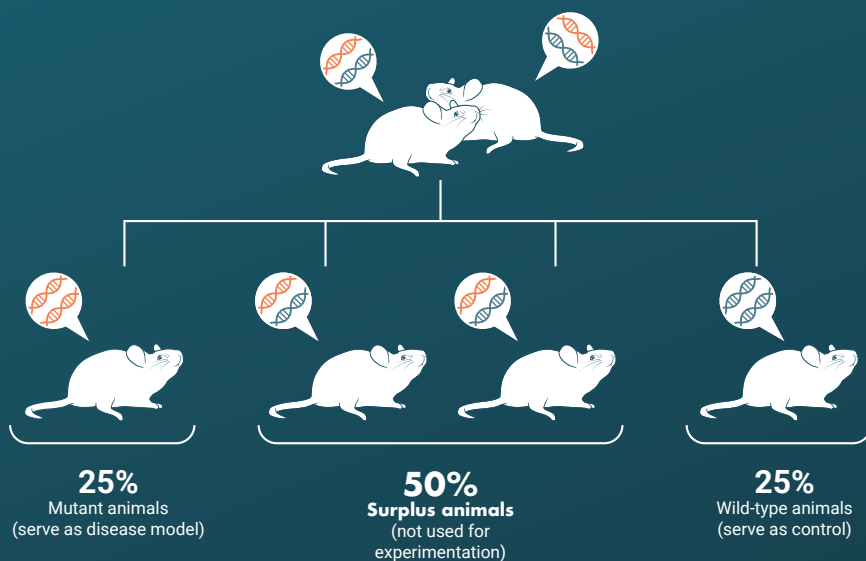


# LABORATORY ANIMALS – IS THERE OVERPRODUCTION?

## WHY ARE SURPLUS ANIMALS GENERATED AS PART OF BIOMEDICAL RESEARCH?

Biomedical Research would be impossible without genetically modified animals that serve as models for studying human diseases. Unfortunately not all animals bred for this research can be used for experiments. This is due to the fact that these so-called surplus animals have not inherited the genetic alterations required to model the disease. This is a consequence of the basic biological laws that govern inheritance in all living species including humans, something that cannot be overcome by researchers. Therefore, all breeding for research purposes results in surplus animals.



A regular breeding scheme with 50% of all offspring being surplus animals. Often animals carrying more than one genetic modification are needed for animal studies and/or only females or males can be used for experimentation, which will increase the fraction of surplus animals.

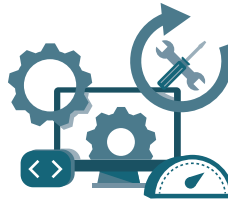
# WHAT DO WE DO AS RESEARCHERS TO REDUCE THE NUMBER OF SURPLUS ANIMALS?

Despite the laws of genetic inheritance, researchers are very much aware of the dilemma caused by surplus animals. Therefore, they actively engage in efforts to reduce the fraction of surplus animals during breeding and/or use them for other purposes:



## Cryopreservation

Sperm freezing allows researchers to only breed animals when they are needed for animal experimentation.



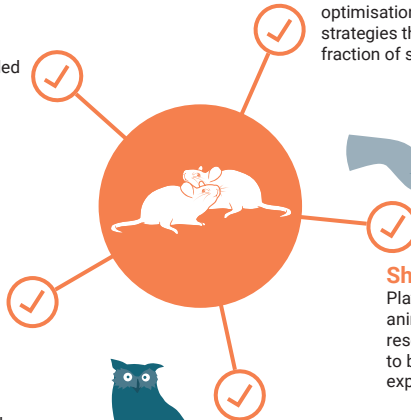
## Optimising breeding strategies

Advanced software allows optimisation of breeding strategies that reduce the fraction of surplus animals.



## Use for training and continuing education

All researcher conducting animal research have to attend legally required training courses.



## Sharing

Platforms for sharing surplus animals and their tissues with the research community allows them to be used in different experiments.



## Use as animal feed

Ultimately surplus animals should be used as animal feed for reptiles, birds of prey and other animals in zoos, rescue stations and animal shelters, instead of breeding animals for feed.

