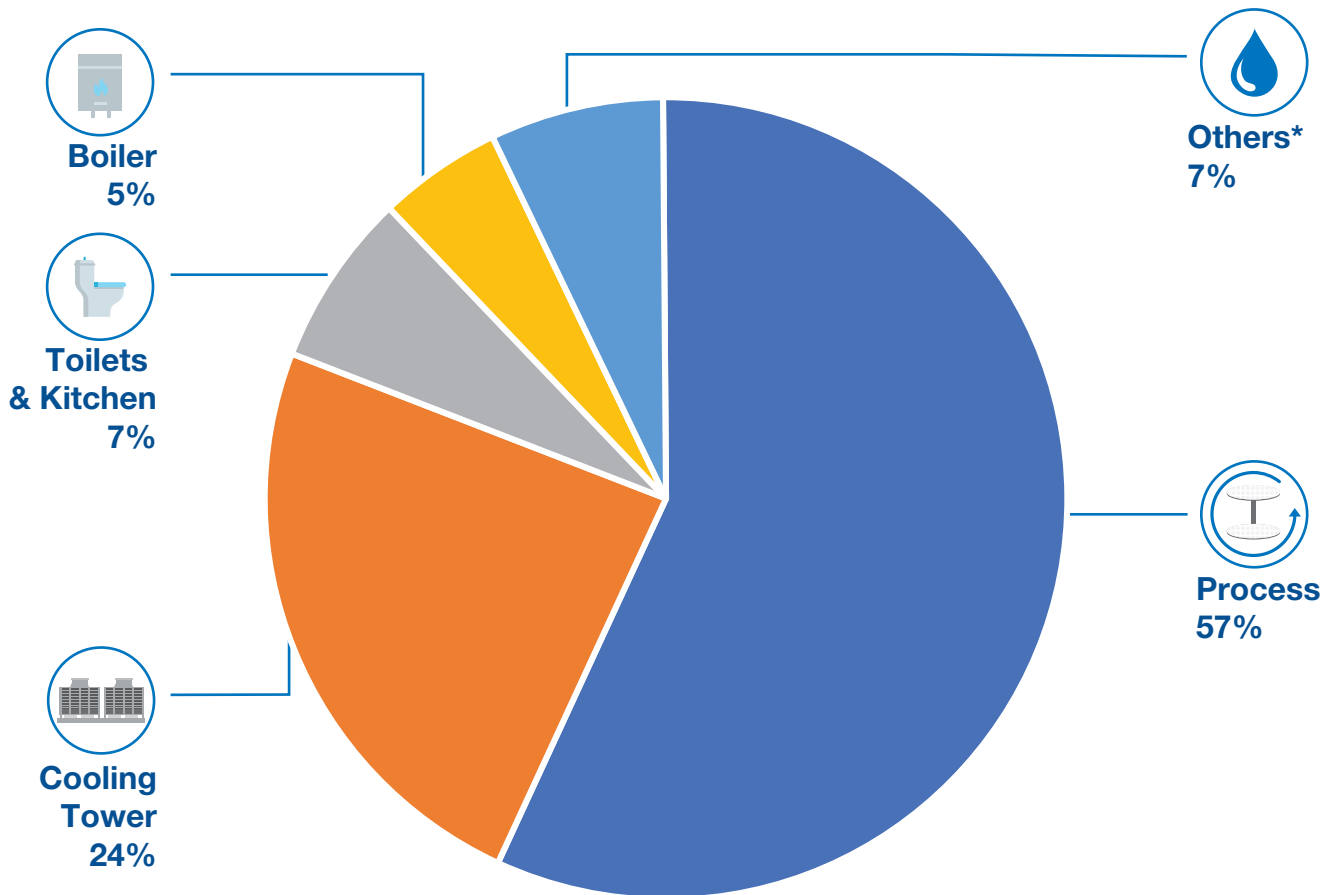


# Biomedical Manufacturing Benchmarks



The Biomedical Manufacturing sector is a key contributor to Singapore's manufacturing economy. Manufacturing plants in this sector are typically large water consumers.

Figure 1 below shows a breakdown of the overall water usage statistics in the biomedical manufacturing sector. Water usage pattern for each plant may vary depending on the type of product being produced.



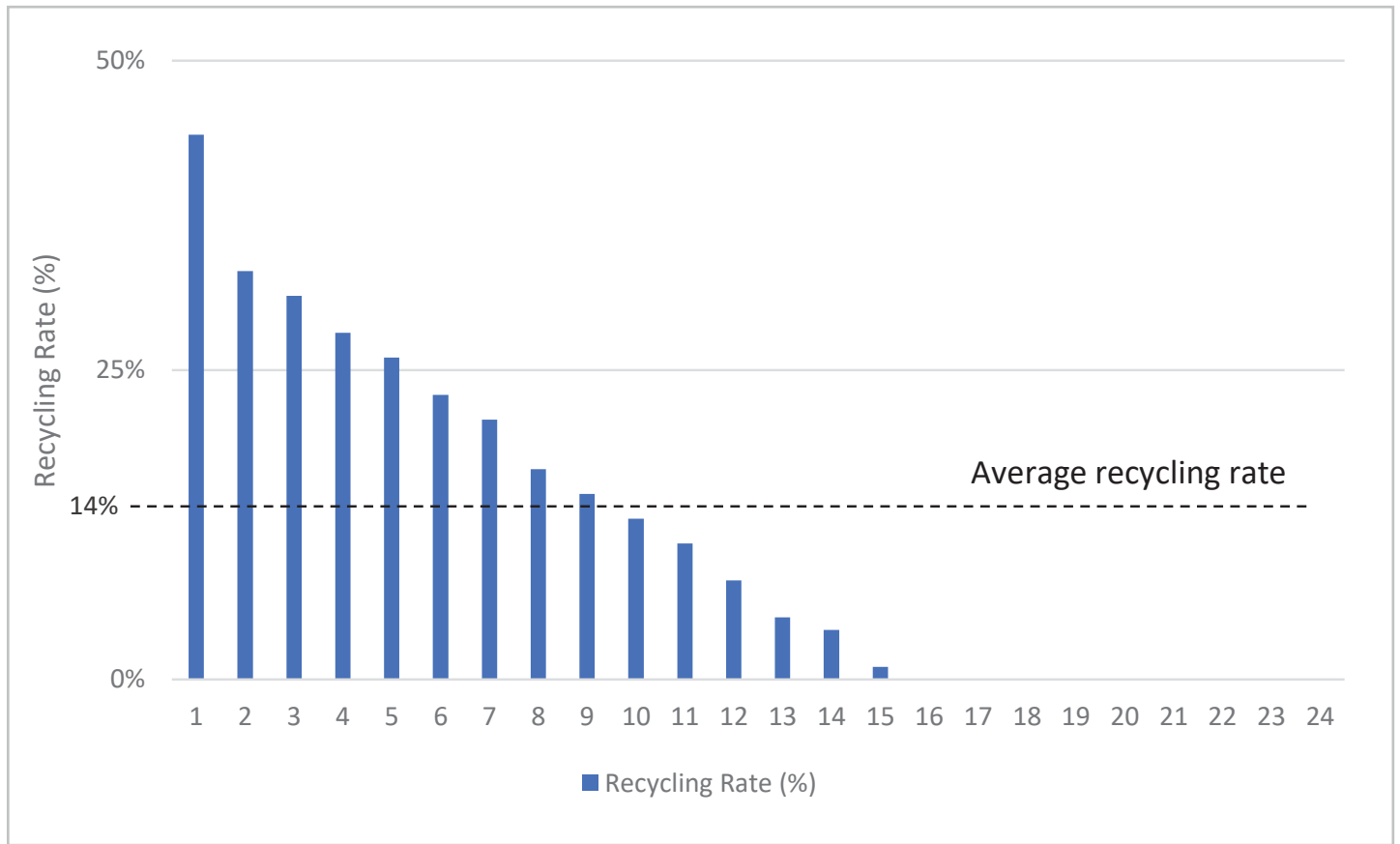
**Figure 1: Breakdown of Water Usage for Biomedical Manufacturing Sector**

It is important for all plants to reuse and recycle as much water as possible to ensure water sustainability.

Recycling rate is computed using the total recycled water of a plant divided by summation of the total supplied water and recycled water.

$$\text{Recycling Rate (\%)} = \frac{\text{Total Amount of Water Recycled}}{\text{Total Amount of Water Recycled} + \text{Total Supplied Water}}$$

Most biomedical manufacturing plants in Singapore practise some form of water recycling. The plants' recycling rates range from 0% to 44%, with an industry average of 14% as shown in Figure 2 below.



**Figure 2: Recycling Rates of Biomedical Manufacturing Plants**