met in December, 2020, providing an opportunity to discuss key issues and priorities for Advanced Oxford’s 2021/11 workplan. Advanced Oxford typically undertakes 2 to 3 projects each year, each providing thought leadership and seeking to research and develop an evidence base, along with recommendations for action, around key issues that affect the development and operation of the innovation ecosystem within the Oxford region. An examination of the skills and talent pipeline was identified as a high priority issue for members. This document develops some of the ideas that were discussed by members, sets out areas that could be explored and proposes a methodology and indicative timetable for this work.

Discussion groups held with members identified the following issues:

- (i) Should the project identify gaps in specific sectors or attempt to look across all areas of knowledge-based/innovation-based businesses? It should be noted that while Advanced Oxford is not a sector specific organisation, the current membership does not provide access to all sectors and there will be a need to reach into a range of businesses outside the membership to collect data and evidence.
- (ii) Is the project seeking to address the shortage through local action?
- (iii) There appears to be a role for Advanced Oxford (and members) in creating awareness of skills gaps with schools and an increasing willingness to showcase what innovation-based business do was highlighted as an opportunity to develop a flow of local talent
- (iv) Showing why Oxfordshire is a destination for imported skills is equally important as growing a local pipeline.
- (v) What has been the impact of Brexit in sourcing, retaining and growing talent?
- (vi) Given the nature of Advanced Oxford’s membership, there was very positive discussion around skills and in particular the need to recruit specialist technical skills now and new skills in future.
- (vii) Three of the companies participating in the discussion, all drawn from the life sciences sector, indicated that they were undertaking individual initiatives and flagged the need for stronger connections between tertiary education and industry. A comment was made that people moving from academia to industry often struggle with the transition.
- (viii) How to make better use of apprenticeships (adding value to the company and the apprentice) was identified as an issue.
- (ix) New recruitment practices, which result in taking on new people without the complete skill set and incorporating training was identified.
- (x) Remote working is likely to continue for some jobs and businesses (e.g. professional services) to what extent will the nature and location of work change for science/technical roles?
- (xi) Access to skills and talent is impacted by other issues/factors within the business environment, including affordable housing, good transport, infrastructure. Some concern was expressed that a focus on these topics may detract from key questions around developing and attracting skills and the timescales to influence and bring about positive change on these issues is much longer.

In November, 2020, Advanced Oxford published its report on Oxfordshire's green innovation economy: Powering Up for the Green Recovery. This report contains an analysis of enablers and challenges to growth for innovative companies within the low carbon and sustainable/environmental goods and services sector (<https://advancedoxford.com/green-recovery/>). Access to skilled employees was identified as both a key enabler, but also as a challenge for companies.

While access to skilled employees scored highly within the analysis, and was an issue identified through interviews conducted as part of the Powering Up for the Green Recovery project, the issue of apprenticeships was not identified once by any respondent. Advanced Oxford is unable to offer any further analysis to determine why apprenticeships failed to score at all in questioning about the enablers of growth, but given the emphasis given to this form of training by both national Government (Skills for Jobs: lifelong learning for opportunity and growth – a white paper from DfE, 21st, January, 2021) and by the Oxfordshire Local Enterprise Partnership (OxLEP) skills team, including through the Local Industrial Strategy, this is an area where further research should be conducted. The companies represented within the cohort of innovative companies questioned for the Green Recovery project all have high growth potential, consequentially, it would be useful to understand whether apprenticeships can play a role for companies like those questioned, or whether they will continue to look to draw in higher level skills within the labour market. This is an area that could be explored in more detail within the Attract, Retain, Grow project.

In March, April and May 2021, further discussion was conducted with a group of HR and management professionals, drawn from Advanced Oxford members and a small number of other organisations, including OxLEP skills team, Innovate UK and OAS to refine the scope of the project further. This is set out below.

Project scope – what is in, what is out

- It is proposed that the project be divided into 2 parts, an examination of the current situation (quantitative focus), and a forward look to 5 years hence, asking companies to anticipate changing or new areas of skills requirements (qualitative).
- There will be a focus on hard to fill roles/higher level STEM scientific and technical skills.
- Entry routes to careers, technical, early-stage skills, including the role of apprenticeships within the local labour market will be examined.
- Support and operational roles (non-scientific roles) within innovation-based companies will not be a focus of qualitative research within the project.
- The project will look in the broad with regard to sectors and companies outside Advanced Oxford's membership will be asked to participate.
- Diversity and inclusion issues will not be specifically addressed, but companies will be asked to identify any initiatives that seek to address equality, diversity and inclusion issues.
- Collection of salary details, salary inflation, starting salaries etc will not be included within qualitative research activities, but questions related to these issues may be included in quantitative data collection
- An examination of the impacts of Brexit on the attraction and retention of talent will be included.

The current state of play – the project will look at both demand for and supply of skills. Issues to be explored (qualitative)

- Higher level (STEM) skills – hard to fill roles
- Talent sources - labour markets from which roles are recruited (local, national, international)
- Apprenticeships – different entry levels, awareness of apprenticeship as a talent source, use of apprenticeships, barriers to using the apprenticeship system
- Impacts of Brexit and mitigations
- Vacancy rates and company growth plans – the demand for skills
- Activities that companies are using to grow and develop skills (training, development, attitude vs aptitude)
- Examination of recruitment initiatives – e.g. best practice examples from companies that are looking to address skills shortages, grow their own pipeline or access hard to reach groups
- Retention – exit interviews/data; any evidence related to ‘hygiene’ factors, e.g. housing, transport etc.

Future skills requirements (qualitative)

Roles and skills that are expected to be in demand in 5 years.

Stakeholders/sources of data (to include, but not limited to)

- HR and talent teams within members
- HR and talent teams – other companies
- Face to face interviews with C suite leaders and HR professionals
- OxLEP skills team – data from the Skills for Business programme
- FE providers
- HE providers (including those outside Oxford)
- Recruitment professionals
- Strategic research sites/institutes within the region, e.g. NATA, Rosalind Franklin Institute, VMIC, Culham Science Centre etc
- CIPD regional branch
- Sector skills organisations, e.g. Cogent
- LinkedIn
- Tech Nation data
- Harwell skills survey (confidential and not published to date)
- Science Park job boards (e.g. <https://www.miltonpark.co.uk/vacancies>)
<https://oxfordsp.com/news/#careers>
- Company job boards
(https://vrtx.wd5.myworkdayjobs.com/vertex_careers/3/refreshFacet/318c8bb6f553100021d223d9780d30be)
- Apprentice providers such as The Engineering Trust and Oxfordshire Advanced Skills
- Space skills alliance 2020 skills census
- Job vacancy data

Out of scope issues (see project scope above also)

Advanced Oxford is working with the Centre for Diversity Policy and Research within Oxford Brookes University Business School and is sponsoring and contributing supervision to a PhD studentship, which commenced in January, 2021. The PhD will focus on gender diversity within innovation and science-based companies, using Oxfordshire as a study area. As this studentship has only just commenced and given other collaboration opportunities between Advanced Oxford and the Centre and Oxford Brookes, it is proposed that issues relating to diversity and inclusion are not included within the scope of this particular project. However, there may be opportunities to identify initiatives and best practice examples as part of the study and these will be collected where appropriate.

Methodology

The project will use a number of different data collection methodologies, based around a key set of questions and data sets. Learning from the *Powering Up for the Green Recovery* project, face to face interviews proved to be a more effective method of collecting data, perceptions, opinions etc than surveys, which typically attract low completion rates. This does not suggest that surveys will not be used where appropriate, but face to face interviews and workshops/focus groups will be used as a primary source of data collection, case studies and qualitative data. This will be supplemented with other data sources, where they can be accessed in a cost-effective manner, and are detailed below, including an analysis of job vacancy data for a set duration, within the project.

- Vacancy analysis – Twitter, LinkedIn, company job boards, data from a job vacancy aggregator
- 1:1 interviews
- Focus groups – HR managers, recruiters, sector specific groups
- Survey data collection
- Development of case studies

RESOURCES

The project is being managed by Advanced Oxford's Managing Director, Sarah Haywood.

Two part time Research Associates have been recruited to support the project, Jasmin Khokhra and Laura Bell. They will support both quantitative and qualitative data collection.

Data analysis, e.g. job postings and labour market movement –sources: companies, other published research,

Timelines

The project is running from May, 2021 and aims to complete analysis of findings and recommendations, within a report, by the end of September, 2021.

Outcomes/outputs from this research

The research will produce an evidence base relating to existing and future skills and talent requirements, looking at both the short and medium term (to 5 years).

The evidence base will be used to inform and influence the work of the skills team within OxLEP – the Skills Hub, which incorporates the Skills for Business programme providing skills audits and practical support to SMEs, and the Careers Hub, which aims to inspire and inform school age students about career opportunities. This project has been discussed with the skills team and they will be invited to comment on the scope, to ensure that it generates data and insights that can be applied.

The evidence base will be used to engage with local HEIs, including those outside Oxfordshire, such as University of Reading and the Oxford-Cambridge Arc Universities Group, with regard to future skills requirements and areas of skills shortages. The evidence base should be of value both to University careers services and to relevant faculties as they design STEM-related courses.

The evidence base will be used to engage with local Further Education and apprenticeship scheme providers across the region, particular in relation to technical skills, entry level skills and in relation to the development of apprenticeship programmes. It is expected that the evidence base can be used to develop the business case for the development of new training programmes.

The Department for Education recently published a Skills for Jobs white paper (<https://www.gov.uk/government/publications/skills-for-jobs-lifelong-learning-for-opportunity-and-growth>) which focuses particularly on apprenticeships and higher skills apprenticeships. The white paper identifies the need for employers to work with providers to create courses that address local skills needs and this project will create an evidence base that can be used to this purpose. OxLEP Skills Hub is looking to engage with employers on the provisions and opportunities on the white paper and this project could be used as a vehicle for facilitating this engagement. Thames Valley Chamber of Commerce has submitted a bid to DfE for the Thames Valley region, incorporating Oxfordshire, to be a trail blazer for the development of Local Skills Improvement Plans, which is part of DfE's proposed Skills Accelerator. Trail blazers will pilot methods for engagement with business/employers on skills needs. This project has been referenced within the TVCC bid.

It is also intended that the project will look at the impact of Brexit on skills and talent within the region. While we cannot anticipate the outputs from this part of the project, it is anticipated that the Home Office and The Department for International Trade will be the audiences for this part of the project.

About Advanced Oxford

Advanced Oxford is a not-for-profit membership organisation with members drawn from R&D based/innovative companies working across Oxfordshire. Our membership includes companies, Oxford's two universities, the NHS through Oxford Academic Health Science Network and providers of innovation infrastructure and support.

Advanced Oxford is research-led, providing analysis and a united voice for our members on the key issues affecting the development of the innovation ecosystem in the Oxford region. We generate



our own research and work to support and inform key stakeholders involved in the development of the business environment, infrastructure and policy. Advanced Oxford is working to support the long-term development and success of the Oxford region as a place to live and work. We do this by drawing on our collective experience of setting up, running or working in knowledge-based, innovation-focused businesses and organisations. We use our connections to other businesses to generate evidence and undertake research.

Advanced Oxford was set up in response to the Oxford Innovation Engine Update report. Published in 2016, the report identified the need for stronger engagement from the innovative businesses in Oxfordshire in the work to develop the region as a centre of excellence and an engine room for innovation. Work to scope and set up Advanced Oxford started in 2017. Further information about Advanced Oxford, our members and our work can be found on our website, www.AdvancedOxford.com. You can follow us on twitter @advanced_oxford and on LinkedIn <https://www.linkedin.com/company/advanced-oxford>