

Thinking outside the cage: utilising existing resources to improve Animal Welfare and technician morale

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Introduction

Our facility is part of The University of Cambridge's University Biomedical Services (UBS) department. We are a conventional rodent facility, primarily housing mice and rats, with additional species of naked mole rats and guinea pigs.

We focus on behavioural studies, requiring researchers to interact closely with the animals. This provides us as technicians, with a unique opportunity to enhance Animal Welfare through creative solutions. Complete respiratory protective equipment (RPE) is used and the equipment is cleaned between rooms. Being a conventional facility grants us this flexibility.



The project

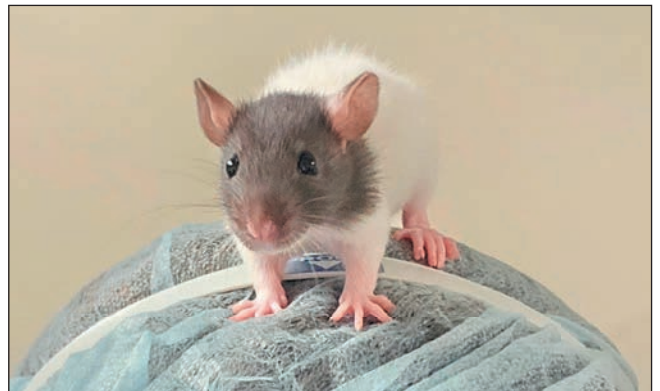
Making the most of what we already have access to and a strong commitment to Animal Welfare, we set out to repurpose old equipment into innovative enrichment tools.

Our goal was two-fold:

- Enhance the quality of life for the rats by providing them with engaging environments that promote natural behaviours.
- Encourage a culture of creativity and collaboration among technicians and researchers to rethink animal husbandry practices.

We started off with modifying sentinel cages and observing their behaviours.

Once we were satisfied that they displayed reduced aggression, due to lower recorded instances of fighting, we expanded the project to other animals and other enrichment cages.



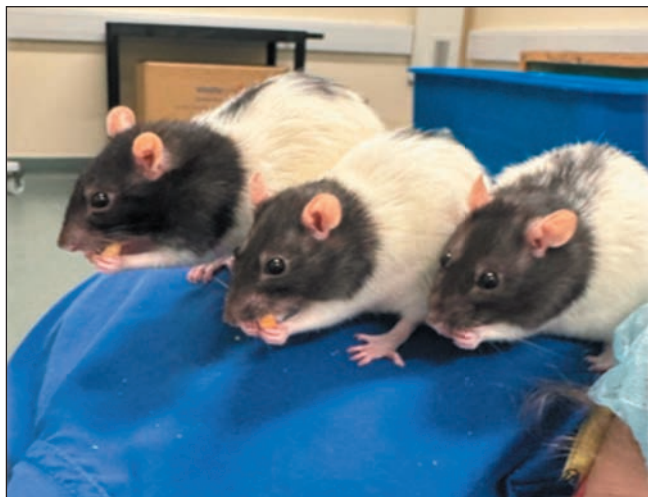
Positive outcomes

Our refinements had clear benefits for both the rats and the technicians caring for them:

Improved socialisation

The rats became more confident and interactive with technicians. We also received some positive feedback from researchers, letting us know that this programme has been effective.

The positive feedback consisted of better handling, less aggression, etc.

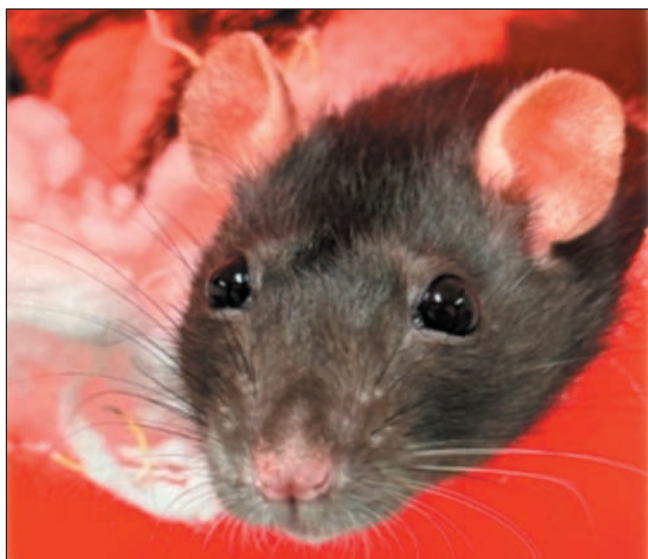


Reduced aggression

Multi-room cages provided more space, decreasing territorial disputes when it came to consolidating and feeding time.

The playpen serves as a neutral space for reintroducing or consolidating groups of rats. This also provides more opportunities to express their natural behaviours.

This was originally trialled with sentinel animals due to trying to improve their experience as they have less interaction than most laboratory animals.

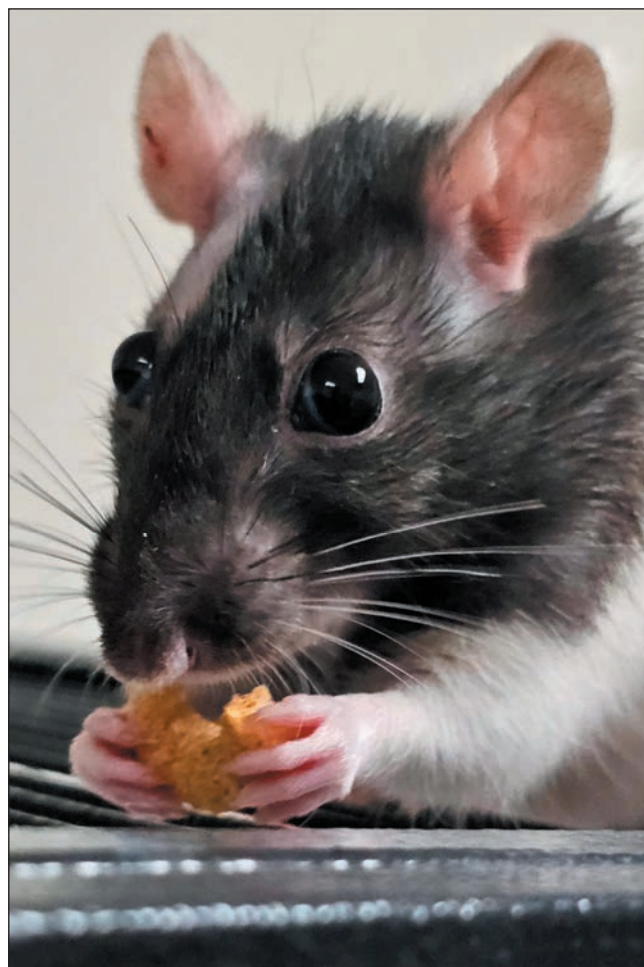


Better adaptability

We spent some time drilling holes and creating multi-story platforms so that the rats can have lots of fun. We are always looking for old equipment to use.

Encouraged by these results, we began collaborating with a group of researchers in the facility to integrate these refinements/enrichment into behavioural study protocols.

We did this by adapting another smaller cagewash bin into a more compact rat playpen more suited for the experimental rooms.



Turning old equipment into new enrichment

Using a trial-and-error approach and the assistance of our in-house maintenance team, we successfully repurposed various pieces of equipment to create new enrichment opportunities.

Multi-room cages

By modifying standard lab cages we created enclosures with separate rooms giving the rats more space to explore and reducing aggression.

We simply used fun tunnels as a bridge between cages.



Playpen project

An old cagewash bin was transformed into a rat playground, where rats took turns experiencing an enriched environment.

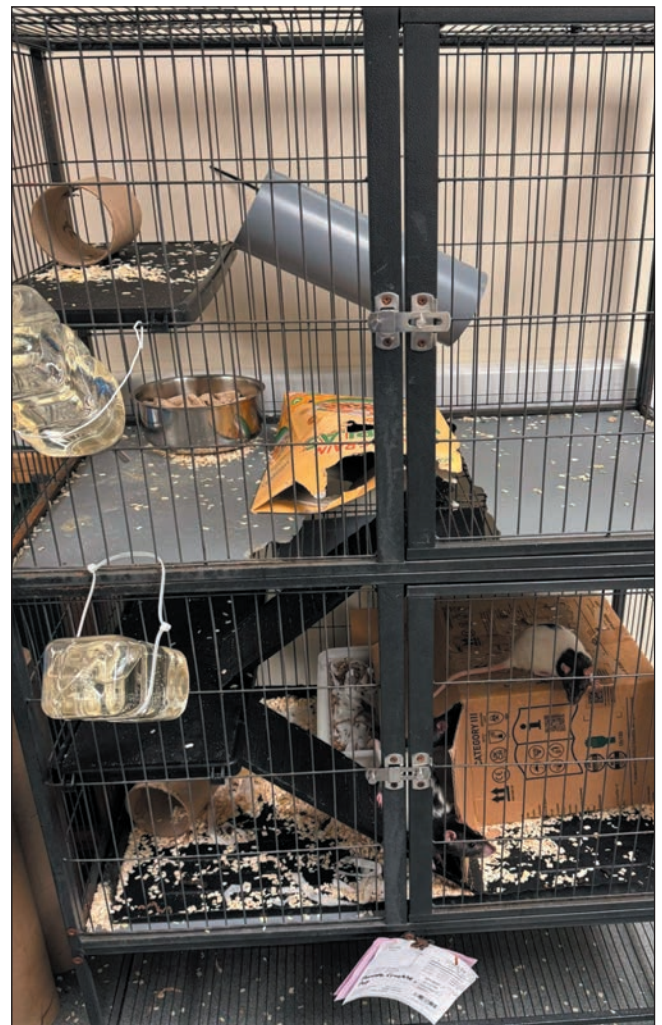
This initiative was led by two junior technicians under the guidance of a senior technician and became a major success.



Multi-story rat habitat

A large pet-style rat cage was introduced, that allowed rats to engage in climbing and exploratory behaviours not possible in standard lab caging.

We rotated groups of rats so that all had an equal turn with the equipment, which was cleaned between groups.

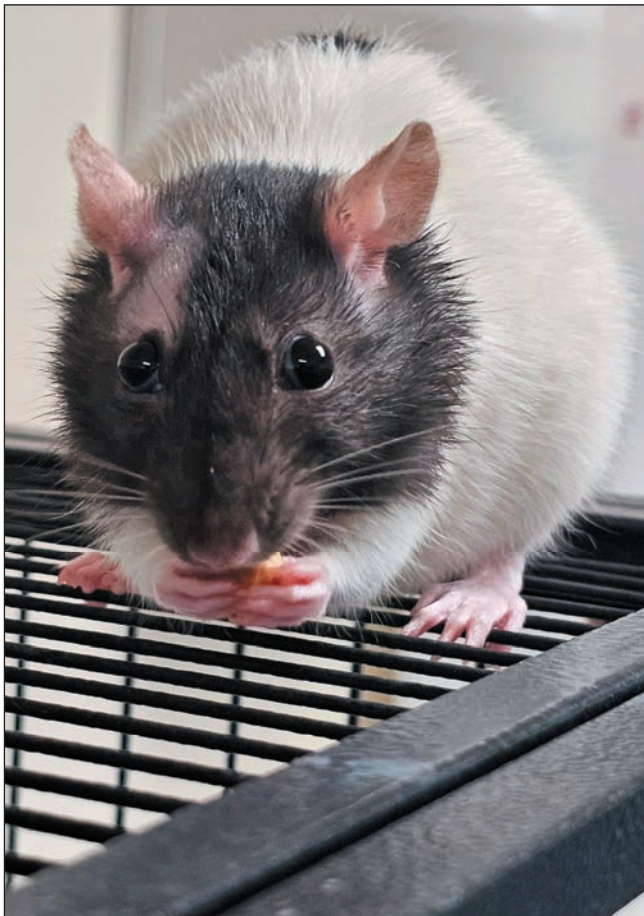


Conclusion

This initiative empowers technicians to enhance Animal Welfare, alleviate compassion fatigue and boost morale by engaging in a programme that celebrates high welfare standards.

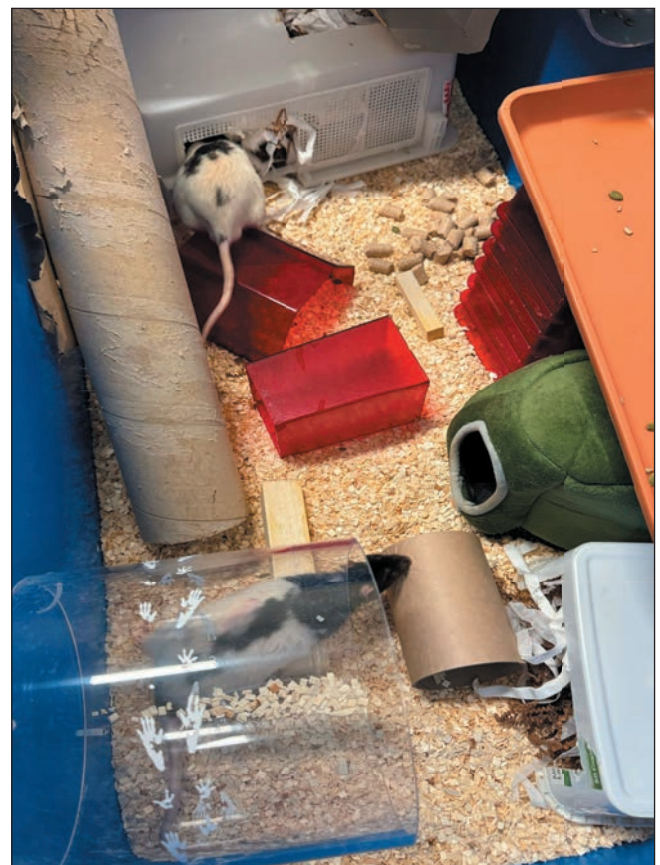
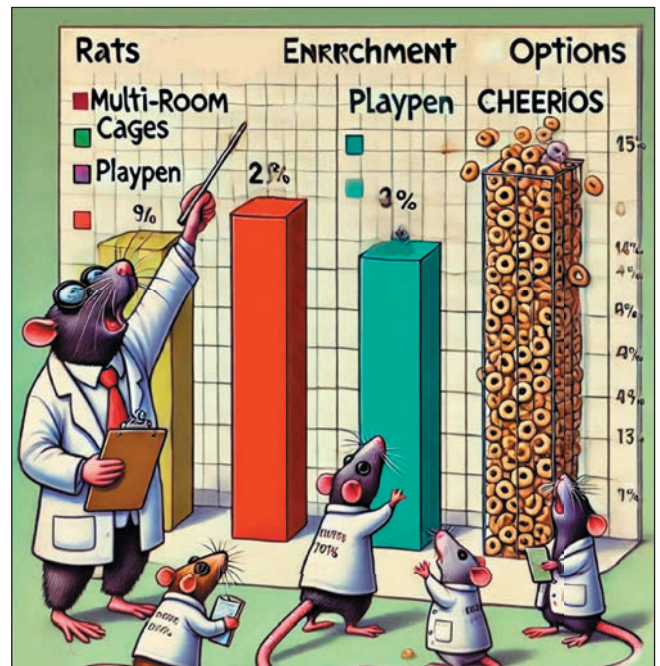
It also offers a tranquil space for technicians to unwind and interact with the rats in ways that might not occur during regular routines.

One cherished activity is feeding the rats Cheerios as a special treat, fostering a deeper bond between technicians and the animals they care for.



This project also highlights how resourcefulness and teamwork can significantly improve Animal Welfare by embracing an initiative-taking mindset, we not only enhanced the rats' wellbeing but also fostered a culture of innovation and collaboration with research users and our technicians within our facility.

We hope our approach inspires other technicians and researchers to think creatively about enrichment, proving that small changes can make a big difference!



How can you repurpose equipment in your own facility?