

# Using change management and human behavior change principles to implement large scale animal welfare reform in a global research organization.

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## 1 BACKGROUND

- Charles River set an internal goal in 2022 to transition away from aversive rodent tail handling<sup>3</sup> to refined handling methods such as tunnel, cup, and body handling (Figure 1, 2, and 3) by the end of 2025.
- Two organizational change management strategies were employed to facilitate this change: ADKAR (Awareness, Desire, Knowledge, Ability, Reinforcement)<sup>2</sup> and the Results Pyramid<sup>1</sup>.
- To monitor progress, longitudinal surveys were conducted focusing on human behavior change to assess employee knowledge and attitudes towards refined handling at the beginning of the transition (2022), towards the middle (2023), and near the end (2025).

**Refined handling** refers to patient, behavior-centered handling techniques in which the animal handler focuses on animals' response and uses optimal practices to reduce fear and stress.



Figure 1. Tunnel handling. Figure 2. Cup handling. Figure 3. Body handling.

## 2 ORGANIZATIONAL CHANGE MANAGEMENT

To enable a large-scale animal welfare change, extensive planning and strategizing was necessary. A combination of two organizational change management strategies (ADKAR and the Results Pyramid), provided a structural framework to allow the organization to move through the change in a stepwise and ordered approach. Progress was tracked at 68 sites across 11 countries and four business units within Charles River.

**Organizational change management** refers to the actions a business takes to change or adjust a significant component of its organization. It involves deliberate efforts to outline the steps needed and create new experiences for employees that will foster the beliefs and mindset necessary to achieve desired results.

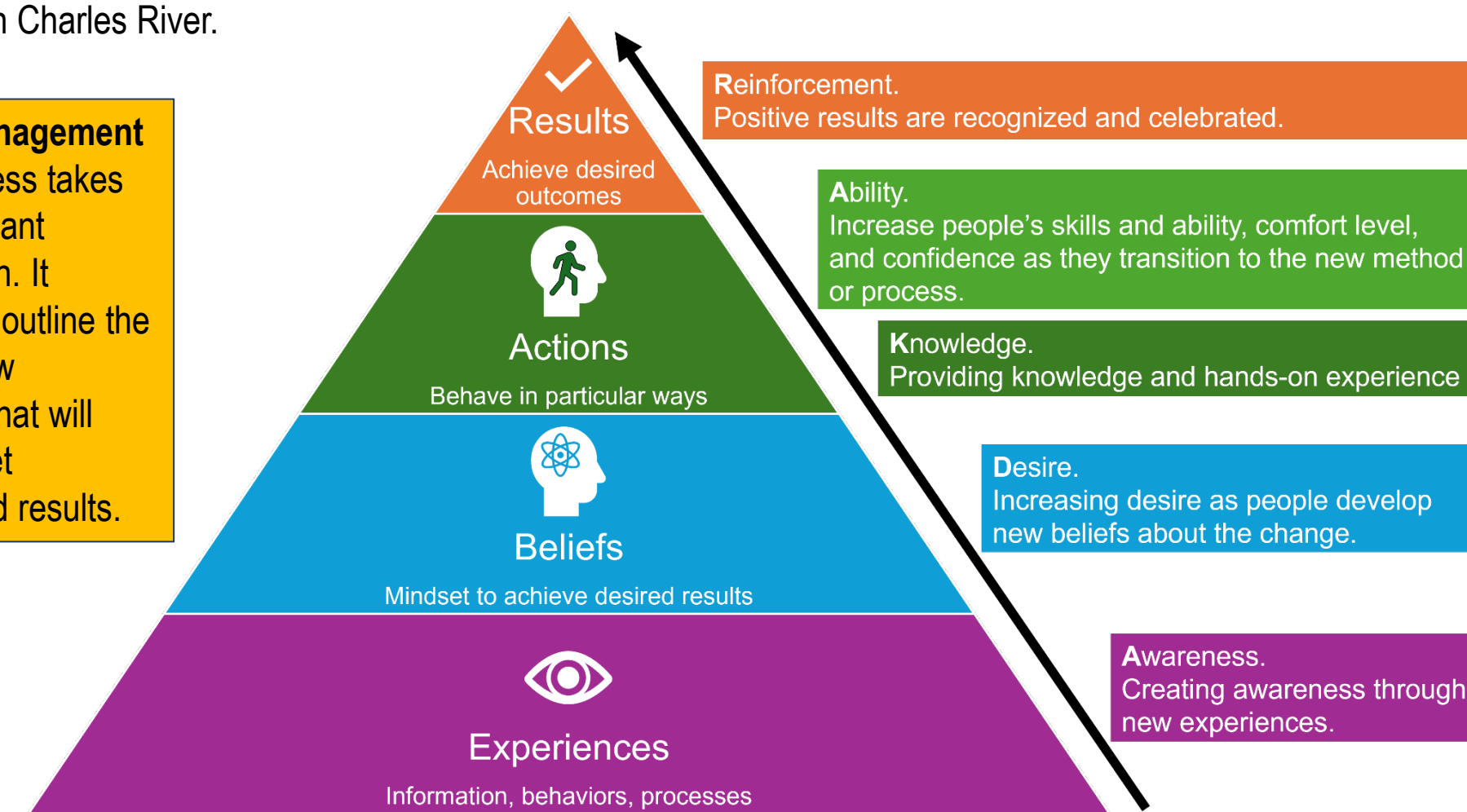


Figure 4. Results Pyramid and ADKAR Organizational Change Management Strategies.

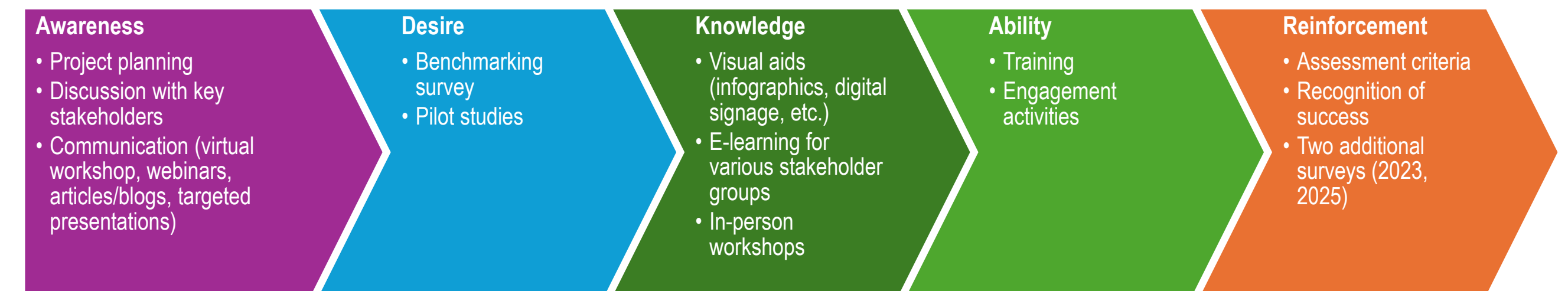


Figure 5. Change management strategies used to implement refined handling company-wide.

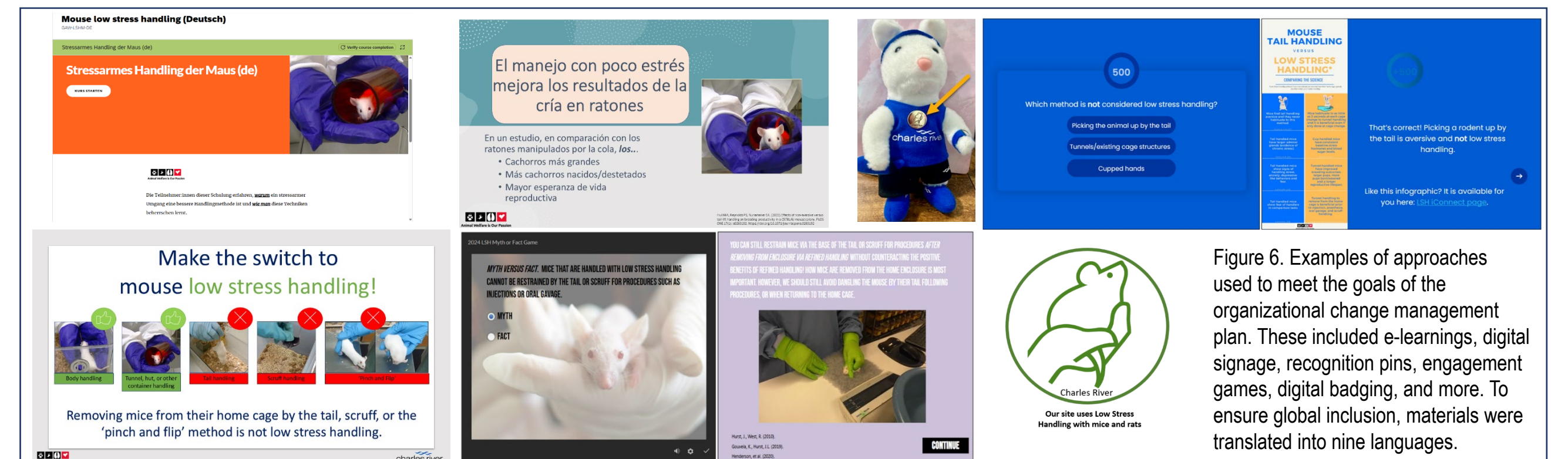


Figure 6. Examples of approaches used to meet the goals of the organizational change management plan. These included e-learning, digital signage, recognition pins, engagement games, digital badging, and more. To ensure global inclusion, materials were translated into nine languages.

## 3 HUMAN BEHAVIOR CHANGE

- Three surveys were conducted to assess uptake of and attitudes towards refined handling for rats and mice.
- Surveys consisted of multiple-choice questions and opportunities for open ended responses.
- Handling methods were assessed for different groups of animals including young adults, infant and juvenile, grumpy or less handled, and pregnant.
- 2022 survey: aimed to benchmark current handling practices, capture concerns, and learn what resources would be needed. There were 35 responses across 31 sites.
- 2023 survey: aimed to identify progress made towards refined handling. There were 67 responses across 42 sites.
- 2025 survey: aimed to assess current handling practices and attitudes. There were 261 responses across 38 sites.

**Human Behavior Change** refers to the gradual process of individuals transitioning from one behavior to another over time. This is a process, not an event.

## 4 RESULTS

- Handling**
  - In 2022, 81% of respondents used tail handling for mice with it being the primary method for young adults and grumpy, older, less handled mice. 79% used tail handling to some extent with rats, however body handling was the primary method of handling.
  - By 2025, refined handling methods were the primary handling method for all groups of mice and rats (Figure 7 and 8).
- Bite Rates**
  - From 2022 to 2025 the reported number of bite rates decreased in both mice and rats (Table 1).
- Resources**
  - The 2025 survey responses found that on-site training, live animal practice and on-site discussions are the most valuable training tools to learn refined handling techniques (Figure 9).

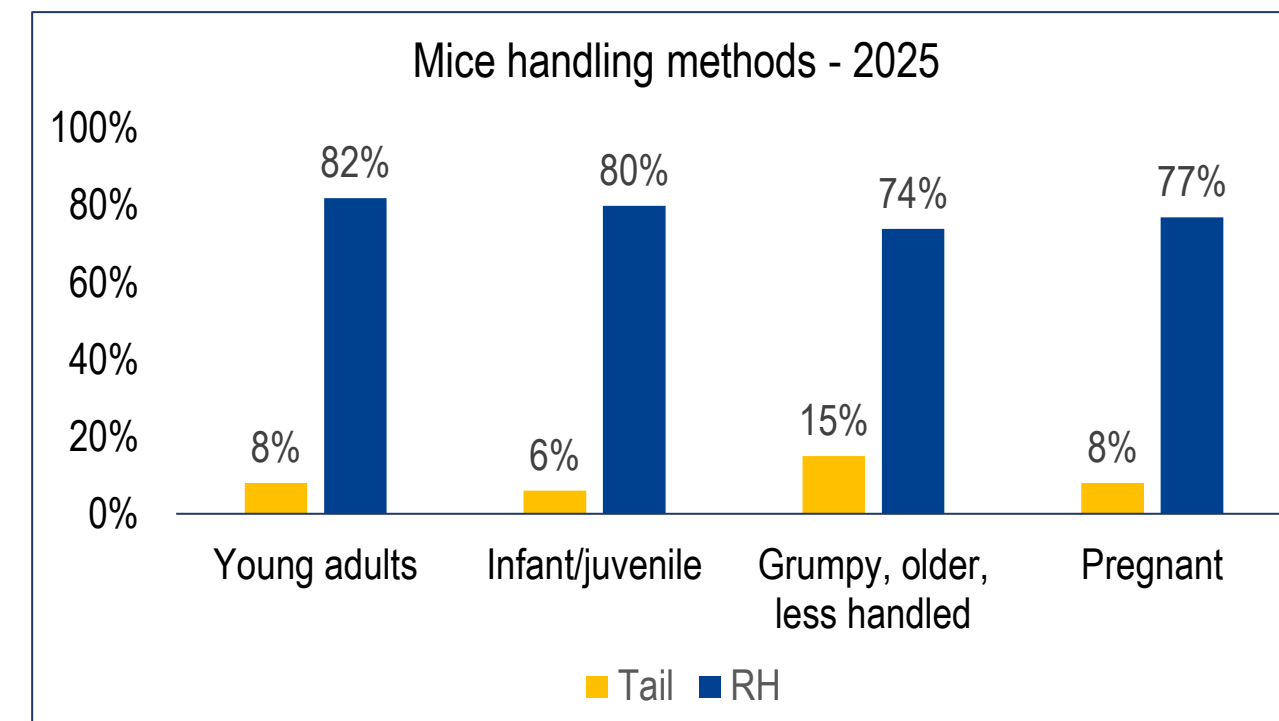


Figure 7: Handling methods used for mice in 2025. RH = Refined Handling

\*Not all values add up to 100% for Figures 7 and 8 due to survey responses also including scruffing and soft paper towel handling which are not included in tail or refined handling.

Bite Rates	2022		2023		2025	
	Mice	Rats	Mice	Rats	Mice	Rats
Never	3%	8%	7%	19%	17%	33%
Rarely (< 1 per month)	49%	51%	53%	59%	51%	57%
Occasionally (2-4 per month)	24%	27%	28%	19%	20%	8%
Sometimes (4-6 per month)	16%	5%	10%	2%	5%	1%
Often (> 6 per month)	5%	0%	2%	2%	7%*	0%

Table 1: Bite rate data across surveys.

\*We suspect this slight increase is due to an increase in cup handling and confusion of when to cup vs. tunnel handle mice. Additional training on this topic is being provided.

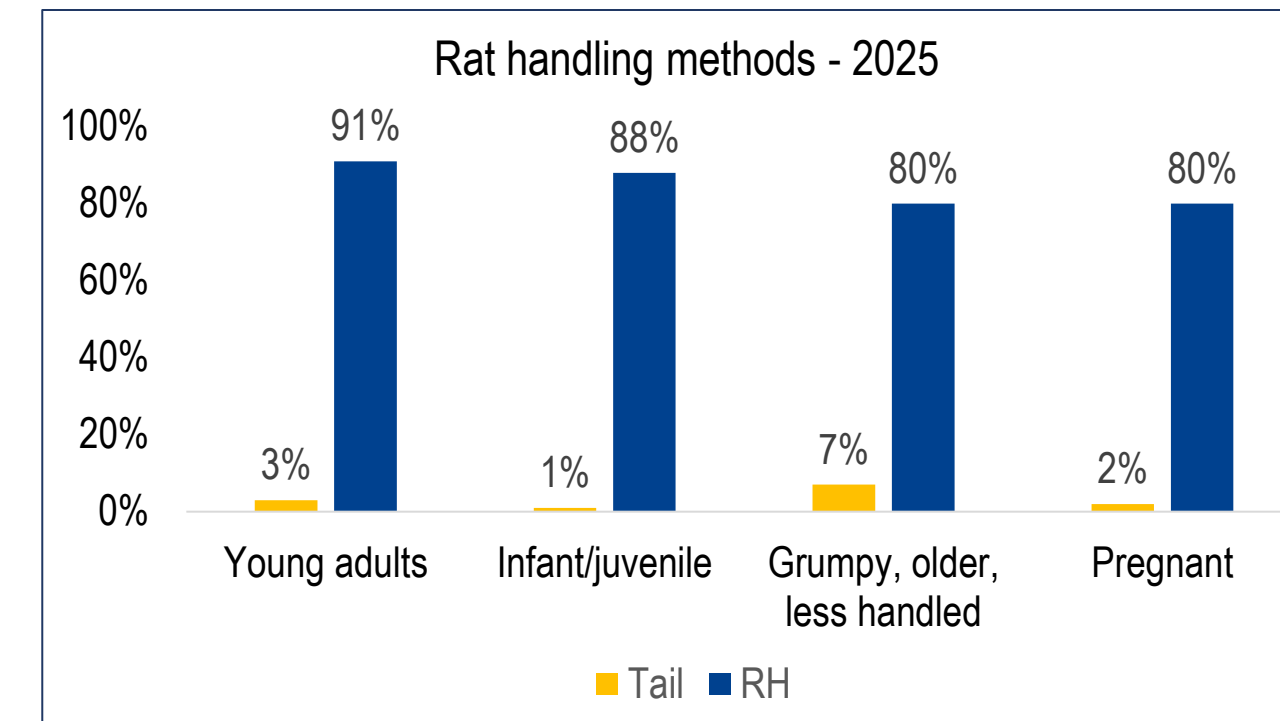


Figure 8: Handling methods used for rats in 2025. RH = Refined Handling

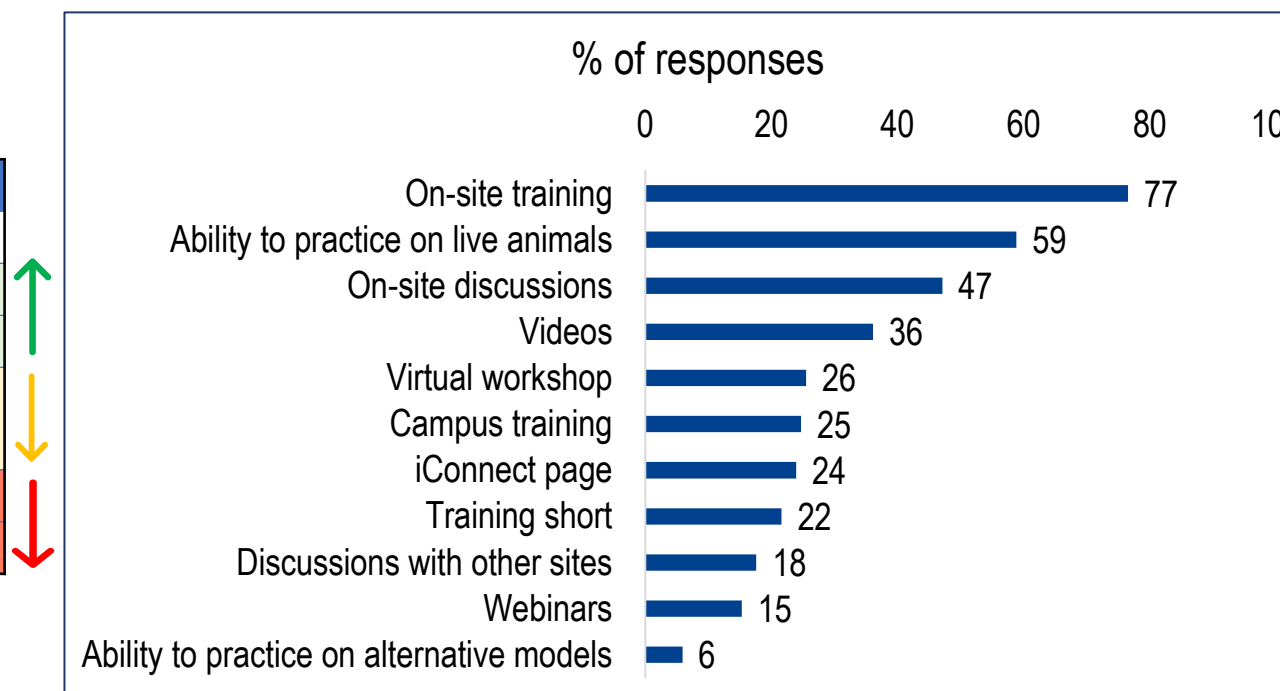


Figure 9. Resources that were useful in implementing refined handling as reported in the 2025 survey.

## 5 CONCLUSIONS

Through the various change management and human behavior change efforts, 100% of Charles River sites have achieved >85% implementation of refined handling for mice and rats which is our internal criteria for a site to be considered as transitioned to refined handling (Figure 10). This approach can be successfully utilized to implement refined handling or other significant animal welfare reforms in large global research organizations. We have continued to support the refined handling process both internally and externally by the addition of tunnels to all mouse and rat transport boxes shipped from North American CRL vendors (Figure 11). We have also set up a public facing website<sup>4</sup> with refined handling information and resources to share with clients, other organizations, and anyone who may have questions about refined handling at CRL. Finally, we are in the process of publishing three papers detailing the practical application of refined handling, the organizational change management process, and human behavior change for improved animal welfare.

Figure 10. Digital signage celebrating the 100% refined handling implementation.

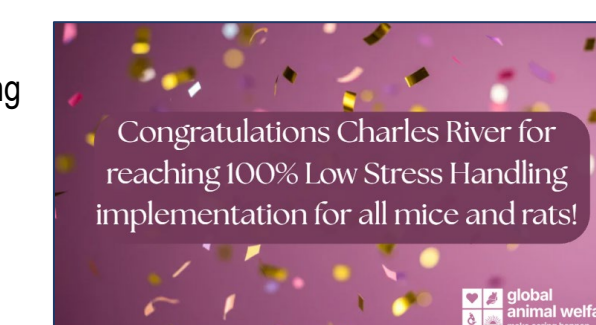


Figure 11. Rats arriving at a client site with a tunnel in their transport box.

## 6 CITATIONS

- Connors, R., Smith, T. The Results Pyramid®: Building a Foundation for Culture Change. (Culture Partners; 2022).
- Hiatt, J. ADKAR: A model for change in business, government, and our community. (Prosci, 2006).
- Hurst, J.L. & West, R.S. Taming anxiety in laboratory mice. Nature methods 7, 825-826 (2010). Human Behavior Change
- Low-stress handling of rats and mice. Charles River Laboratories. (2026). <https://www.criver.com/products-services/research-models-services/animal-models/animal-welfare/low-stress-handling?region=3611>