

# ABOUT US

Transforma Robotics is a spin-off company from Nanyang Technological University (NTU) Singapore. We aim to develop modular collaborative robotic platforms with data analytics and artificial intelligence to enable safe, cost-effective, and efficient construction. We offer robots and robotic services to the construction industry: Quality Inspection and Assessment Robot (QuicaBot) for construction quality assessment and Spray Painting Robot (PictoBot) for indoor wall painting.

# OUR GUARANTEE

### M SAFETY

Use robots to do the risky, repetitive, and boring work such as high ceiling painting and quality checks

### QUALITY

Ensure quality work by leveraging repeatability and accuracy of robots

### **▼** PRODUCTIVITY

Paint more walls and inspect more rooms in shorter time. save up on headcount and labor cost

### **TRUSTWORTHINESS**

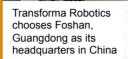
Credible results from the objective measurements and processes of the robots

### TRANSFORMA IN THE NEWS









CONSTRUCTION ROBOTICS

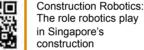
CONSTRUCTION LANDSCAPE





Jackal-based robot modernizes site inspection







JTC and NTU partner to create robots for the construction industry





Saving time and manpower with Singapore-developed spray painting robot



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## **PICTOBOT**

### **SPRAY PAINTING ROBOT**

The PictoBot improves the productivity and safety of workers by reducing the tiresome tasks and occupational hazards related to heights. Now, workers do not have to be suspended on ladders, cranes, scissor-lifts or scaffoldings to reach high ceilings and walls.



- 1.50 m x 0.82 m x 2.20 m
- 300 kg (including batteries)
- 4 hours of non-stop operations on full charge
- Up to 40 liters of paint capacity
- Quantitative painting process model
- Paints up to 3 metres high
- Higher spray transfer efficiency vs manual spraying
- In-situ scanning using optical camera
- Modeling of environment using laser scanner
- Night-time (dark or low-light) operations
- ❖ 4x faster than brushing or rolling

### **T-CLOUD**

### TRANSFORMA ROBOT CLOUD SERVICE

T-Cloud is Transforma's robot cloud service platform. It leverages on IOT, big data analytics, and AI to provide robot fleet management, user interface, and project tracking and reporting.



### INTELLIGENT SCHEDULING

Robots are assigned automatically depending on client's job order or projects

### **CREDIBLE REPORTING**

Project progress could be tracked online. Once done, T-Cloud will generate accurate and trustworthy report

### **ROBOT FLEET MANAGEMENT**

Robots could be tracked through T-Cloud and provide information such as location, working condition, task history, fault status, and so on

### **DATA ANALYTICS**

T-Cloud analyses robot and project data to provide insights that could assist business decision making processes

### **USER-FRIENDLY UI**

Users could request job orders, enter job requirements, make payments and view project progress and robot status in real-time

### QUICABOT

# QUALITY INSPECTION & ASSESSMENT ROBOT

The QuicaBot conducts comprehensive and accurate quality checks, eliminating human errors and subjectivity. QuicaBot can, after carefully inspecting a room, pick-up defects like cracks, hollow tiles, and walls at a wrong angle. The robot can also be moved around a construction site owing to its compact size.



- Visual inspection using camera
- Hollowness detection
- Detecting wall evenness
- Measuring floor slope and wall alignment
- Scanning and mapping rooms autonomously or semiautonomously