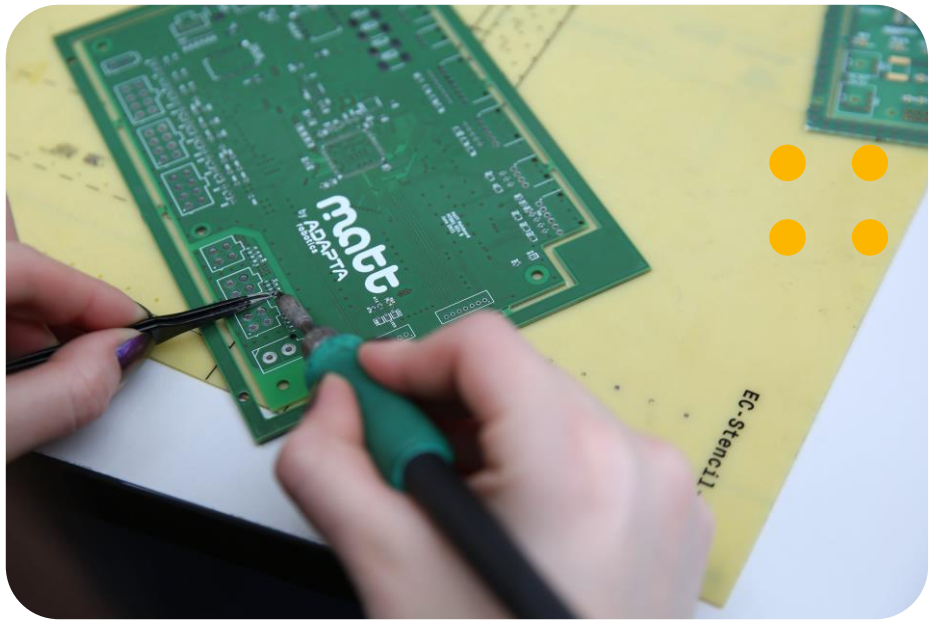
ADAPTA ROBOTICS



Enhancing Human Potential Through Robotic Solutions.


Reshaping the retail industry by developing AI solutions to undertake its biggest challenges and advance automation.
IRiS

Problems

Lengthy, repetitive & error prone in-store tasks lead to losses in business and customer satisfaction.

- Wrong price labels
- Duplicated labels
- Out of stock & soon to be out of stock
- Wrong label to product

Manual audit is the method used in the present

Solution

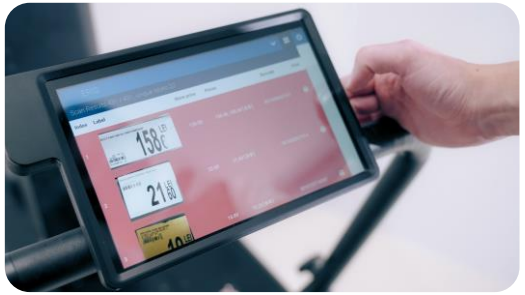
Powered by AI and human operated, solves price and promotion discrepancies (from shelf to checkout) and minimizes customer dissatisfaction brought by empty shelves and price tag mistakes.

- Verifies pricing accuracy
- Detects Out-of-Stock situations
- Works in real-time
- Builds a visual map, a panoramic preview
- User-friendly interface & easy to provide commands

ERiS

Capabilities

Patent pending



Label Management

- Products identified based on barcode;
- Comparing detected prices with actual checkout price;
- Print & replace paper-back labels on-the-spot;
- Integration with electronic shelf labels gateways to update prices.

Out-of-Stock Detection

- OSA (On-Shelf-Availability);
- OOS (Out-of-Stock).

Panoramic Shelf Scan

- Reduces the label replacement & out-of-stock solving time by showing label & product placement on shelf;
- Real time reports of shelves situation sent to management teams;
- Used to check against a reference planogram.

Why a semi-autonomous robot?

Labor Cost

Handheld devices
High labor cost
Low equipment cost

Automated devices
Low labor cost
High equipment cost

AI powered and semi-autonomous (human operated) ERIS builds bridges between solutions that are outdated, incomplete, or heavily reliant on staff intervention, and the difficult and costly autonomous ones.

ERIS

Autonomous Robots

Equipment Cost

PRICE LABEL DETECTION

- Reading displayed prices from the shelf-placed labels
- Comparing detected prices with actual checkout price
- Verifying that the labels are correct from the perspective of:
  - **Placement**
  - **Barcode**
  - **Double label occurrence**
- Option to print paper-back labels on-the-spot
- Option to integrate with ESLs gateways to update prices

Both **paper-back** and **electronic price labels** are supported.

LABEL MANAGEMENT

- **Barcodes**
  Detecting all labels even the ones where the barcode is either obstructed or not printed correctly.

- **Placement**
  ERIS displays where each label is placed on-shelf, its human operator quickly identifying misplaced labels.

- **Number of instances**
  As ERIS detects displayed labels and their placement, it reports the number of instances for each product label.

- **Double Label Occurrence**
  ERIS recognizes all labels with the same barcode printed and associated mismatched products

OUT OF STOCK

- **OOS-**using the ten vison modules ERIS is able detect on shelf product gaps
  On-shelf stock necessities list can be visualized, printed on the robots, and sent to other stock management systems
  OOS is also signaled on the shelf panorama obtained after the scan

- **OSA-**Estimating on-shelf availability of a product. For each detected product, the shelf occupancy percentage is computed. Stock necessities are issued, or alerts can be sent when a critical percentage of stock availability is reached.

- **This functionality enable stock trackability and alerts can be issued when products are available in the warehouse but not on shelves (especially in recurrent cases)**

PANORAMIC IMAGE

Reduces the label replacement time and OOS solving by showing label and product placement

Provides real time reports of shelves situation to management teams

Used to check against a reference planogram

Key Performance Indicators

Overall accuracy	**≈ 99%**
Shelf auditing	**x 15 faster** Than manual scanning
Scanned labels	**2600/ h**
Continuous usage	**8 h**
Error occurrence	**≈ 0**

SCANNING WORKFLOW

1. ERIS is taken out of the charging stand

2. The operator can start scanning by placing ERIS at the **beginning of the shelf** and **pushing it through the aisle**.

3. At the end of the scanning session, a **report is issued**, with all the encountered problems.

4. The employees can **restock** missing or low-availability products or **replace** any incorrect label. When price mismatched are found, the operator will be able to **re-print** the incorrect labels.

5. **Scanning reports** are automatically sent to managers and supervisors, as well as **integrated** in the existing systems of retailers.

Thank You!

ADAPTA ROBOTICS

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