

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.

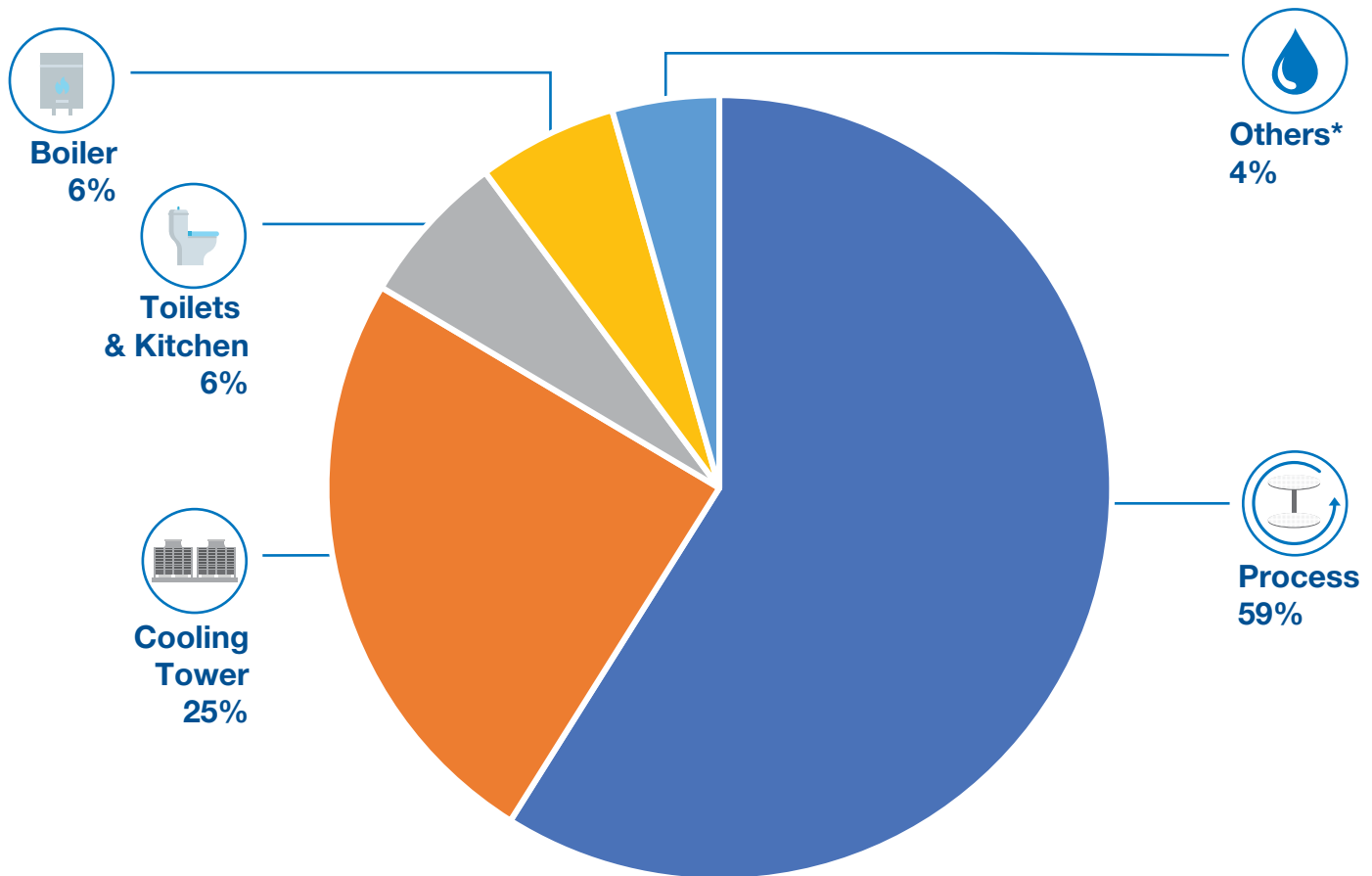


Figure 1: Breakdown of Water Usage for Biomedical Manufacturing Sector

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 34%, with an industry average of 14% as shown in Figure 2 below.

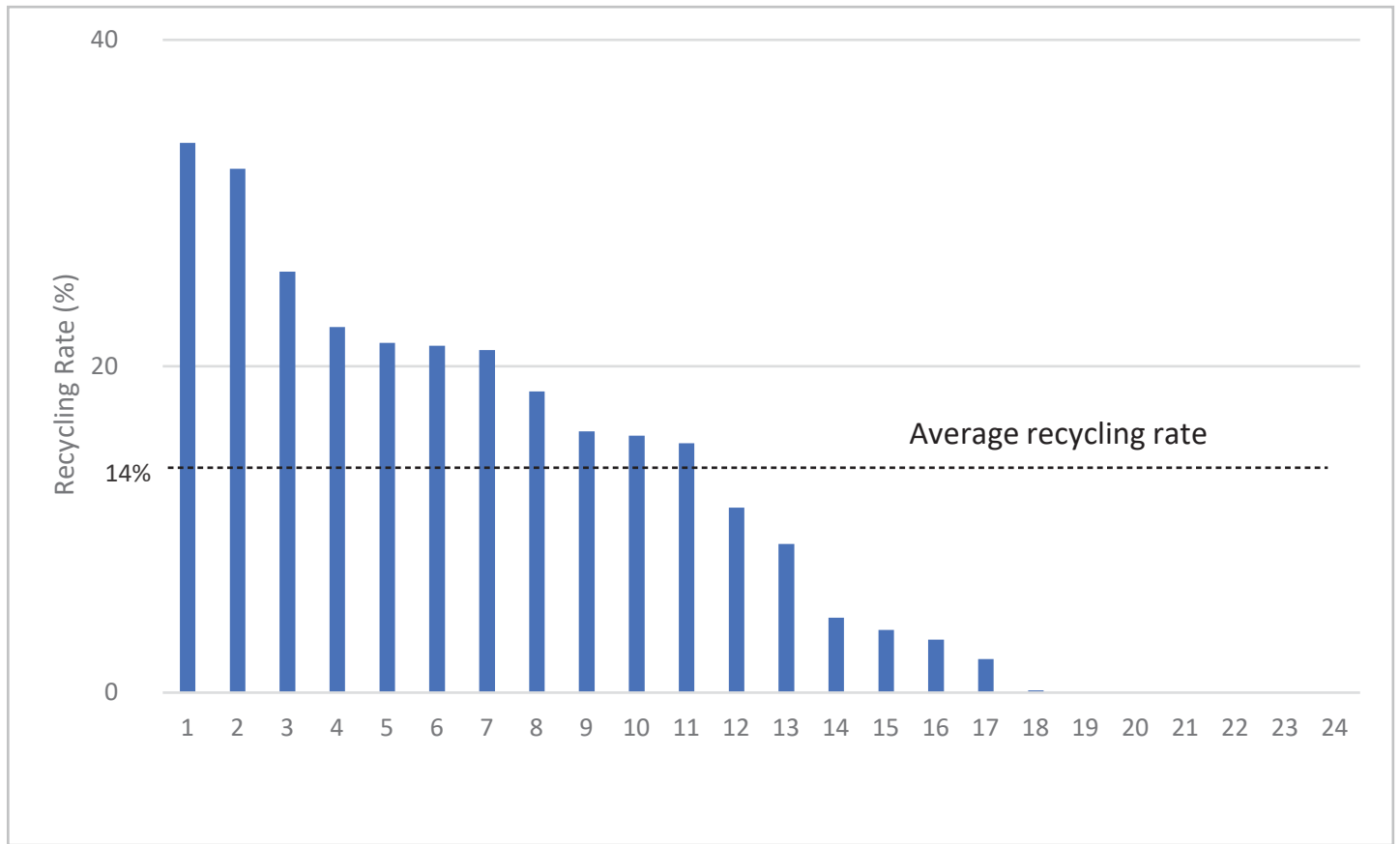


Figure 2: Recycling Rates of Biomedical Manufacturing Plants