Department for Business, Innovation, Science and Trade

Replacing Animals in Science Strategy: one year on

27 November 2026

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1. Introduction

One year ago, the government published the Replacing Animals in Science Strategy, setting out an ambitious long-term vision to replace the use of animals in science wherever scientifically possible and position the UK at the forefront of the development, validation and uptake of alternative methods.

Over the past year, government, research funders, regulators and partners across the life sciences sector have worked together to turn that ambition into action.

Significant progress has been made across the strategy's 26 commitments, strengthening the funding, infrastructure, skills and regulatory environment needed to accelerate the development and adoption of scientifically robust alternatives.

The first year has seen important milestones across the research and regulatory system.

These include:

- the launch of the University of Cambridge-hosted Preclinical Translational Models Hub
- advanced planning for a Translational Research Network to launch in 2027;
- support for 10 Contracts for Innovation projects developing drug models for industrial use with potentially improved human relevance
- new funding questions and guidance to strengthen scrutiny of animal use in research proposals
- new Medicines and Healthcare products Regulatory Agency (MHRA) guidance supporting the development of medicines using alternative methods

Progress has also been made in building the governance, structures and evidence needed to support lasting change.

This includes:

- establishing routine collection of information on second-species testing in clinical trial applications
- progressing the UK Centre for the Validation of Alternative Methods (UKCVAM) and the Alternative Methods Expert Committee (AMEC)
- commissioning a renewed survey of public attitudes to animal research; and supporting publication of a database of alternative methods
- approaches with potential regulatory applicability.

Together, these achievements demonstrate the momentum that has been built in the first year of the strategy, providing strong foundations for the work ahead.

New investment, infrastructure, evidence and regulatory pathways are helping to create an environment in which alternative methods can be developed, validated and adopted more quickly and confidently.

At the same time, the government recognises that replacing animal use in science is a long-term endeavour and that some animal research will continue where scientifically justified and where suitable alternatives are not yet available.

As the strategy is implemented, we will continue to support and enable well-designed, ethically reviewed animal research where it remains necessary, while accelerating the development, validation and uptake of alternative methods to reduce reliance on animals over time.

This one-year update marks our progress and looks ahead to the next phase of delivery. It reports progress against all 26 strategy commitments, provides an update on the priority “baskets” of animal tests identified for replacement, and introduces the key performance indicator framework for tracking progress over time.

The framework considers progress across the full pathway, from investment and capacity through to the availability, uptake and regulatory acceptance of alternative methods and, ultimately, their impact on animal use.

Together, these provide a clear picture of how far we have come in the strategy’s first year, the foundations now in place and the opportunities ahead. They also provide greater transparency about how progress will be measured and where continued focus will have the greatest impact as we build on the momentum of the first year.

2. One Year Moment: delivery update and highlights

Delivering the strategy requires action across a complex and interconnected life sciences ecosystem.

Over the past year, senior responsible officers for the 26 commitments, delivery partners and stakeholders from across government, academia, industry, funding organisations, regulators and civil society have worked together to translate the strategy's ambition into coordinated delivery.

Through this collaboration, the government has helped align activity around a shared vision, strengthen partnerships, and create greater coherence across the system.

While progress has been made against individual commitments, an equally important achievement has been the growing collective effort behind them.

New networks, governance arrangements, funding programmes and collaborative initiatives are helping to create a more connected ecosystem that is increasingly able to support the development, validation and uptake of alternative methods.

Together, these foundations position the UK life sciences sector to sustain momentum and deliver continued progress in the years ahead.

The following table provides an overview of progress made against each of the strategy's commitments during its first year of delivery. It is supplemented by more detailed case studies and updates that illustrate how these commitments are being delivered in practice

Progress in delivering all 26 commitments

Commitment	What we said we would do	Progress / status
1. Create a preclinical translational models hub (MRC)	Establish a preclinical hub and a translation network by the end of 2026; define scope, governance, funding mechanism, appoint leadership and launch the hub.	On 12 August, following an MRC-led competitive process, the Science Minister announced that the Cambridge Stem Cell Institute at the University of Cambridge would be the host for the Preclinical Translational Models Hub. The Hub will open in November 2026 and a translational network in a key area of health research will be established in 2027. **Status: delayed**
2. Increase investment in alternative methods (UKRI)	Increase UKRI investment in alternatives methods, starting in the 2026 funding cycle.	Major funders continue to support and expand research into alternative methods. The MRC and BBSRC are working with the NC3Rs to establish baseline data and improve understanding of the UK research landscape. BBSRC and Defra have committed a further £500,000 to advance *in vitro* approaches for animal health research. Work is also underway with European partners to support the development and adoption of innovative methods that could reduce reliance on animal testing. **Status: on track**
3. Enable funders to ensure thorough scrutiny of animal research in funding decisions (UKRI)	Implement new funding application questions, reviewer guidance and training to strengthen scrutiny of animal use and 3Rs approaches in UKRI funding applications from the 2026 funding cycle.	UKRI has introduced updated funding application questions to encourage consideration of opportunities to replace, reduce and refine animal use in research. The new approach is being rolled out across funding opportunities, supported by guidance and applicant resources to help embed consideration of alternative methods throughout the research funding process in both applicants and assessors. This aims

		to increase awareness of available approaches and promote their use where scientifically appropriate. **Status: on track**
4. Provide foundational training for early career researchers in alternative methods (NC3Rs)	Develop a national ECR training offer, including curriculum, steering group, e-learning resources, and summer school expansion beginning in 2026.	The NC3Rs has developed a national training programme, informed by experts from academia, industry, funders and the wider research community. Launching as a phased rollout before the end of 2026, the programme will combine online learning with workshops, summer schools and engagement activities, providing researchers with training in alternative methods, experimental design, research transparency and animal welfare to support the wider uptake of alternative approaches. **Status: on track**
5. Publish areas of research interest for alternative methods (UKRI)	Establish a framework, gather evidence and stakeholder input, and publish areas of research interest for alternative methods during 2026.	UKRI research councils and NC3Rs are working together to define the areas of research interest (ARI). Researchers from across the life sciences have been invited to contribute to this process through an initial expression of interest call, followed by an in-person workshop hosted on 6 October 2026 to discuss and refine the ARI list submitted through the call – nearly 100 EOIs were received. The ARIs will be published early in 2027. **Status: delayed**
6. Strengthen the commitment of journal editors to publishing research using	Host an editors/publishers workshop and develop recommendations and guidance to encourage journals to publish research using alternative	Delivery will primarily focus on journals implementing the DRIVER recommendations for the design and reporting of in vitro models which was published in July 2026.

alternative methods (NC3Rs)	methods; formal initiation planned from 2027.	Dissemination activity is continuing. Workshop planning has already begun and will continue in 2027. **Status: on track**
7. Increase the visibility of available alternative methods to facilitate their uptake (NC3Rs)	Expand the NC3Rs gateway to include non-NC3Rs-funded alternative methods research, develop a dissemination network and communications plan, and launch a campaign.	A survey has been developed to identify research methods with the potential to support the replacement of animals in research and explore researchers' interest in publishing their methods through the NC3Rs gateway. The survey has been submitted for ethical approval, with preparations for launch underway. **Status: delayed**
8. Accelerate uptake in alternative methods through reform of animals in science regulation (ASRU)	Complete ASRU reform; commission the Animals in Science Committee to recommend corporate responsibility reporting expectations for establishments using animals; review additional animal-use data collection; and implement Rawle Report recommendations in 2026.	A new operating model for the Home Office's ASRU is now in place with increased inspector resource. Actions to implement the Rawle Report recommendations have been progressed or agreed with key delivery partners, including UKRI and the NC3Rs. Work will continue to implement the recommendations, including where delivery is dependent on wider programme sequencing. This includes consideration and implementation, as appropriate, of forthcoming advice from the Animals in Science Committee (ASC) on best practice for Animal Welfare and Ethical Review Bodies (AWERBs), due to be published in 2027. Following a review of additional statistics on animal use, the Home Office will resume the Government's data collection and introduce a cycle of annual publication. Implementation is under way, with the first publication planned for 2028, covering data collected in 2027. The ASC is due to be

		commissioned this year to provide advice on corporate responsibility reporting expectations for establishments using animals. **Status: delayed**
9. Establish a UK Centre for the Validation of Alternative Methods (UKCVAM)	Define the remit, funding mechanism, host application process, governance and initial priorities, and launch UKCVAM by end 2026.	The proposed design and remit of UKCVAM have been shaped through early engagement with UK regulators and stakeholders, and in consultation with European and US validation centres. Advice has also been received from the ASC. Following this advice, UKCVAM will be hosted in UKRI and delivered principally by the NC3Rs. Work to stand up UKCVAM is underway and the Centre will fully open in 2027. **Status: delayed**
10. Publish regulatory agency accepted alternative methods and priorities for future development and validation (NC3Rs)	Establish the publication structure and criteria, collate and review methods with regulators, publish the accepted methods list, and then develop priorities for future development and validation.	NC3Rs has published the database of replacement methods and approaches with potential regulatory applicability. An open consultation is underway, closing on 22 January 2027. In parallel, NC3Rs is collating further information on UK regulatory contexts and conditions for method application, to be incorporated into the next version of the database. Priorities for future development and validation will follow and be developed in collaboration with UKCVAM. **Status: on track**
11. Expand challenge-led innovation for alternative methods (Innovate UK/UKRI)	Launch challenge-led competitions, starting with Contracts for Innovation in priority areas such as pharmacokinetics and cardiotoxicology, and develop	Ten projects have been awarded a total of £2 million through Innovate UK's 'Contracts for Innovation' competition supporting the development of novel approaches that could improve the prediction of drug safety and efficacy while reducing reliance on animal testing. The initial competition

	wider support to scale and commercialise alternative methods.	focused on priority areas identified in the strategy, including pharmacokinetic and cardiovascular safety studies, where improved human-relevant models have the potential to address longstanding challenges in drug development. Building on this progress, a business case covering Innovate UK investment for FY27-FY30 has been approved, providing a pathway for future challenge-led competitions and broader support for scaling promising technologies. **Status: on track**
12. Support training in alternative method development, qualification and validation (NC3Rs)	Review existing training, identify gaps, commission a landscape review, survey stakeholders and develop a platform and curriculum for validation and qualification training by start of 2027.	The British Toxicology Society (BTS) Skills Gap initiative has been identified as a suitable mechanism for developing and delivering training related to commitments 12 and 13. A review of existing training provisions is also being conducted to identify gaps and inform the design of future courses, with findings expected before the end of 2026. **Status: delayed**
13. Support the upskilling of regulatory assessors (OLS-led)	Collate existing training resources, identify gaps, establish funding for regulators to attend training, create additional resources and launch secondments and a funding scheme by end 2026.	The NC3Rs has commissioned a review of training opportunities relevant to alternative methods to identify gaps in training for UK regulators. The findings will inform the expansion of the BTS Skills Gap training programme, which has been identified as the preferred mechanism for delivering this commitment. Funding to support regulators attend training courses and technical workshops will be available through UKCVAM. **Status: delayed**

14. Develop mechanisms to enable regulators to provide pre-submission feedback (OLS-led)	Convene a regulatory group, publish the MHRA alternatives statement, generate baseline data on regulator engagement on alternatives, and design and pilot pre-submission mechanisms during 2026.	MHRA published in March 2026 new guidance on medicines development using alternative methods. UK regulators have been surveyed on their use of pre-submission feedback mechanisms. While many regulators already offer this service, stakeholder awareness and uptake vary. A cross-regulator meeting will be convened before the end of 2026 to identify opportunities to improve consistency, visibility, and use of these services. **Status: on track**
15. Quantify annually the inclusion of second species testing in clinical trial applications (NC3Rs/MHRA)	Define metrics, put a process in place to identify, collate and publish information on second-species use in clinical trial applications (CTAs), with first publication targeted for mid-2026.	The first batch of MHRA data on second-species testing in CTAs, covering applications assessed between June and September 2026, has been analysed and published by the NC3Rs. Initial assessment of 186 CTAs established the baseline dataset, with around two-thirds of applications including studies in both a rodent and non-rodent species. **Status: fully completed and delivered**
16. Increase investment in data-driven biology (UKRI)	Increase investment in data-driven biology linked to the Life Sciences Sector Plan.	Delivery plans are being shaped up, including work to establish a baseline to track relevant investments. **Status: delayed**
17. Establish data sharing frameworks to support equitable access to public and private data sources (OLS-led)	Define stakeholder priorities, secure funding discussions, develop and launch a data sharing framework/resource, and identify high-impact datasets in 2026.	We are working closely with partners including ABPI, NC3Rs and Lhasa Limited to develop plans for delivering this commitment, with initial stakeholder feedback strongly supportive.

		Delivery plans are being refined with input from an expert group and will be strengthened by specialist industry expertise through a data-focused secondment into OLS, helping to accelerate progress from 2027. **Status: delayed**
18. Enhance data curation and quality control and develop regulatory frameworks for data use (OLS-led)	Assess current data curation, develop regulatory guidance/best practice, standards and quality-control protocols, and initiate a regulatory sandbox approach in 2026.	We are working closely with partners to explore how they could support delivery of this commitment. Delivery plans are being refined with input from an expert group and will be strengthened by specialist industry expertise through a data-focused secondment into OLS, helping to accelerate progress from 2027. The MHRA launched AI sandboxes in June 2026 to help make medicines safer, speed up development, and reduce reliance on animal testing. **Status: delayed**
19. Establish the UK as a global leader in the regulation and science of alternative methods (OLS-led)	Review current international engagement, develop a coordinated international engagement strategy, engage global partners.	Through the NC3Rs Regulatory Sciences Forum, we are engaging with regulators, industry and other stakeholders to better understand how the UK currently participates in key international regulatory fora relevant to alternative methods. This work will help to identify opportunities to strengthen UK engagement, share expertise more effectively, and support greater international alignment on the development, validation and regulatory acceptance of alternative methods. We are also working across government to determine priorities for international partner engagement in alternative methods. **Status: on track**

20. Launch specific projects to secure international acceptance (UKCVAM-linked)	Following establishment of UKCVAM, identify priority international acceptance projects, launch calls and award funding aligned to the first UKCVAM funding cycle.	This action aligns with UKCVAM delivery. **Status: delayed**
21. Host an international meeting of regulators in the UK on the validation and acceptance of alternative models (OLS-led)	Agree an initial invite list and agenda, plan and host an international regulators meeting in the UK, linked to wider UK international engagement opportunities.	We are exploring opportunities to convene international regulators and partners to support alignment on regulatory approaches, including through the UK's 2027 G20 Presidency. Decisions on G20 presidency activities and events are expected early in 2027. **Status: on track**
22. Provide ministerial leadership on alternative methods (OLS-led governance)	Establish cross-government ministerial and BIST[1] official-led delivery groups and maintain governance of those groups from early 2026.	The cross-Government ministerial group has been established and is expected to meet twice a year. Meetings were held on 12 March 2026 and 8 July 2026. Following the change in Government in July 2026, arrangements are being made to continue the group under Minister McDonald, and a timetable for future meetings is being finalised. This is supported by an official-led delivery group that meets quarterly. **Status: fully completed and delivered**
23. Formally involve BIST in the direct commissioning and	Establish and publish the mechanism for the BIST minister to jointly commission ASC advice and receive	An updated ASC 'Ways of Working' document was agreed by the Home Office Minister, Lord Hanson, and published in February 2026. The first commission was completed during 2026.

receipt of advice from the ASC (OLS-led)	advice on plan implementation in H1 2026.	**Status: fully completed and delivered**
24. Enable better advice on alternative methods (ASRU/ASC)	Agree the joint approach with ASRU and ASC, commission advice on setting up an alternatives committee, publish the advice and the Government's response.	The ASC published its recommendations on the establishment of the AMEC in July 2026 in response to a commission for advice and guidance from BIST. The Government has accepted all 12 recommendations with some caveats. BIST is now leading the establishment of AMEC, and delivery arrangements have been agreed with UKRI, with NC3Rs identified as the secretariat for AMEC. **Status: on track**
25. Restart the survey on public attitudes to animal research (OLS-led)	Complete approvals and procurement, appoint a survey partner, finalise questions with stakeholders, run the survey and prepare publication and communications outputs in 2026.	Following a competitive process, BMG Research has been commissioned to run the survey. Question sets have been finalised, with input from expert stakeholders from across the life sciences. The survey was launched at the end of October 2026 and results will be published early in 2027. **Status: fully completed and delivered**
26. Establish KPIs to assess delivery of the strategy (OLS-led)	Agree KPI sets with responsible organisations and ministers, develop a tracker and publish a dashboard of progress against key deliverables, including translational hub and UKCVAM metrics.	KPIs and baseline measures have been developed with delivery partners and are published as part of the One Year Moment. **Status: fully completed and delivered**

3. Commitment delivery deep dives

Commitment 1: create a Preclinical Translational Models Hub

The strategy committed to establishing a national Hub to ensure that cutting-edge new models of disease are effectively developed, validated and rolled out for commercial use. One year on, we are delivering that commitment.

In March 2026, UKRI's Medical Research Council opened the funding call. On 12 August, the Science Minister announced a £20 million Hub, led by the Cambridge Stem Cell Institute and opening in November. Bringing together human organoids, stem cell-derived models, bioengineering and AI, it will unite hospitals, research institutes and industry across the UK to develop, validate and adopt human-relevant models.

The Hub will help identify effective medicines earlier, accelerate patient access to safe and effective treatments, and reduce reliance on animal models. Co-designed with industry and academia and supported by a further £10 million, translational research networks will be established to connect researchers to NHS patient cohorts, samples and data. This will allow the models, including from the Hub, to be tested against real patient evidence and speed new medicines into clinical studies.

Commitment 4: provide foundational training for early career researchers in alternative methods

A key objective of the strategy is to ensure that training on the 3Rs and alternative methods is available to all PhD students and early career researchers working with animals or alternative methods by the end of 2026. The NC3Rs is leading delivery of this commitment and has developed a training programme with the support of an expert steering group drawn from academia, industry, funders and the wider scientific community to shape the programme's curriculum, content, and approach to implementation.

The programme will begin with a phased rollout in December 2026, initially working with a small number of UK research institutions to test the training with PhD students and gather feedback ahead of its wider national launch to all PhD students and early career researchers in 2027. It has been developed as a modular national e-learning offer, supported by in-person activities including summer schools, workshops and engagement events. It is structured around six core themes, including alternative methods, experimental design, research transparency and animal welfare considerations.

During 2026, NC3Rs has progressed curriculum development, expanded its annual summer school, and begun testing the first training modules. The next phase will focus on launching the national programme and supporting adoption across UK research institutions and funding organisations. Success will be monitored through measures including module delivery, programme uptake and national adoption, helping equip the next generation of researchers with the knowledge and skills to identify and use alternatives to animal testing where scientifically appropriate.

Commitment 10: publish regulatory agency accepted alternative methods and priorities for future development and validation

A key barrier to wider adoption of alternative methods is that information on regulatory acceptance and applicability is dispersed across scientific literature, regulatory guidance and international standards. To address this, the NC3Rs, in partnership with its cross-sector expert Regulatory Sciences Forum, has developed and published a database of replacement methods and approaches with potential regulatory applicability, bringing together methods already accepted in regulatory contexts and those that show promise for future use.

The resource will help researchers, industry and regulators identify opportunities to generate regulatory data without animals, improving awareness of available approaches and confidence in their use. By providing a clearer picture of the current landscape, it will support the practical uptake of replacement methods and inform decisions about their application.

The database will also help identify evidence gaps and priorities for future method development, validation and regulatory acceptance. Feedback from regulators, industry and the scientific community will inform future iterations. Alongside wider work by regulators, UKCVAM and the NC3Rs, it provides an important foundation for accelerating the development, use and acceptance of replacement methods across the UK regulatory system.

Commitment 11: expand challenge-led innovation for alternative methods

Challenge-led innovation is helping to accelerate the development, adoption and commercialisation of alternative methods in areas where scientific and regulatory needs are most pressing. A key milestone this year was the launch of Innovate UK's Contracts for Innovation competition, which awarded £2 million to 10 projects developing industrial human-relevant drug models.

These projects are supporting the development of innovative approaches that could improve the prediction of drug safety and efficacy while reducing reliance on animal testing.

The initial competition focused on priority areas identified in the strategy, including pharmacokinetic and cardiovascular safety studies, where improved human-relevant models have the potential to address longstanding challenges in drug development. Building on this progress, a business case covering Innovate UK investment for FY27-FY30 has now been approved, providing a pathway for future challenge-led competitions and broader support for scaling promising technologies. Together, these activities are strengthening the UK's innovation ecosystem and helping translate emerging alternative methods into practical tools for research and industry.

Commitment 24: provide better advice on alternative methods

The Government has made significant progress in strengthening independent expert advice on alternative methods through the development of AMEC. Following a review by the ASC, recommendations for the establishment of AMEC were published providing a framework for how expert scientific advice can better support the replacement, reduction and refinement of animal use in research and testing.

The Government has accepted all 12 recommendations, with a small number of caveats relating to implementation and delivery. The NC3Rs will lead the establishment and delivery of AMEC, providing its day-to-day secretariat and drawing on its scientific expertise and networks across academia, industry, regulators and policymakers.

Work with delivery partners has developed the governance and operational arrangements for the Committee. Initial steps in 2027 will include developing AMEC's Terms of Reference and ways of working, with members appointed by the end of the first half of 2027.

Alongside the UKCVAM, AMEC will strengthen coordination and provide independent advice to accelerate the development, validation, regulatory acceptance and uptake of alternative methods.

4. Priorities for targeted replacement of animal tests: delivering the baskets for change

The strategy includes a tiered "baskets" approach to focus collective effort on areas where progress towards replacing animal use can be achieved over different timescales.

The baskets identify priority areas for action in the short, medium and long term, reflecting the varying levels of scientific, technical and regulatory readiness across different uses of animals in research and testing.

By setting clear priorities, the baskets help government, regulators, researchers, industry and funders concentrate resources where they can have the greatest impact.

They provide a practical framework for translating the strategy's ambitions into targeted action, while recognising that different scientific and regulatory challenges require different approaches.

Working in partnership to deliver progress

Progress against the basket targets has been driven by collaboration across government, regulators, industry, researchers and other stakeholders.

Over the past year, partners have worked together to advance priority areas for replacement, helping to build the scientific evidence, regulatory confidence and practical pathways needed to reduce reliance on animals in research and testing.

The table below provides a summary of progress against each basket target, showing the intended outcome and current delivery status. It highlights areas where targets have been achieved, where substantial progress has been made, and where further work is needed.

While some commitments have already been delivered, many represent long-term programmes of work that will require continued partnership across the life sciences community.

We will work with delivery partners and stakeholders to address remaining challenges and accelerate progress wherever scientifically and regulatorily feasible.

Keeping the baskets under review

The baskets were designed as a dynamic tool, not a fixed list of priorities. As science advances and opportunities emerge, the areas where animal use can be reduced or replaced will continue to evolve.

To ensure the baskets remain relevant and impactful, the strategy commits to reviewing and refining priority areas at least every two years.

This process will identify emerging research and regulatory testing priorities through dedicated horizon-scanning and stakeholder engagement activities.

Research priorities will be identified in partnership with UKRI, while regulatory testing priorities will be developed in partnership with the NC3Rs, drawing on expertise from regulators, industry, academia and other stakeholders.

The two-year review cycle will provide a structured opportunity to refresh priorities, but emerging opportunities may be added to the baskets at any time where there is a strong case for action.

Through this collaborative and evidence-led approach, we will ensure that future basket priorities continue to reflect the greatest opportunities to accelerate the development, validation and uptake of alternative methods across the UK life sciences sector.

International regulatory context

Several of the targets within the baskets focus on the use of animal tests to satisfy UK regulatory requirements.

However, some companies and organisations also generate data to meet the requirements of international markets, where animal-based tests may still be specified by overseas regulatory authorities or international standards.

Where animal testing is conducted in Great Britain solely to support non-UK regulatory submissions, it remains subject to the requirements of the Animals (Scientific Procedures) Act 1986.

Such testing requires prospective authorisation by ASRU in the Home Office and falls outside the scope of the basket targets reported here, which are focused specifically on reducing and replacing animal use in the UK required to meet UK regulatory requirements.

As international standards evolve, the UK will continue to work with regulators and international partners to encourage wider acceptance and adoption of validated alternative methods.

Baskets for change

Basket 1		
Target	**Status**	**Progress**
By the end of 2025 we will aim to apply only validated alternative methods for pharmacopeial pyrogen testing.	Achieved	The rabbit pyrogen test was removed from the British Pharmacopoeia in 2025, meaning it is no longer required for pharmacopeial pyrogen testing.
We will aim to apply only validated alternative methods for pharmacopeial adventitious agent testing for human medicinal products licensed in the UK by the end of 2027.	Achieved	UK regulators do not require animal-based pharmacopeial adventitious agent tests to satisfy UK regulatory requirements for human medicinal products.
By the end of 2026 we will define and apply guidance that permits first in human clinical trial submission for biological therapies where no pharmacologically relevant preclinical animal model exists based only on non-animal data.	Achieved	In March 2026, the MHRA published guidance on its approach to medicines developed using alternative methods. The guidance includes case studies illustrating how the MHRA may assess applications for biological therapies where no pharmacologically relevant animal species exists, including circumstances in which first-in-human clinical trial applications may be supported by non-animal data.
By the end of 2026 we will aim to apply only validated alternative methods to satisfy UK regulatory requirements for skin irritation testing.	Achieved	All UK regulators have confirmed that animal tests are no longer required to satisfy their UK regulatory requirements for skin irritation testing.

By the end of 2026 we will aim to apply only validated alternative methods to satisfy UK regulatory requirements for eye irritation testing.	Achieved	All UK regulators have confirmed that animal tests are no longer required to satisfy their UK regulatory requirements for eye irritation testing.
By the end of 2026 we will aim to apply only validated alternative methods to satisfy UK regulatory requirements for skin sensitisation testing.	Achieved	All UK regulators have confirmed that animal tests are no longer required to satisfy their UK regulatory requirements for skin sensitisation testing.
By the end of 2027 we will aim to apply only validated alternative methods in the pharmacopeial potency testing of botulinum toxin.	Achieved	The Home Office have confirmed that no *in vivo* LD50 tests are conducted in the UK for pharmacopeial potency testing of commercial batches of botulinum toxin. This indicates that animal-based lethality testing is no longer routinely used in the UK to meet UK testing requirements and is consistent with the expectations of the MHRA and British Pharmacopeia.
Following international competent authority acceptance of an alternative quality control (QC) test, we will aim to replace the use of animals in the UK for veterinary vaccine testing as soon as is feasible where these tests can be validated and implemented for the relevant veterinary vaccine.	Achieved	The Veterinary Medicines Directorate (VMD) has confirmed that, where an alternative quality control test has been accepted by the relevant international competent authorities, it already seeks to replace animal use for veterinary vaccine batch testing as soon as it is feasible to validate and implement the alternative method for the relevant product. The VMD's recently published report on animal use in quality control testing for batch release of immunological products (Animal usage in QC tests for batch release of immunological products 2013 to 2024 - GOV.UK) demonstrates a substantial reduction in animal use between 2013 and 2024, reflecting the continued uptake of alternative methods and application of this approach.

Basket 2		
Target	**Status**	**Progress**
We will no longer grant licences for the forced swim test (FST) as a model of depression. In cases of screening for antidepressant efficacy and studying the neurobiology of stress, we will aim to support the validation of alternatives to FST by the end of this parliament to replace the use of the FST.	Ongoing	There are currently no active project licences that include the FST as a model of depression and no such licences will be granted in the future. We will continue to work with UKRI and other relevant stakeholders to support the development, validation and uptake of alternatives to replace the use of the FST by the end of this parliament.
We will aim to replace fish acute toxicity tests for chemicals registered under UK REACH with alternative methods by the end of 2028, and reduce such tests for pesticides and agrochemicals in line with international acceptance.	Ongoing	Progress towards replacing acute fish toxicity testing under UK REACH is being advanced through collaborative engagement across government, regulators, industry and other stakeholders. During the reporting period, a dedicated stakeholder roundtable was convened by the NC3Rs to identify the scientific, regulatory and practical actions needed to support delivery of the 2028 ambition. Discussions focused on barriers to replacement, opportunities to increase the use of alternative approaches, and measures to ensure animal testing is used only as a last resort. Recommendations from this work will help inform future priorities and actions needed to achieve the target.
We will aim to use validated alternative methods to reduce the use of dogs and non-human primates in dedicated	Ongoing	Progress towards these targets is being supported through a partnership between NC3Rs and Innovate UK to accelerate the development and adoption of alternative approaches for dedicated PK and cardiovascular

pharmacokinetic (PK) studies for human medicines by at least 35% by 2030. We will aim to use validated alternative methods to reduce the use of non-human primates and dogs in dedicated cardiovascular safety studies by at least 50% by 2030.		safety studies. In 2026, up to £2 million was awarded to projects developing innovative technologies, including AI-driven prediction tools, organ-on-a-chip systems and human-relevant models designed to reduce reliance on dog and non-human primate studies. These projects will generate the evidence and capabilities needed to support delivery of these targets.
We will aim to replace the use of animal-derived polyclonal antibodies (pAbs) by 2030.	Ongoing	Progress towards this target is being taken forward through engagement with the NC3Rs and the Only Good Antibodies community, building on existing efforts to increase the adoption of non-animal-derived affinity reagents. Plans are currently being developed and will include convening stakeholders from government, funding bodies, journals, industry and the scientific community to identify the scientific, regulatory and practical actions needed to support delivery of the 2030 target. This collaborative approach will help develop a shared roadmap for accelerating the transition away from animal-derived pAbs.
Basket 3		
Test	**Status**	**Progress**
By the end of 2035 we will aim to include validated alternative methods in UK regulatory guidance to reduce the use of fish endocrine disruption tests.	Ongoing	We will continue to engage with regulatory partners and industry through UKCVAM to develop a plan for the delivery of this target.

5. Measuring progress towards replacing animals in science: A balanced approach

We have adopted a balanced approach to reporting progress against the UK's Replacing Animals in Science strategy.

This reflects the breadth of system change required to replace the use of animals and recognises that progress is best understood across the full lifecycle of innovation: from early investment in new approaches, through their development and validation, to their availability, uptake, regulatory acceptance, and ultimately their impact on animal use.

The key performance indicators (KPIs) have been selected to provide a coherent, outcome-focused and proportionate set of indicators that can be tracked consistently over time. They are designed to strike a balance between what is feasible and robust to measure using available data, and what best reflects the direction of travel towards a research and innovation system that increasingly replaces animals with alternative methods. Where possible, we have prioritised metrics that are repeatable, comparable year-on-year, and meaningful across different parts of the life sciences landscape.

The scorecard is structured around a series of outcomes covering:

- capacity and investment (for example funding, market growth, skills development)
- availability of alternative methods (for example publications, commercial offerings)
- regulatory acceptance (domestic and international)
- uptake in research and regulatory contexts
- impact on animal use

Together, these provide a balanced view of progress across the system, rather than relying on any single measure. The KPIs will be complemented by qualitative evidence, including case studies that demonstrate how strategy interventions have contributed to the replacement of animals in specific research, testing and regulatory settings. These examples will help illustrate how activity captured through the KPIs is translating into real-world changes in practice across the innovation system.

Scope and limitations

We recognise that the system we are seeking to influence is complex, distributed and evolving. A wide range of actors across academia, industry, regulators, funders and research organisations contribute to the development and adoption of alternative methods, often through diverse and unconnected activities.

It is therefore not possible to capture every relevant activity or investment within a single KPI framework. For example, we cannot comprehensively track all sources of funding, all model development efforts, or all instances of method adoption across the UK.

As a result, these KPIs should be understood as providing a representative but not exhaustive picture of progress. There will inevitably be important contributions that are not directly reflected in the metrics. Our intention is not to measure everything, but to provide credible indicators of system-wide change and to demonstrate how delivery of the strategy is contributing to that change.

We recognise that many of the strategy's impacts will be delivered through the organisations and programmes established to support implementation. Major delivery structures (e.g. UKCVAM, the Preclinical Translational Models Hub, the AMEC), and partners (e.g. regulators, UKRI and NC3Rs), will develop and report against their own measures of success and animal replacement impacts. Together with the strategic KPI framework, these measures will provide a more complete picture of progress and how it is contributing to changes in animal use.

We will also monitor progress against the basket targets, enabling us to track changes in specific uses of animals and assess whether they are reducing as intended. In addition, we will report on delivery of the strategy's 26 commitments to provide a comprehensive view of progress.

Measuring impact on animal use

The overarching ambition of the strategy is to reduce and ultimately replace the use of animals in science in all but exceptional circumstances. However, direct measurement of changes in animal use presents specific challenges.

Trends in animal use are influenced by a range of external factors, including scientific advances, emerging disease threats, regulatory changes, and shifts in research priorities.

For this reason, while we will monitor national statistics on animal use, these are not a core KPI of strategy delivery. Instead, they are used alongside the scorecard to understand the broader effect of the strategy in contributing to a reduction in animal use across the UK life sciences sector.

To complement this, we will include case studies from our investments and test basket examples, highlighting specific instances where animal use has been reduced in practice.

Time lags and long-term change

Replacing animals in science is a long-term endeavour. There is often a significant time lag between:

- initial investment in method development
- scientific validation and qualification
- regulatory acceptance
- widespread availability and uptake
- observable impact on animal use

These stages can take many years, particularly where changes to international test guidelines or regulatory frameworks are required. As such, early progress is more likely to be seen in upstream indicators (such as investment, capability, and method development), with downstream impacts emerging over longer timescales.

The KPI framework has therefore been designed to enable progress to be tracked across different stages of the transition while recognising that reductions in animal use will not be immediate.

Continuous development

Finally, we recognise that this framework will need to evolve over time. As data sources improve, new methodologies emerge, and the system matures, we will refine and strengthen our approach to measurement.

The KPIs presented here provide a practical and transparent starting point for public reporting, while supporting ongoing learning about what works in driving the replacement of animals in science.

As the strategy develops, we expect additional data sources, partner-led metrics and evidence of animal replacement to become available.

Over time, this will enable a more comprehensive assessment of how interventions across the research and innovation ecosystem are collectively contributing to the replacement of animals in science.

Key performance indicator (KPI) scorecard

Outcome	Objective	KPI	Data source	Baseline
Increased capacity in alternative methods	Increase investment in alternative method development and validation.	Government investment in alternative methods funded or managed by UKRI (£M).	Based on UKRI application monitoring and final reporting data. The UKRI baseline will be derived from their annual investment in NC3Rs, alongside any strategic calls delivered within the relevant year.	The 2025-2026 Government investment in alternative methods funded or managed by UKRI was £11,671,141 (previously unpublished finance line from UKRI).
	Increase growth of the UK alternative methods sector.	Growth in the UK alternative methods industry, measured through turnover and employment of tracked companies.	Data will be drawn from a curated list of companies developing and applying alternative methods in the UK, including large life sciences companies and CROs. OLS will collect turnover and employment data for these organisations and, where feasible, distinguish alternative methods-related activity from wider company operations to monitor sector growth over time.	Baseline not currently available. Baseline data on turnover and employment of tracked companies will be published by the end of H1 2027.
	Develop expertise in alternative methods development, validation and adoption across researchers, method	The number of researchers and regulators developing expertise in alternative methods through recognised training	Data will be collected on participation in agreed alternative methods training programmes (e.g. NC3Rs ECR e-learning, BTS, CTPA, etc), identified through an NC3Rs review of existing provision and stakeholder engagement.	Baseline not currently available. Baseline data on researcher and regulator participation will be published in the next progress update once the

	developers and regulators.	opportunities (for example NC3Rs ECR e-learning, BTS, CTPA, etc).	Attendance by researchers and regulators will be used as a proxy measure of capability-building in alternative methods.	recognised training opportunities have been defined.
Increased availability of alternative methods	Increase the number of alternative methods commercially offered by CROs/fee for service companies.	Increase the number of alternative methods commercially offered by CROs/fee for service companies.	We will survey annually the curated list of companies developing and applying alternative methods in the UK (referred to above to assess the growth of the UK alternative methods sector) on the number of alternative methods they offer commercially.	Baseline not currently available. The list of companies and baseline data will be published by the end of H1 2027.
	Increase the number of alternative methods available for use.	Number of alternative methods publications on the NC3Rs gateway.	Data will be drawn from the NC3Rs gateway, which will be broadened beyond its current scope to capture publications from researchers developing and applying alternative methods across relevant sectors and disciplines.	32 alternative method-focused articles were published on the NC3Rs gateway as of November 2026.
Increased regulatory acceptance of alternative methods	Drive domestic regulatory acceptance of alternative methods.	Number of alternative methods included in the biennially published list of methods accepted by UK regulators.	Data will be drawn from a biennially published list of alternative methods that UK regulators have identified as acceptable for use in generating evidence for regulatory decision-making. The list will be developed jointly with regulators and updated every two years.	54 alternative methods were included in the initial list published for consultation on 22 October 2026. The final baseline will be confirmed following completion of the consultation process.

	Drive international regulatory acceptance of alternative methods.	Number of OECD accepted alternative methods test guidelines.	UKCVAM will track the number of OECD-accepted alternative method Test Guidelines as an indicator of international regulatory acceptance.	As of November 2026, there are 45 OECD accepted alternative methods test guidelines included in the OECD Test Guideline Explorer database.
Increased uptake of alternative methods	Increase use of alternative methods for UK regulatory testing.	Number of alternative methods used in MHRA and REACH regulatory submissions/dossiers.	Data collection will focus on pharmaceutical and REACH submissions/dossiers, but not pesticides and biocides recognising ongoing planning with EU alignment for these products.	Regulatory agencies are developing mechanisms to systematically capture this information through submission and dossier review processes. Baseline data will be published in the next progress update.
	Increase use of alternative methods in research.	Proportion of researchers reporting the use of alternative methods in basic research.	Data will be drawn from an annual survey of researchers, collecting information on the use of alternative methods in basic and applied research, alongside barriers and enablers to adoption.	Baseline not currently available. Researchers will be surveyed in 2027, and baseline data will be published in the next progress update.

All the above are KPIs. They are trackable, measurable, and expected to change over time. The overarching aim of the strategy is to reduce the use of animals in research and testing. However, we recognise that this is challenging to measure directly, as it is influenced by a range of external factors, such as disease threats, scientific discoveries, and emerging technologies. For this reason, we do not treat measures of the strategy's impact on overall animal use as core KPIs. Instead, we monitor them to understand the broader effect of the strategy in contributing to a reduction in animal use across the UK life sciences sector. To complement this, we will include case studies from our investments and test basket examples, highlighting specific instances where animal use has been reduced in practice.				
Impact on animal use	Reduce the total number of experimental procedures on animals.	Total number of experimental procedures on animals.	Home Office annual statistics of scientific procedures on living animals.	2.54 million scientific procedures involving living animals were carried out in Great Britain in 2025.
	Reduce the total number of experimental procedures on specially protected species.	Total number of experimental procedures on specially protected species.	Home Office annual statistics of scientific procedures on living animals.	17,317 scientific procedures involving specially protected species were carried out in Great Britain in 2025.
	Reduce the total number of experimental procedures on	Total number of experimental procedures on animals for basic research purposes.	Home Office annual statistics of scientific procedures on living animals.	712,699 scientific procedures involving living animals for basic research purposes were

	animals for basic research purposes.			carried out in Great Britain in 2025.
	Reduce the total number of experimental procedures on animals for translational/applied research purposes.	Total number of experimental procedures on animals for translational/applied research purposes.	Home Office annual statistics of scientific procedures on living animals.	340,253 scientific procedures involving living animals for translational/applied research purposes were carried out in Great Britain in 2025.
	Reduce the total number of experimental procedures on animals for regulatory use.	Total number of experimental procedures on animals for regulatory use.	Home Office annual statistics of scientific procedures on living animals.	246,270 scientific procedures involving living animals for regulatory use purposes were carried out in Great Britain in 2025.

6. Priorities for next year

The first year of the strategy has generated the momentum needed to drive change. Over the next year, our focus will increasingly turn to building on this momentum and translating investment, innovation and new infrastructure into greater development, validation, regulatory acceptance and uptake of alternative methods.

We will strengthen the pathway from development to regulatory acceptance. This will include operationalising UKCVAM, coordinated by NC3Rs, and establishing the AMEC, with NC3Rs providing its secretariat.

Together, these initiatives will strengthen coordination, expertise and advice and help create clearer routes for promising alternative methods to move from development through validation towards regulatory acceptance and wider use.

A key priority will be to continue progress on the priority baskets of animal tests, focusing effort where scientifically robust alternatives have the greatest potential to replace animal use.

The baskets will be refined and evolve using the published areas of research interest and regulatory priorities committed to in the strategy and developed with researchers, industry, regulators and other stakeholders. This will ensure they remain responsive to scientific advances, target the most pressing opportunities and align with international priorities for validation, regulatory acceptance and adoption.

Delivery will be supported through coordinated action between government, regulators, industry and researchers across method development, validation and uptake.

The Preclinical Translational Models Hub and the Translational Research Networks will help address key scientific challenges, while challenge-led approaches will focus investment on priority areas where replacement is feasible and could deliver significant impact. UKCVAM's validation accelerator funding will support promising methods to generate the evidence needed for regulatory use and wider application.

We will continue to build the UK's innovation pipeline, skills and capability. This will include launching the national training programme for early-career researchers and working with funders to embed it within the training of all scientists embarking on careers using animals and alternative methods.

We will publish areas of research interest for alternative methods to mobilise the UK scientific community around shared priorities and strengthen partnerships across academia, contract research organisations and industry, making greater use of challenge-led innovation to support the development and commercialisation of promising approaches to address these priorities.

We will also continue to strengthen consideration of alternatives in research funding and expand the skills and expertise needed to develop, assess and apply alternative methods.

Improving access to evidence and data will also be a priority. We will build on the database of replacement methods and approaches with potential regulatory applicability, using the evidence gathered to help identify priorities for future development and validation alongside UKCVAM.

We will also progress work on data sharing, curation and quality to support the development and adoption of new methods. This will be delivered with the support of a new AI and In Silico Toxicology Expert Advisory Group, which NC3Rs will establish, ensuring that the UK has the data infrastructure, partnerships, standards and governance arrangements necessary to accelerate innovation and regulatory uptake of data-focused alternative approaches.

Finally, we will embed the KPI framework and balanced scorecard to track progress across investment and capacity, availability of alternative methods, regulatory acceptance, uptake and impact on animal use.

This will provide a consistent evidence base for understanding progress over time, identifying where further action can have the greatest impact and informing the next phase of delivery.

Over the next year, we will build on these foundations to accelerate the development, validation and uptake of effective alternative methods, achieving greater impact and strengthening the UK's position at the forefront of this rapidly developing field. Continued collaboration across the life sciences ecosystem will be critical to achieving this ambition.

We look forward to building on our productive partnerships with researchers, funders, regulators, industry and animal welfare organisations, harnessing their collective expertise to overcome shared barriers and drive forward implementation of the strategy.

7. Annex A: glossary of abbreviations and key terms used in this report

Abbreviations

3Rs — Replacement, Reduction and Refinement: principles for replacing animal use wherever possible, using fewer animals without compromising scientific aims, and minimising pain, suffering and distress.

ABPI — Association of the British Pharmaceutical Industry.

AI — Artificial intelligence.

AMEC — Alternative Methods Expert Committee.

ARI — Areas of research interest: priority research topics identified to guide future activity.

ARPA-H — Advanced Research Projects Agency for Health, a US research funding agency.

ASC — Animals in Science Committee. In this report, ASC refers to this committee, rather than the separate Animal Sentience Committee.

ASRU — Animals in Science Regulation Unit, within the Home Office.

AWERB — Animal Welfare and Ethical Review Body; AWERBs is the plural.

BBSRC — Biotechnology and Biological Sciences Research Council.

BIST — Department for Business, Innovation, Science and Trade.

BTS — British Toxicology Society.

CATALYST — Computational ADME-Tox and Physiology Analysis for Safer Therapeutics: an ARPA-H programme developing predictive approaches to drug safety.

CRO — Contract research organisation; CROs is the plural.

CTA — Clinical trial application; CTAs is the plural.

CTPA — Cosmetic, Toiletry and Perfumery Association.

Defra — Department for Environment, Food and Rural Affairs.

DRIVER — Designing and Reporting In Vitro Experiments Responsibly: recommendations for the design and reporting of in vitro research.

DSIT — Department for Science, Innovation and Technology. Following Machinery of Government changes, the Department for Science, Innovation and Technology (DSIT) is now the Department for Business, Innovation, Science and Technology (BIST).

ECR — Early career researcher; ECRs is the plural

EMBL-EBI — European Bioinformatics Institute, part of the European Molecular Biology Laboratory.

EOI — Expression of interest; EOIs is the plural.

FST — Forced swim test.

FY — Financial year.

H1 — First half of the year.

ISPF — International Science Partnerships Fund.

KPI — Key performance indicator: a measure used to track progress towards an objective; KPIs is the plural.

LD50 — Median lethal dose: the dose of a substance that causes death in half of a test population under specified conditions.

MHRA — Medicines and Healthcare products Regulatory Agency.

MRC — Medical Research Council.

NAMs — New approach methodologies: approaches that enable the full or partial replacement of animal use in chemical or drug toxicity assessments.

NC3Rs — National Centre for the Replacement, Refinement and Reduction of Animals in Research.

OECD — Organisation for Economic Co-operation and Development.

OLS — Office for Life Sciences.

pAbs — Polyclonal antibodies.

PK — Pharmacokinetics: the study of how a medicine moves through the body over time, including absorption, distribution, metabolism and excretion.

QC — Quality control.

REACH — Registration, Evaluation, Authorisation and Restriction of Chemicals. UK REACH is the framework referred to in the report's chemical-testing targets.

SRO — Senior Responsible Officer; SROs is the plural.

UKCVAM — UK Centre for the Validation of Alternative Methods.

UKRI — UK Research and Innovation.

VMD — Veterinary Medicines Directorate

Key terms

Alternative methods — Methods and approaches that can replace animal use, fully or partially, in research and testing. The report covers their development, validation, regulatory acceptance and uptake.

Balanced scorecard — The report's framework for considering progress across capacity and investment, availability of alternative methods, regulatory acceptance, uptake and impact on animal use.

Baseline — The starting measurement against which future progress is assessed. Where baseline data are not yet available, the scorecard sets out plans for collecting or publishing them.

Baskets — The strategy's groups of priority animal tests targeted for replacement over different timescales, reflecting scientific, technical and regulatory readiness.

Challenge-led innovation — Research and innovation focused on a defined scientific or practical problem, such as developing human-relevant approaches for pharmacokinetic or cardiovascular safety studies.

Context of use — The specific application or decision that a method is intended to support, such as screening a medicine candidate or replacing a particular animal study.

Data curation — Organising, checking and maintaining datasets so that they can be found, understood and reused. In the report, this work is linked to data quality, standards and access.

Human-relevant models — Research models designed to reflect aspects of human biology and provide evidence relevant to human health or responses to medicines.

In silico — Research or testing carried out using computational models or simulations.

In vitro — Research or testing using cells, tissues or other biological components outside a whole living organism. In vitro methods are not necessarily free of animal-derived materials.

In vivo — Research or testing carried out in a whole living organism. In the animal-testing passages of this report, the term refers to studies in living animals.

Organ-on-a-chip — A small experimental device using cells or tissues to mimic selected aspects of organ function.

Preclinical models — Experimental or computational models used to study biology and assess potential medicines before clinical testing in people.

Pre-submission feedback — Advice or feedback from a regulator before a formal application or dossier is submitted.

Qualification — Demonstrating that a method is fit for a specific context of use.

Regulatory acceptance — Acceptance by a regulator of a method or the evidence it generates for a specified regulatory purpose; this does not imply acceptance for every possible use.

Second-species testing — Testing in an additional animal species. The report tracks information on its inclusion in clinical trial applications.

Translational research — Research that moves scientific discoveries towards practical applications that improve health.

Uptake — The adoption and use of alternative methods by researchers, industry or regulators.

Validation — Establishing that a method is reliable, reproducible and relevant for its intended purpose. Validation provides evidence to support use of a method, but is distinct from a regulator's decision to accept it.

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