



**Next Phase**  
Life Science Solutions

How do we tackle  
the growing skills  
shortage in the  
ATMP sector?

November 2021 Report



## > Introduction

A record £3 billion has been raised by the UK biotech and life science sector in the first three quarters of 2021, according to data released recently by the BioIndustry Association (BIA) and Clarivate. Fundraising in 2021 has already surpassed the previous record year of 2020, when £2.8 billion was raised, with another three months of the year left to go.

One of the key areas of growth in the biotech world is in Advanced Therapies. ATMP businesses continue to innovate, developing creative solutions and new technologies despite a range of challenges. With a projected growth rate of at least 30% between 2021 and 2025, coming off the back of significant expansion over the last 5 years, there is a huge demand for talented people – and there simply are not enough people already in the industry.

On 5th – 6th October 2021, some of the leading figures within the global ATMP sector met at the Advanced Therapies Congress at the ExCeL in London. As one of the event sponsors, Next Phase hosted a roundtable discussion about the growing skills shortages in ATMP (which are broadly being experienced across other areas of the biotech sector as well). Skills shortages are quickly becoming the root of the largest issues these companies must face. The relative lack of people with specific skills is having a noticeable impact on companies' ability to meet their growth objectives, as well as affecting organisations' abilities to retain the best talent.

This report summarises the key points that were raised and discussed in the roundtable. As such, while some of the information appears more anecdotal it comes directly from the perspective of around 20 ATMP industry professionals, including representatives from the BIA, Cell & Gene Therapy Catapult and a number of service organisations who specialise in this sector.

Whilst the term “ATMP” is used throughout this report, it should be noted that the challenges – and indeed the ideas and initiatives – described within can generally be applied to other areas of the biotech sector. Whilst each individual organisation experiences its own specific staffing challenges, we have focused this report on the general observations and ideas that are shared between the majority of participants.

## > Acknowledgements

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## > What are the main staffing challenges that ATMP organisations are facing?

The number of roles to fill in ATMP far outnumbers the amount of people who are currently working in the sector. Large numbers of individuals without previous ATMP experience therefore need to be hired – otherwise companies are simply “fishing in the same pool”, driving salary inflation and creating hiring mentalities that go against the collaborative spirit on which this industry is based.

The ATMP world is very different to traditional Pharma. People often do not appreciate these differences until they see them for themselves. Even if someone has a strong Biologics education / experience, they often need to ‘start from scratch’ when coming into a ATMP environment. This means that there is a significant investment required in training and development for anyone coming from outside the ATMP sector.

Graduates (BSc / MSc / PhD) do not necessarily know what career opportunities are available to them within ATMP. It is hard for them to know whether to apply for manufacturing / engineering roles (which are often perceived as less enticing than more research-based positions), or whether to focus on finding more ‘scientific’ opportunities. Given that a typical ambition of graduates is to “make an impact”, it is important for companies to develop attractive career paths that are also grounded in realism.

Some companies have expressed concerns about investing time and resources into training, only for individuals to move on elsewhere. This is therefore more of a staff retention issue.

Several organisations have developed graduate programmes, but may not yet have considered potential career paths for non-graduates (e.g. apprenticeships) or people with experience from other sectors. As certain processes become more automated, could there be ways to create positions that require less education / previous experience, and which harness skills (translational, manufacturing, digital, entrepreneurial and more) which could be put to good use?

In countries where ATMP is less developed as a sector, these issues are amplified even further. There is a real lack of people with relevant, necessary skills; and a lack of collaborative partnership, shared thought and central resources to enable companies to attract and hire people who require extensive internal training.





The roundtable discussion led to three clear action points to tackle the skills shortage:



Instigate broader collaboration between existing companies (particularly at an HR level) to share ideas & best practices, around training programmes, apprenticeships and staff development.



Communicate more throughout university, college and school education about the ATMP sector, the positive opportunities it presents, and the potential paths available to people who choose a career in a STEM area.



Identify and agree other sectors where transferable talent can be secured & transitioned. Examples include Oil & Gas and Food industries.

Of course, each of these three action points requires collaboration between different groups, as well as engagement at senior level to make them a reality. It is clear that the participants of the roundtable agree these initiatives are essential to ensure that the ATMP sector can grow at its required rate. The next pages detail some specific ideas which have been adopted by some organisations, with apparent success.

## > Some specific ideas to consider for your own business (based on real, recent examples)

In 2020 the Vaccine Taskforce funded a network of training centres, which are initially Roslin CT, National Horizons Centre and Birmingham University. There is a drive to expand this network, to ensure access to highly specialised manufacturing skills across the country. Enabling trainees to access a “clean room classroom” could have great value for developing skills.

Build partnerships with local universities, to promote career opportunities and become a featured employer for people who are studying relevant courses. Remember that initiatives like this need to be nurtured on an ongoing basis, and results will not be immediate.

Work with hiring managers to develop a matrix of what these “relevant courses” might be. Skills developed in non-scientific degrees could be useful for roles in project management, business development, quality, supply chain and more, for example.

In December 2020, the ADVANCE programme was launched to support people in the early stages of their ATMP careers. It is a series of self-paced online courses and can be accessed [here](#).

A pilot version of a “[Career Converter](#)” tool is available, which enables people to identify ATMP roles where their skills and experience could be utilised. A more comprehensive version of this converter is currently in development.

In 2018, UKRI funded the Advanced Therapies Apprenticeship Community, enabling ATMP companies to enrol staff in 3-year apprenticeships with 6-month rotations through each department (e.g. manufacturing, development, QC, QA, supply chain), plus 1 day a week on day release at a local college to obtain an employer-led Applied BioSciences qualification. Introducing trainees to the whole spectrum of potential roles will expose them to everything and enable you to identify where they could progress. More information can be found [here](#).

Register with your local education authority to provide work experience programmes.



## > Specific ideas for your own business (continued)

Read up on different visa options and what you can do as a business to facilitate quick access to UK visas for workers from overseas. [Skilled Worker](#) visas are arguably more suited to placing people in industry, while [Global Talent](#) visas will hopefully gain increased endorsement from UK industry to expand their appropriateness outside of academia.

Be clear with graduates from the outset about what manufacturing is like (regulations, PPE gowning etc), to minimise dropouts. Create packs, give them the information and wait for them to come back to you, to be sure they really want to work in this kind of setting. This will minimise the instances of people leaving relatively quickly.



Some companies are developing virtual clean rooms, using state-of-the-art VR technology to enable people to “experience” working in a GMP environment. This will certainly help people to decide if this type of work is for them.

In very specialist areas where there is simply too much of a skills gap to nurture internal talent (e.g. creating software infrastructure that is fit for purpose for end-to-end manufacturing), it is important to build collaborations with external consultancies, as well as considering [hiring contractors](#) with specialist expertise that can be hugely beneficial on an interim basis.

To avoid missing out on strong new talent, look at ways to streamline your recruitment process. Set aside blocks of time with hiring managers to review applications, reduce the number of interview stages and provide swift feedback. People will remember the experience they had in applying to you.

The ATMP sector may not always be able to compete with other industries on salary. However, potential employees can be engaged on a more emotional level by reinforcing the enormous, life-changing potential of next-generation treatments, and really emphasising the rewards of working within this growing sector.





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For further information about any of the points raised in this report, or to join us at a future event:

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