In order to improve recycling in the UK, we need a system-wide view of what is currently happening, where we want to be, and how to get there. This involves rethinking the current system and setting ambitious recycling targets for the future. A key part of this is understanding the challenges and potential solutions for improving the recycling system.

The resource hierarchy (shown to the right) is a useful tool for understanding the different stages of recycling. It shows that recycling is just one part of a wider process, which includes reducing, reusing, and recovering resources. The hierarchy also highlights the importance of designing products that are easier to recycle, and using materials that are more easily recycled.

Sorting is the next big challenge. In order to improve recycling, we need to improve the way that we sort plastic. This is important because the quality of the sorted plastic is crucial for its value. There are several methods for sorting plastic, including optical sorting, which uses cameras and artificial intelligence to identify recyclable plastics.

Other areas for future research and innovation include:

- Designing the chemistry of the underlying polymers and ensuring that they are conserved. Breaking away from the take-use-waste model and moving towards more circular solutions is crucial.
- Developing new and innovative product designs that can be easily recycled or repurposed.
- Improving labelling for citizens to make it simple for them to understand how to recycle.
- Creating new and innovative packaging that is easier to recycle or compost.