Automating Material Handling & Quality Checks

Industry: Energy & Utilities

Client: Electronics Assembly Plant, Pune, India

The Challenge

- ✓ Manual handling causing defects
- ✓ Slow inspections and packing
- ✓ Labor fatigue & limited scaling

Our Approach

We used **Time & Motion Study to:**

- ✓ Deploy cobots for precision tasks
- ✓ Use AI vision for faster inspections
- ✓ Automate sorting & packaging

Key Solutions

- ✓ **Robotic Arms:** With smart grippers
- ✓ **AI Visual Inspection:** Detects defects
- ✓ **Automated Sorting:** With barcode & packing
- ✓ **Dashboards:** Track output & robot health

Tech Stack

UNIVERSAL ROBOTS | OpenCV | TensorFlow | ROS | Power BI | SIEMENS

Impact Summary

Metric	Before	After
Defect Rate	8%	2.5%
Quality Check Time	6 mins	3 mins
Manual Packing	100%	10%
Handling Efficiency	Medium	High

Results at a Glance

70%	2X	50%	90%
fewer defects	faster inspections	more output	routine tasks automated

Qematic helps manufacturers scale with robotic precision.

QeMatic

Start Your Journey Towards Smarter Operations

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