

Intelligent Robotic Systems for Interior Finishing and Quality Assessment

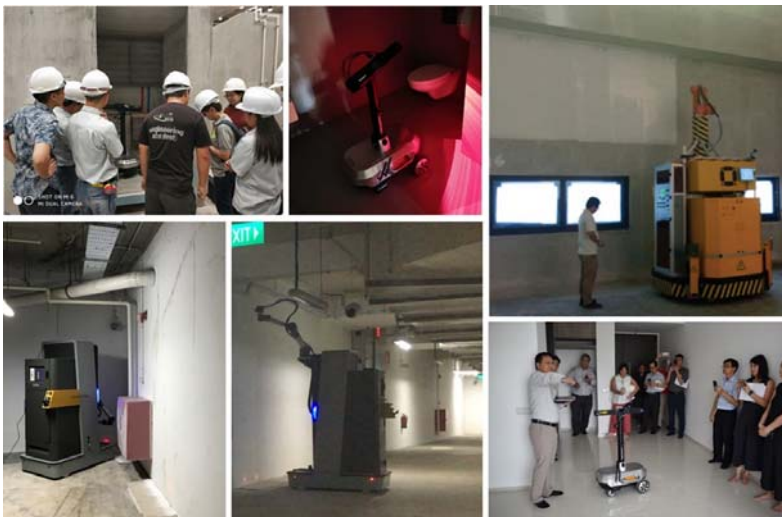
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Transforma Robotics



The construction industry is facing a significant need in designing and absorbing the technological innovation to improve the productivity and safety of workforce, and to address the future shortage of workers and wage increases. Interior finishing and post-construction quality assessment are indispensable procedures that are currently executed by manual workers and inspectors.

Transforma's first solution, PICTOBOT, is an intelligent mobile robot that autonomously scans, plans and paints interior of buildings. No CAD model or drawings are required. It works efficiently and safely near human coworkers performing the repetitious and troublesome task of painting. Pictobot provides a way to combine the benefits of automation in construction with those of human dexterity and ingenuity. Thus, it relieves workers of the arduous tasks, and eliminates the need to work in proximity of hazardous spray particles and to work at height.

Transforma's second solution, QUICABOT, is a mobile robot for Building Interior Finishing Inspection and Assessment. It collects data and scans the interior finishing and automatically generates an assessment of different kinds of defects, such as cracks, unevenness, alignment, lippage and more, using different sensors and artificial intelligence (AI). Furthermore, the data could be uploaded into a cloud or BIM for reference and data analysis. The main advantages of robot inspection are data transparency and consistency. Moreover, the result is more objective than manual inspection.



Transforma's Robots at construction sites:
Top-left: Quicabot inspecting inside a prefabricated unit.
Top-right: Pictobot at industrial development, performing spray painting at 5-meter height.
Bottom-Left: Pictobot A-300 at a residential building, performs spraying at corners and walls up to 3-meter.