

## **About HAECO Group (HAECO)**

Established in Hong Kong in 1950, HAECO is one of the world's leading independent aircraft engineering and maintenance groups. It is one of the largest Maintenance, Repair and Overhaul ("MRO") service providers in terms of capacity. Through its 16 subsidiaries and joint venture companies around the world, the Group offers a full spectrum of services including airframe services, line services, component services, engine services, inventory technical management, fleet technical management, cabin integration and reconfiguration services and interior products, private jet solutions, freighter conversion, parts manufacturing and technical training.

HAECO fulfils its vision to be a green and sustainable MRO service provider by striving to be a good steward of the natural resources and biodiversity in the areas where we operate. What's more, the nature of our business of providing MRO services means that we contribute to the efficiency of aircraft which, in turn, alleviates the adverse impacts of the aviation industry on the environment. We carefully manage our energy use, emissions and waste in accordance with relevant laws, regulations and industry best practices.

We have striven to protect our environment through de-carbonisation, water conservation, waste reduction, adoption of renewable energy.

*For further details on HAECO sustainability efforts: <https://sd.haeco.com/en/>*

### ***Problem Statement***

*To treat wastewater from an industrial facility to the point of being reusable for high value use cases (e.g. beyond flushing of toilets) cost effectively*

### ***Aims***

Swire Pacific Sustainable Development (SD) Fund Challenge Process invites innovators to submit a new solution to be trialled with the intention of implementing and scaling to other sites with similar problems.

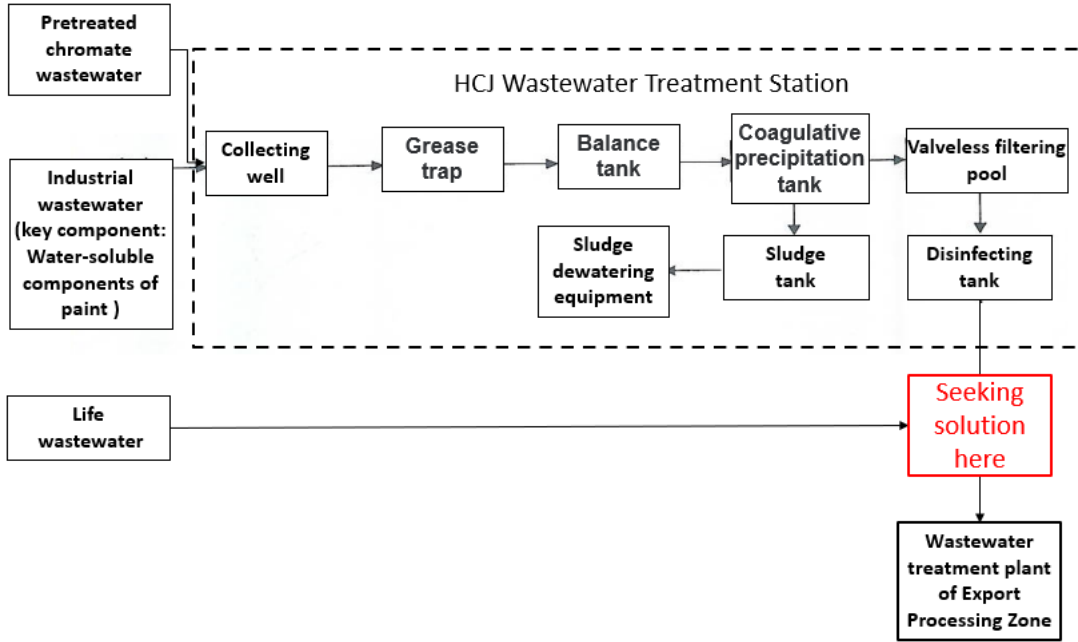
- Seeking wastewater treatment solutions that can be installed in between the existing treatment systems and the sewage plant (details below).
- The facility is looking for solutions that can assist in the cost-effective removal of: BOD, COD, Suspended solids, Ammonia, Phosphorus, LAS, Petroleum, Fluoride
- Potential solutions can include but are not limited to:
  - Greywater Recycling (C&I)
  - Zero Liquid Discharge
  - Biological Solutions (organic algae, bacteria, or growths):
  - PFAS and Metal Removal
  - Membrane Filtration (micro- and ultra- filtration)
  - Electro-Chemical/UV Treatment (electro-fields or reactants to remove toxins/solids)
- The goal is to produce water for a greater range of reuse cases other than just flushing of toilets or basic greywater uses. For example, greater reuse in industrial processes, showering, washing hands, etc. Ideal solution would be a complete system that plugs into the existing process. However, critical technologies that comprise part of the solution can be considered as well.

### ***Problem Background***

HAECO has a water intensity target of 25% reduction by 2030 compared to 2018 baseline, and is committed to reusing wastewater more extensively in a greater portion of their facilities to reach the goal. The HCJ facility in Jinjiang currently lacks a wastewater treatment solution to work downstream of their existing chromate pre-treatment and composite wastewater treatment plants, which both treat water before it goes to a sewage plant. They are seeking a wastewater treatment system to fit in here to divert some of the water from sewage and return it to be used in a greater range of reuse cases.

**Process:**

**Chromate pre-treatment system > Composite wastewater treatment station > *SEEKING SOLUTION HERE* > Sewage treatment plant at Export Processing Zone**



For now, most of the water currently being reused through the existing plants are used only for limited applications, such as gardening, toilets, and hangar washing. HAECO is looking for a wastewater solution that provides **higher quality water to be used for additional applications like hand washing, showering, and more.** The water does not need to be at the quality of drinkable.