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Animal Technologists and 'Replacement' survey summary



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Introduction

The *Animal Technologists and 'Replacement'* survey, developed by the RSPCA Animals in Science Department, aimed to allow the views of Animal Technologists to be heard in relation to the UK Strategy for 'Replacing animals in science'. This includes how the actions contained in the plan are being interpreted, discussed and acted upon, as well as how relevant they feel to people's day-to-day roles.

It is also valuable to understand what support Animal Technologists might need, or engagement they would welcome, around issues raised by the Strategy, both now and in the future.

This will be critically important to maintain, and develop, good animal welfare standards for animals used throughout the implementation of the Strategy. As Technologists' roles change, to support more *in vitro* science, it is essential that they maintain their vocation to care for animals and be their voice.

Respondents

The survey was completed by 64 participants, with 64% being technologists who have worked in the sector for over 10 years. Representing a range of institutions, just over half in university settings (56%) and a third in research institutes (35%), respondents work with a variety of species, primarily mice and rats, alongside aquatic animals (including crustaceans), dogs, and macaques.



Understanding of Replacement

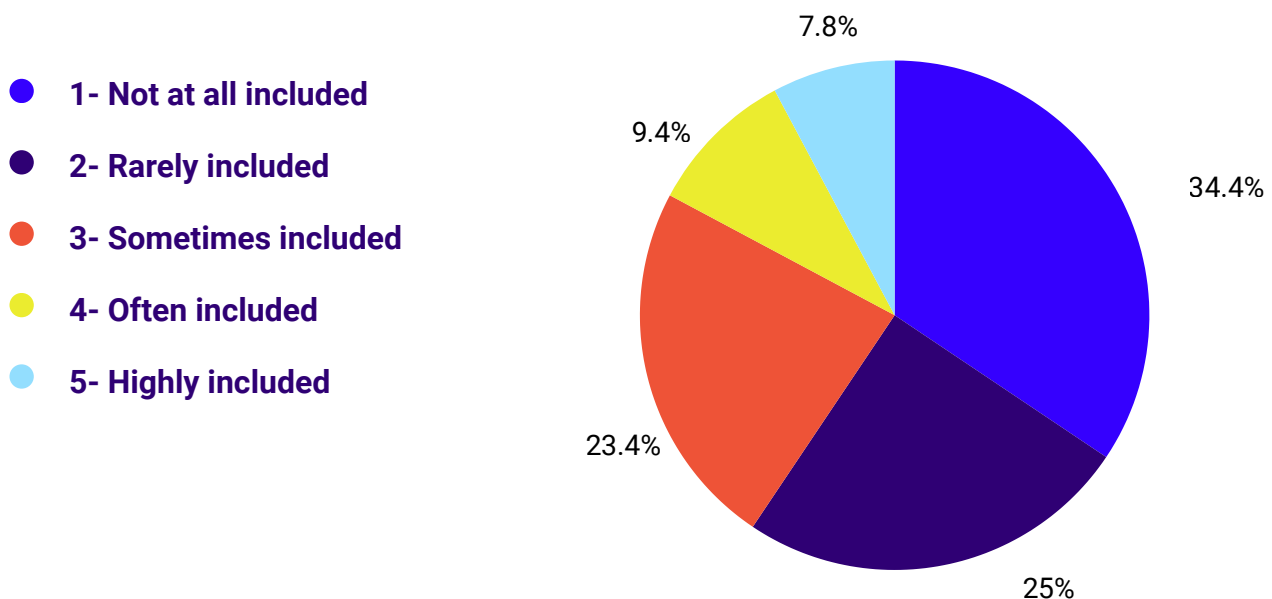
Based on the survey responses, Animal Technologists generally define "Replacement" as the process of actively substituting live, protected animals with alternative non-animal methods. In practice, they see this happening through the adoption of artificial intelligence (AI), computer modelling, stem cells, human tissue samples, organ-on-a-chip technologies, and 3D printed models. However, a crucial point for many Technologists is that these non-animal methods must maintain strict scientific rigour and that the new methods must be reliable, reproducible, and translatable.

17% of respondents also view replacement as a broader spectrum that includes "partial" replacements, such as swapping so-called "higher" species like primates and dogs for "lower" animals like fishes, or shifting to completely unprotected species, such as flies¹.

Involvement in Replacement

There was a range of involvement in discussions around replacement from respondents.

When discussions about 'Replacement' or adopting non-animal methods (NAMs) happen at the establishment, how involved do you feel as an Animal Technologist?



¹ NB the RSPCA does not agree that fishes are a 'Replacement', and has ethical and welfare concerns about the use of many invertebrates, including insects.

The role of Animal Technologists in Replacement

There was a high level of belief that Animal Technologists should play an active role in replacement discussions and activities, due to their practical understanding of animal biology, welfare, and how these dictate the limitations of certain experimental models. Importantly, they can provide informed insights on the animal welfare impact of specific animal models, and help to define and evaluate new refinements while animal use continues. It was also raised that involvement should occur early in the planning stages of research, including when drafting grant proposals and the review of Project Licence Applications. It was suggested that their opinions and input should be actively shared, potentially through AWERBs and laboratory group discussions².

The UK Strategy for Replacing Animals in Science

A large majority of the respondents had heard of the UK strategy "Replacing Animals in Science" (78.1%), with most hearing about it through their AWERB (20%) and the media (20%), and also through discussions with colleagues (18%). However, despite hearing about the strategy, a large majority hadn't read it (36%), or only read part of it (50%). This partly explains the respondents' low confidence in their understanding of the aims of the strategy, with a confidence rating of 2.7/5. For many Technologists, the strategy feels vague, and hard to follow. While they understand and support the broad goal of reducing and replacing animal use, they are left with unanswered questions about how the infrastructure will actually be implemented and how it will practically impact upon them.

Future impact

Respondents raised significant concerns about how the strategy will affect their day-to-day work, with 42% raising concerns around potential loss of posts and increased redundancies due to a reduction in animal numbers and decreased funding. Multiple Animal Technologists expressed worry about their livelihood, with some noting that their entire career path depends on animal use, and others anticipating that those only qualified in animal care might struggle to remain in the scientific research field.

However, while the potential impacts are viewed as massive, and ultimately positive for both animals and science, many feel it will take time, potentially years, for the strategy to fully affect their day-to-day work, as replacement is currently still happening at a slow pace. Nevertheless, others say the uncertainty is already impacting staff retention, as skilled personnel seek more long-term job security elsewhere.

² There is also a recent publication on this; see:
<https://journals.sagepub.com/doi/10.1177/00236772251400976>

Motivations in care and welfare

A key driver for many Animal Technologists to work in the research sector is their strong vocational commitment to animal care and welfare. However, balancing this responsibility with carrying out procedures on animals can involve significant emotional labour and may increase the risk of experiencing compassion fatigue³.

Across the survey, respondents expressed ethical support for moving away from the use of animals in research, viewing replacement as a natural progression of their commitment to animal welfare and a way of reducing animal suffering.

"I love my job as an animal tech and I'm doing it for the animals and their welfare"

- Senior Animal Technologist / Manager

"Really, we have been working towards replacement our whole careers"

- Senior Animal Technologist / Manager

For Animal Technologists, this commitment to animal care can also shape how they view the transition towards non-animal approaches. Their professional identity and expertise are closely connected to understanding animals, recognising their needs and promoting their welfare, while their experiences of working directly with animals can provide important insights into the ethical implications of their use in research.

"It would be a shame to have generations of animal technicians made to feel completely redundant when they could be utilised in the next chapters of technology, paying homage to the animals used in Science so far."

- Senior Animal Technologist / Manager

Respondents emphasised that this expertise should remain central to the transition towards non-animal approaches. Their practical knowledge of animal behaviour, welfare and care can provide valuable perspectives on the ethical and welfare implications of research practices, while their commitment to animal care can continue to inform efforts to reduce and ultimately replace the use of animals.

The values of care and welfare, that underpin the profession, therefore have an important role to play in shaping how the transition towards non-animal approaches is achieved.

³ See *The Caring - Killing Paradox: Euthanasia-Related Strain among Animal-Shelter workers*
<https://onlinelibrary.wiley.com/doi/10.1111/j.1559-1816.2005.tb02096.x>

Support

There was a high level of interest in training opportunities in non-animal related scientific fields, such as lab skills (e.g. basic lab skills, statistical analysis, cell culture, *in-vitro* lab work), New Approach Methodologies (e.g. AI, organs-on-chips, organoids), and the computer technologies associated with replacement methods. This includes both accredited courses and funded Continuous Professional Development (CPD) opportunities.

"Set up areas in facilities to house and run these replacement technologies and allow animal technicians to learn replacement techniques... Learning these new methods could mean fewer, if any, staff redundancies as actual animal work is reduced. The nature of an animal technician role can be changed to more of a research scientist or equivalent."

- Senior Animal Technologist / Manager

Respondents also want to see clearer pathways for career progression and retraining into related roles like lab management, research support, compliance, welfare, and ethics, or even vet/zoo settings for those who would miss working with animals. Establishments and the IAT should help Technologists identify and utilise their transferable skills (like good lab practice, scheduling, and record keeping) to support this transition.

Finally, there are desires for reassurance around job security, and for open discussions about the future of the profession, to ensure staff feel included in the transition rather than left behind. This also includes providing industry updates on how establishments can adapt to changes.

Overall, Technologists would be enthusiastic to support the Replacement Strategy and apply their skills to its effectiveness. However, there is a need for more widespread and inclusive discussion on what the Strategy's implementation will mean in practice, over time, and how Technologists will be supported throughout.

