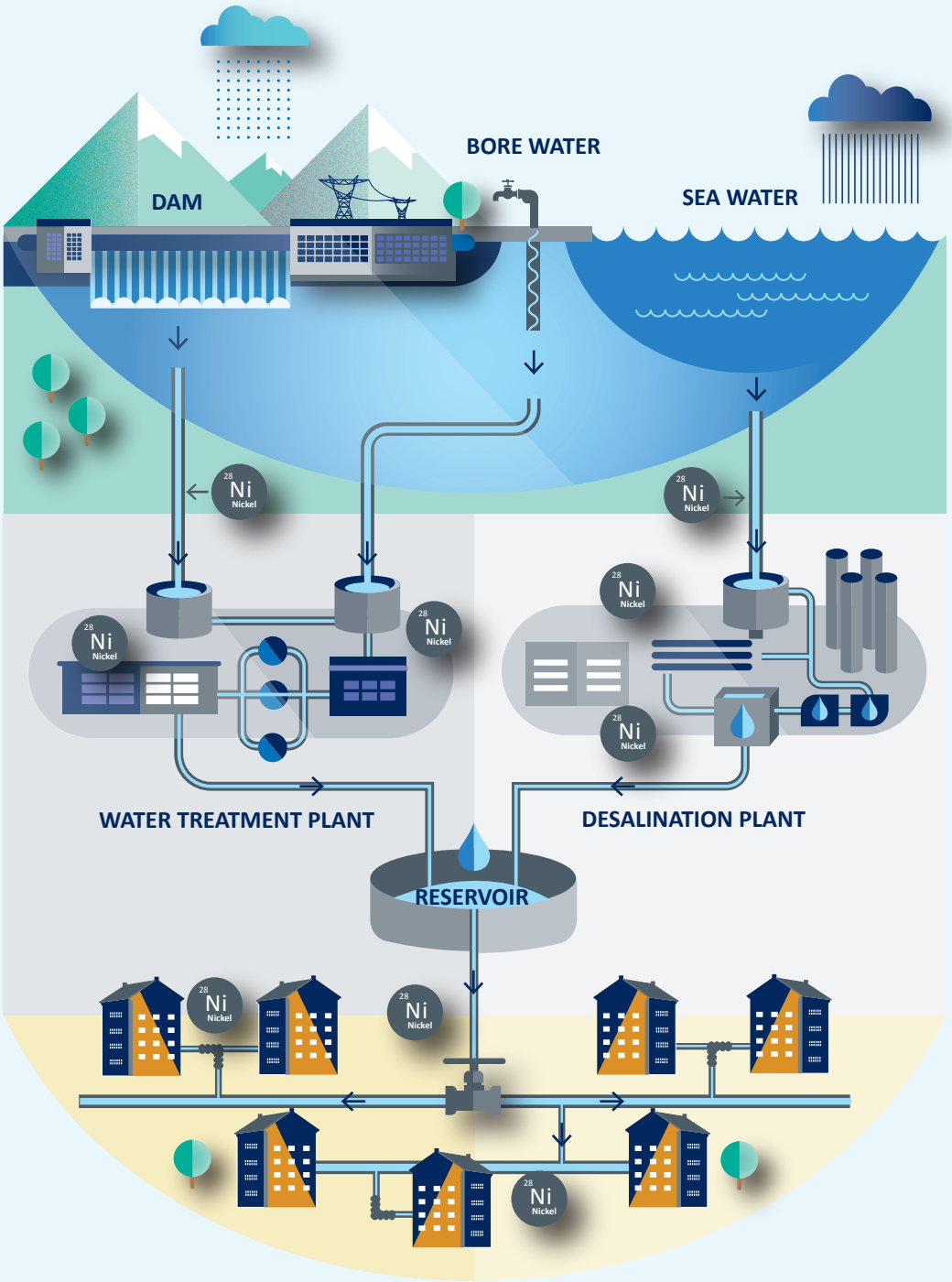
WASTE NO WATER
THE ESSENTIAL ROLE OF NICKEL

By 2025, the World Bank has estimated that water demand will exceed supply by 40% as the world's growing population requires more water for agricultural, industrial and personal use. Nickel-containing materials are essential to preserve this precious resource. Poorly maintained and ageing infrastructure are common problems in nearly all major cities in both the developed and developing world, causing extensive water wastage. Nickel-containing materials provide solutions and assist at every step of the water system from collection to distribution.



WATER COLLECTION

Nickel-containing stainless steel is used throughout the water collection process. Its corrosion resistant properties make it the material of choice for penstocks, dam gates, bore filters and subsea intakes.

WATER TREATMENT

After collection the water is treated. Stainless steel and high nickel alloys are ideally suited for high pressure pipework, valves, penstocks, pumps and other vital components. For the treatment of seawater, nickel-containing materials are essential to combat the extremely corrosive conditions of desalination plants. Many tonnes of nickel alloys and stainless steel are found in a water treatment plant and play a central role in providing safe water.

WATER DISTRIBUTION

Many leaks in the water distribution system occur in the service pipes leading from the mains supply to buildings. Nickel-containing stainless steel is the best choice for the replacement of service pipes thanks to its outstanding properties of corrosion resistance, strength and ductility. The use of stainless steel substantially reduces leakage rates and maintains water integrity by preventing contamination in the pipes. It can tolerate moderate earth movement from seismic events, heavy traffic or construction. Nickel-containing stainless steel provides a low-maintenance infrastructure with a very long life.

Nickel INSTITUTE
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