

Robot System for the Placement and Collection of Traffic Cones and Lanterns in Road Works

Highways Department, The Government of HKSAR
Hong Kong Productivity Council



The Highways Department (HyD) always attaches great importance to safety in road works, accords first priority to the safety of engineering site staff and strives to enhance safety protection for implementing road works on public roads. Given that the engineering site staff may face higher risk when placing and collecting traffic cones and lanterns on public roads, HyD has been striving to study the use of advanced technology to adopt automated approaches to replace the engineering site staff in carrying out relevant works in order to protect their safety.

In March 2017, HyD initiated a research study with the Hong Kong Productivity Council (HKPC) and successfully co-invented our road works robot, RoadBot 1. This automated intelligent robot system is the first of its kind in the world. Fitted with cameras, sensors, robotic arms, and an on-board artificial intelligent system for control, it has full cognitive abilities to understand the surroundings for placing and collecting traffic cones and lanterns on public roads.

RoadBot 1 has received numerous awards including the Honorable Mention Prize of the Chinese Delegation for Invention and Innovation and the Gold Medal at the 47th International Exhibition of Inventions of Geneva, the Gold Medal at the Silicon Valley International Invention Festival 2019 and Gold Award at the Hong Kong Information and Communications Technology Awards 2019.

The assembly work of the full scale model is now in full swing. Site trials will commence on public roads in the near future.

