

# Edgify

The #1 Product Recognition & Loss Prevention  
AI solution for Grocery Retailers

The H-E-B logo is contained within a white circular node on a dashed line. It consists of the letters 'H-E-B' in white on a red background.The Auchan logo is contained within a white circular node on a dashed line. It features a red stylized 'A' icon followed by the word 'Auchan' in red.The Giant logo is contained within a white circular node on a dashed line. It features a colorful leaf-like icon followed by the word 'Giant' in black.The Shufersal logo is contained within a white circular node on a dashed line. It features a red stylized 'S' icon followed by the word 'Shufersal' in red.The Waitrose logo is contained within a white circular node on a dashed line. The word 'Waitrose' is written in green.The Sainsbury's logo is contained within a white circular node on a dashed line. The word 'Sainsbury's' is written in orange.

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# Overview



# Frictionless & scalable Grocery Retail AI, with unrivalled performance

3k+

Devices across 12 countries. Rollout to 1000s of stores in weeks not years

65%+

Retailer's known Loss/Shrink reduced. Edgify is always ROI positive.

5X

Speeding up the checkout process on SCOs and Tills by up to 5 times, improving the customer experience, lowering labour costs and helping to avoid abandoned carts

63%

Average adoption rate increases on self-serve solutions (scales, SCO), driving margins and ROI with Edgify's lossless technology

# Empowering your hardware to reduce customer friction, and **solve loss prevention at scale**

BLIR

Barcode-less Item (Product) Recognition increases transaction speeds, and reduces customer friction, both in-store and in the back-of-house. We also offer Multi-item recognition for fast lane checkouts and "meal deals"

FS

False selection alerts at the SCO and Scales, reducing staff interventions and deterring loss

Enables reduced losses of 65%+ ↓

TS

Ticket (Barcode) switching intervention in real time

NS

Non Scans (Scan Avoidance) and Miss Scans

# Benefits to Vendors

1

## Drive your own sales

- Empower & **upsell your existing clients'** deployments with best-in-class product recognition and loss prevention AI technology
- Leverage Edgify to **sell new hardware** and/or software to Retailers

2

## A large new revenue channel

Two simple partnership models:

- Revenue Share: **20% of total annual revenues** on clients introduced to Edgify
- VAR/Reseller: Purchase licenses direct from Edgify and deploy across your clients without Edgify's involvement

3

## Quick & flexible integrations

- **Quick to integrate and no integration or installation fees**
- Level 2/3 Support
- Training, demo, and showroom support

# Partner Vendors from Scale Manufacturers to OEMs trust Edgify's framework

## Edgify



flooid

DATALOGIC



FLYTECH



BIZERBA



PARTNER  
CARE . TRUST . RESPONSIBILITY



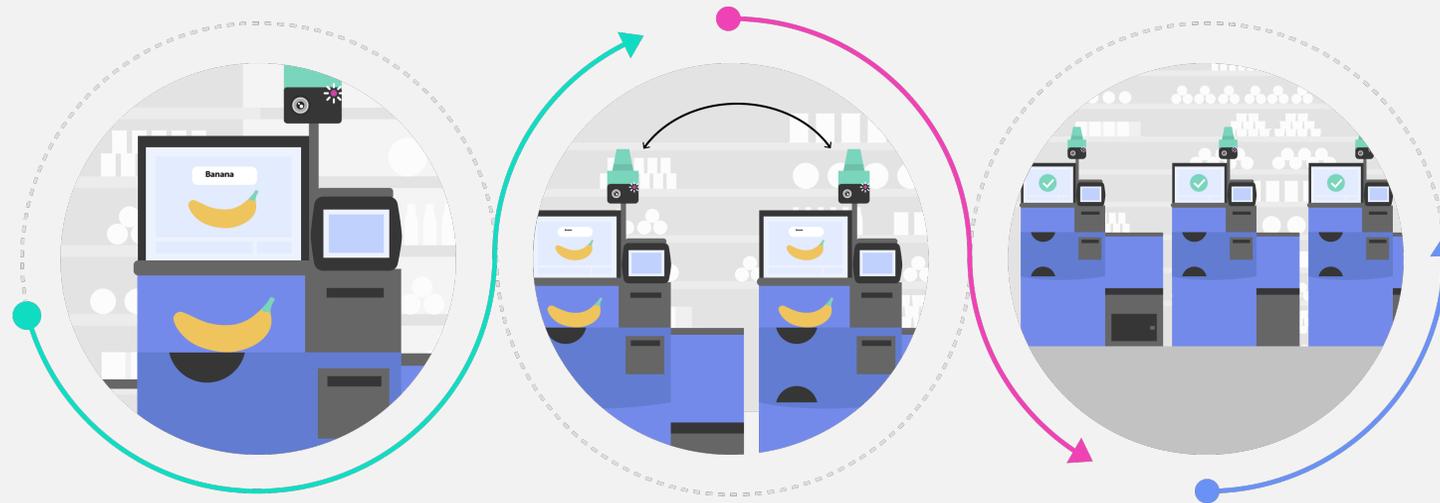
Edgify

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# How Edgify Works



# A simple demo of why Edgify's edge **training framework**, will always generate the best real results



Step 1

As customers are shopping as usual, they teach Edgify how to identify products by selecting items as normal

Step 2

Each machine trains its own model on the products that it sees

Step 3

All the machines collaborate their knowledge - not the images - to create one robust model that can help recognize products and identify & prevent loss

# Vendor hardware agnostic and easily deployed on both new and legacy **POS**, **SCO**, and **SSS devices**



Manned  
Lanes (POS)



Self Checkout  
(SCO)



Self Service  
Scales

# Efficiency gains in back-of-house operations, whilst decreasing staff loss & errors



Staff  
Pickers



Inventory



Waste  
Management

Departments across: pre-packed, eCommerce, and logistics

# Easy to integrate, privacy-first, ROI generating AI magic



## Automatic & Improving

Real-time collaborative learning means there's **no need to train a new item in your inventory**. Our AI Model is **continuously improving its accuracy** on both existing & newly introduced items



## Built with Privacy in Mind

Edgify A.I models can pass on learnings from one store to another (within the same chain) to drive accuracy rates across store-wide. **Personally Identifiable customer data never leaves the store**, maintaining privacy & enterprise compliance



## Seamless Integration

Using existing in-store hardware, combined with easy camera retrofitting (if needed) means **there's no need to spend on extra hardware or infrastructure**, including servers and datacenters, whilst requiring near-zero staff training

# Edgify in Action

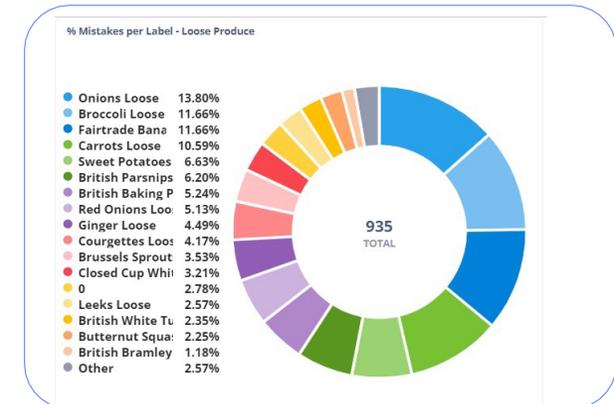
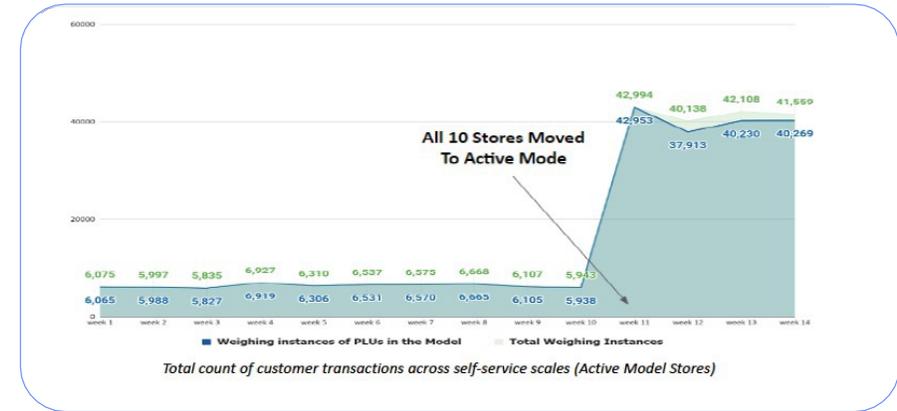
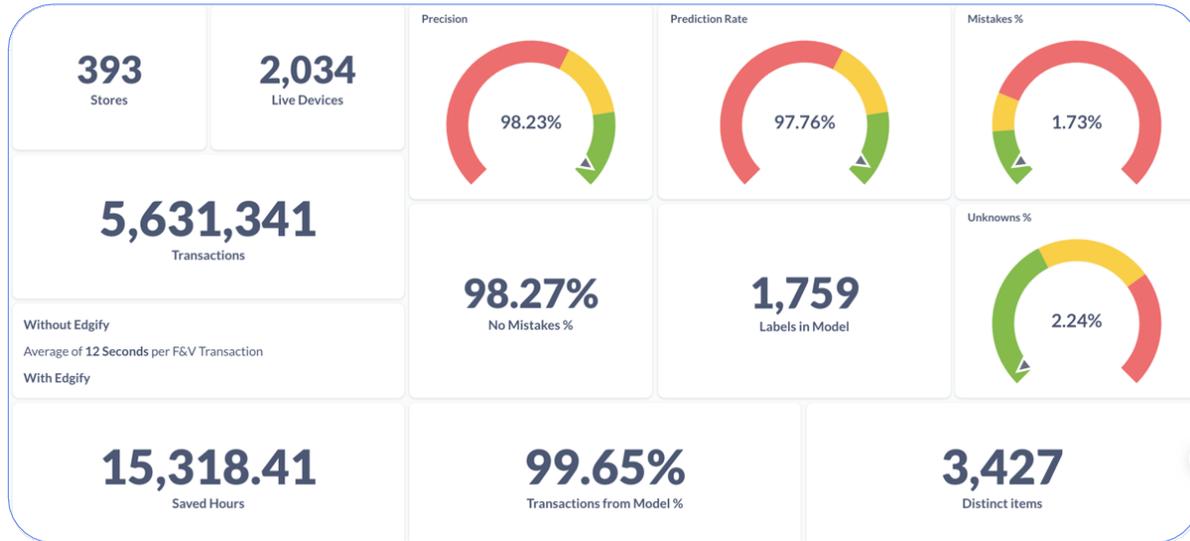


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# Deployment, Reporting, Analysis



# Comprehensive, Real-Time Reporting Dashboard



\*Example non-production data

# Weekly Advanced Reports



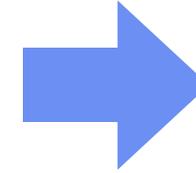
Number of transactions  
08/25-11/12/23



Est. time for store teams  
to process items



Time for Edgify to provide a  
prediction



Store team time vs. Edgify  
prediction time calculated  
over 12 weeks



100%

**Prediction rate:** % of times Edgify provides a  
predictions of total transactions



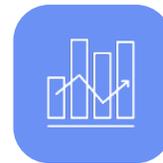
89.83%

**Prediction rate:** % of times the right item was  
predicted out of total predictions



1.3 Hours

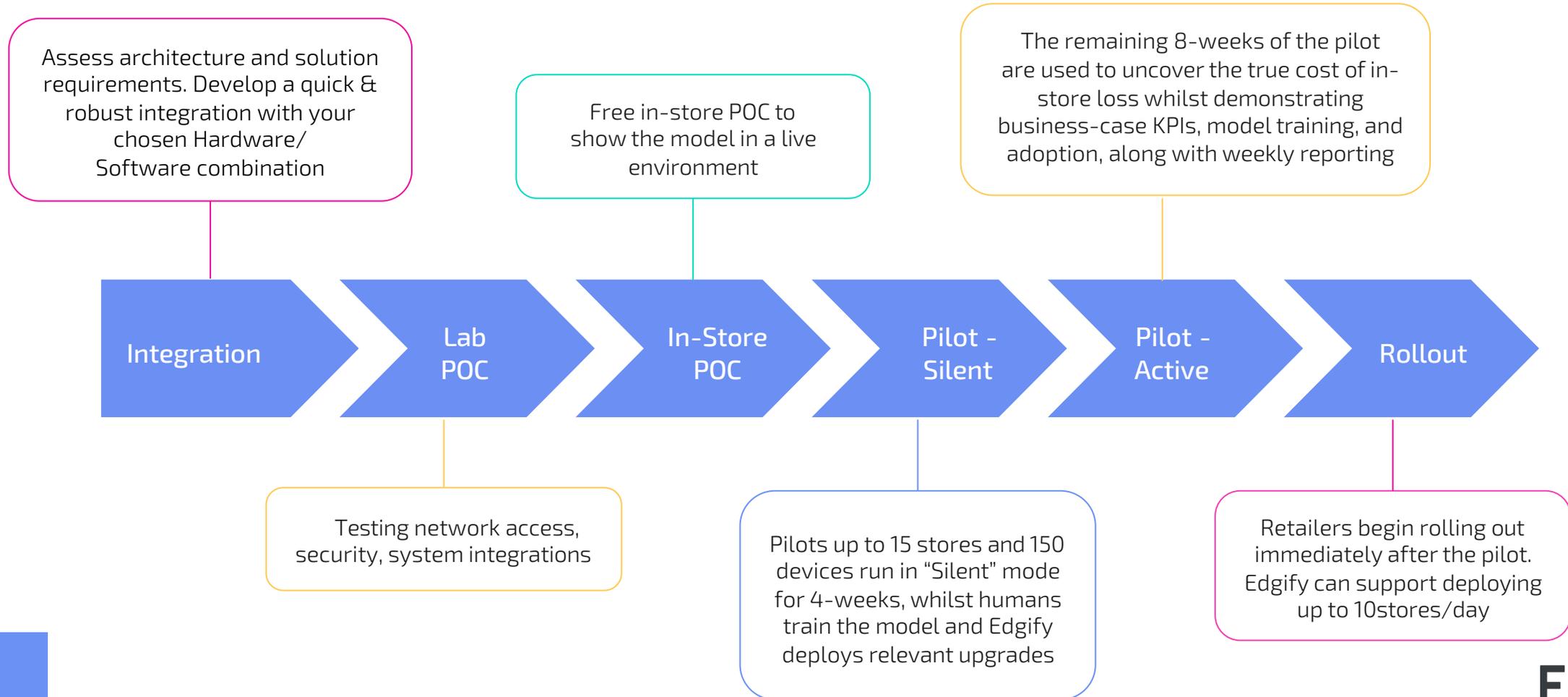
Time saved for customers this week



94.4 Hours

Coverage: % of total transactions that  
contained an item in Edgify's model

# Simple and repeatable deployment, with pilots uncovering the **true cost of Retailer shrinkage**



# The only Loss Prevention provider with **privacy, safety,** **and accuracy at heart**

	Training at the Edge	Inference at the Edge	Continuous Learning	Collaborative Learning	Hardware Agnostic	Doesn't Require Servers & Data Transfers
<b>Edgify</b>	✓	✓	✓	✓	✓	✓
 <b>TILITER</b> Retail	✗	✓	✗	✗	✓	✗
 <b>KANDUAI</b>	✗	✓	✓	✗	✓	✗
<b>everseen</b>	✗	✓	✓	✗	✗	✗
 <b>SeeChange</b>	✗	✓	✓	✗	✓	✗

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# Case Studies



# Retailer Client **Benefits**



## Operational Efficiency

Near 100% item recognition. Reduced pressures on store teams .  
Quicker throughput & less manual processes.



## Better Customer Experience. Faster!

Less time at scales. Quicker processes for customers and Partners.  
Happier customers.



## Greater Inventory Accuracy

Improved stock accuracy & supply chain optimisation.



## Reduced Loss & Shrinkage

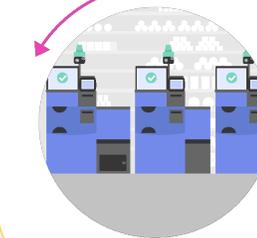
Less accidental or intentional errors. Reduced shrink.



Edgify uses machine learning on edge devices



The edge devices share information for training.



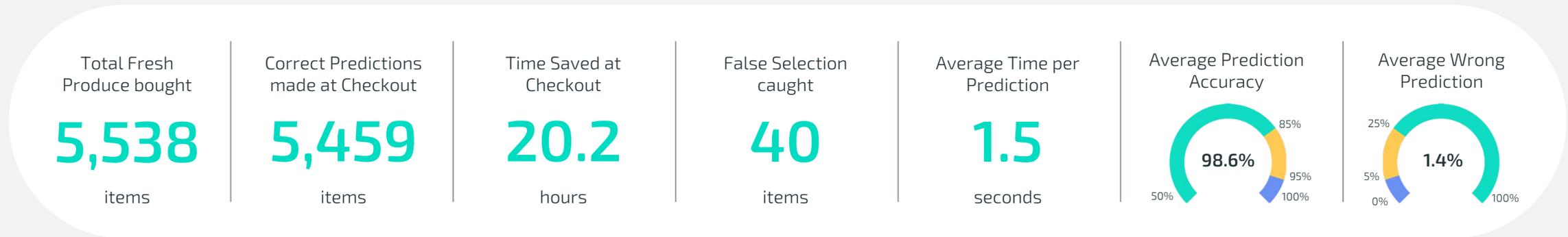
Learning on a continual loop between devices or stores.

# Live Case Study from Shufersal Deployment



Results of our product recognition and false selection solutions.

Data shown from one branch measured over one week (Branch number 244, week of December 15th 2022)



196 hours of checkout time saved for consumers in the first month of deployment

"The Edgify deployment is extremely easy and the speed at which they generate value made us commit to deploying their solution across our entire chain within a year!"

"Our vendors (NCR & Bolet) have shown us their competing solutions, but after testing, it was clear that Edgify was in a different league, so we mandated to our vendors to integrate Edgify immediately."

# Case Study: Bonus

Scan and Go setups can often bring a mix of challenges for shoppers and retailers alike. From annoying glitches, to barcode hiccups & a frustrating lack of assistance—customers can face a tech rollercoaster. On top of this, security worries, bagging quirks & low adoption rates can add to these challenges with stores juggling the knock on effects in loss prevention, scrambled data insights and limited training abilities.

Thanks to Edgify, Bonus' self-service scales now boast the capability to automatically detect and recognise over 50 fruit and vegetable variations.

“Through this project, customers can effortlessly scan their items as they shop, eliminating the need for traditional checkout lines. The AI scale ensures accurate product recognition and pricing, enhancing efficiency and reducing errors. Shoppers can enjoy a quicker and more convenient process, while retailers benefit from increased operational efficiency and improved customer satisfaction”

Bonus CIO, Steinar Kristjánsson



95% Accuracy

60% reduction in mislabels

Over 450 hours saved in 3-months

60+ Items-in-model

25% increase in scale adoption rate



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# Loss Prevention



# Loss Events Captured by Edgify

1

## Mislabelling: False Selections

Shopper intentionally selects an alternative item at the scale or SCO

2

## Label Switching

Shopper intentionally obscures an item's barcode and scans a lower cost item in its place to reduce their total basket cost

3

## Scan Avoidance

### a) No Scan:

Shopper intentionally doesn't scan an item; moving the item from their basket to the bagging area to avoid paying for it.

### a) Miss Scans

Shopper tries to (or pretends to) scan an item before placing it in the bagging area. In either case the scanner doesn't register the item & the customer doesn't pay for the item.

# Loss Events Captured by Edgify: Examples

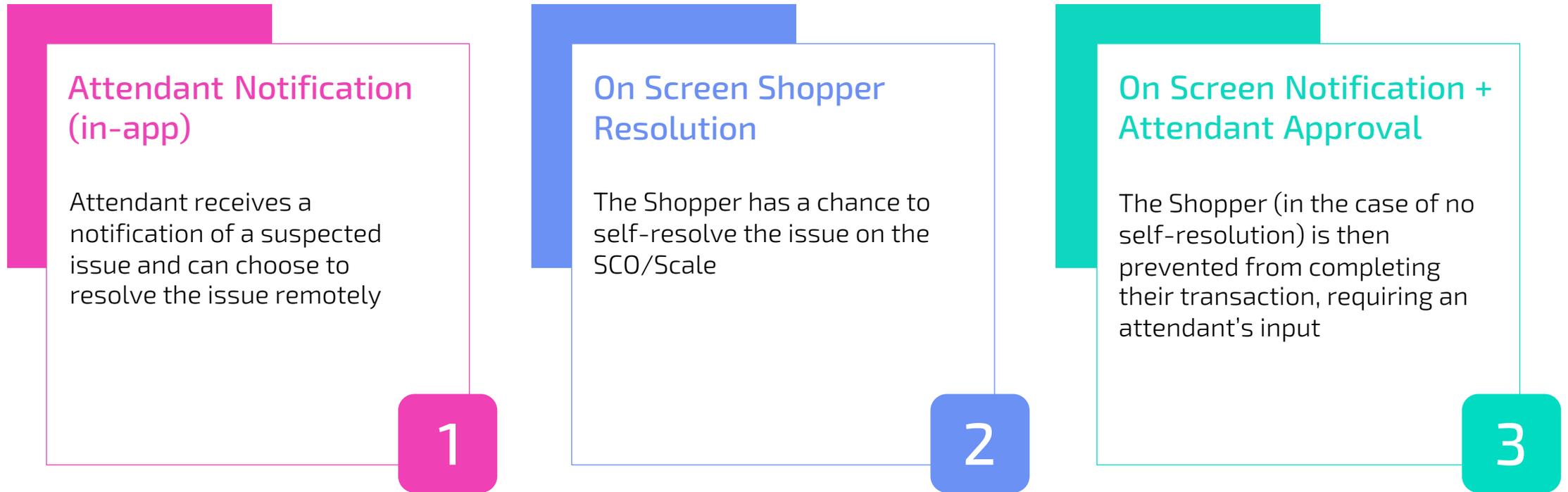
Barcode Switch



Non-Scan

# Loss Prevention Flows Overview

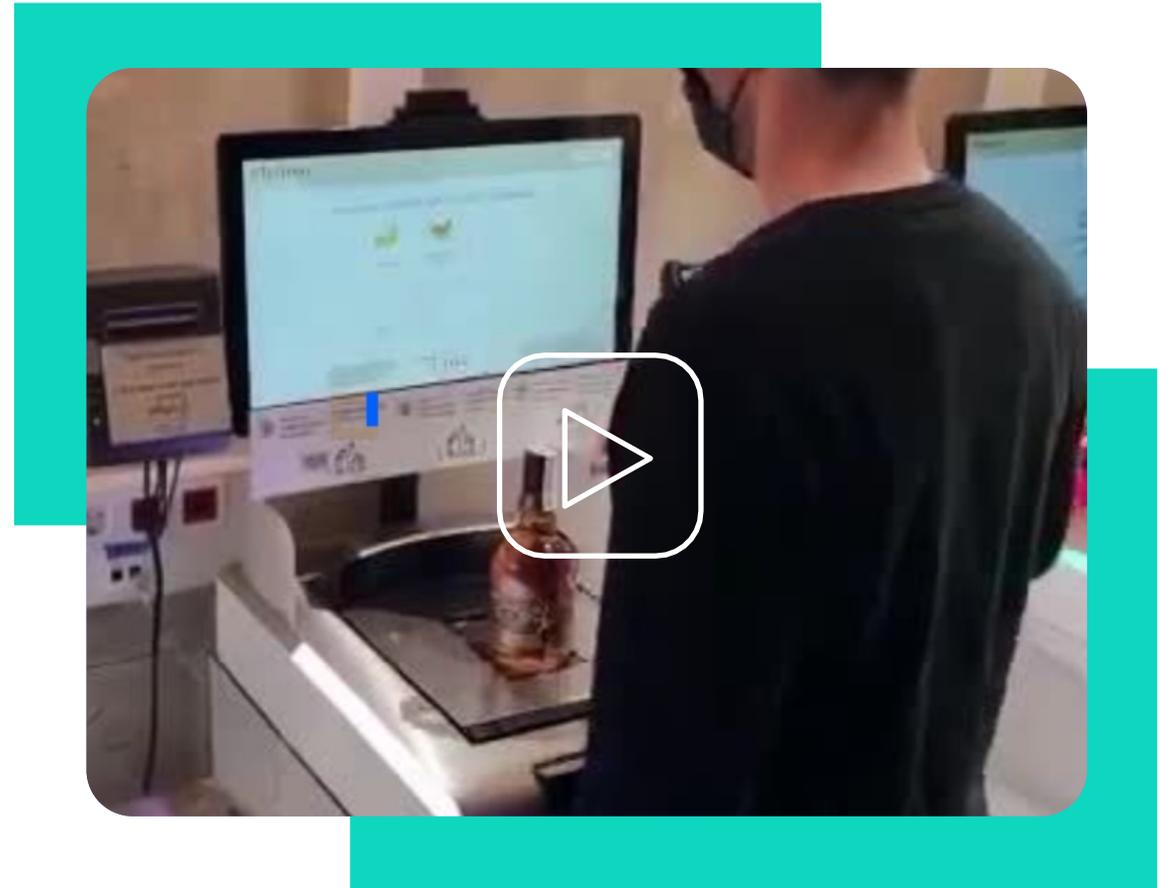
All flows are triggered by Edgify's Platform



# 1. Loss Prevention Flows: Attendant Notification

## Details:

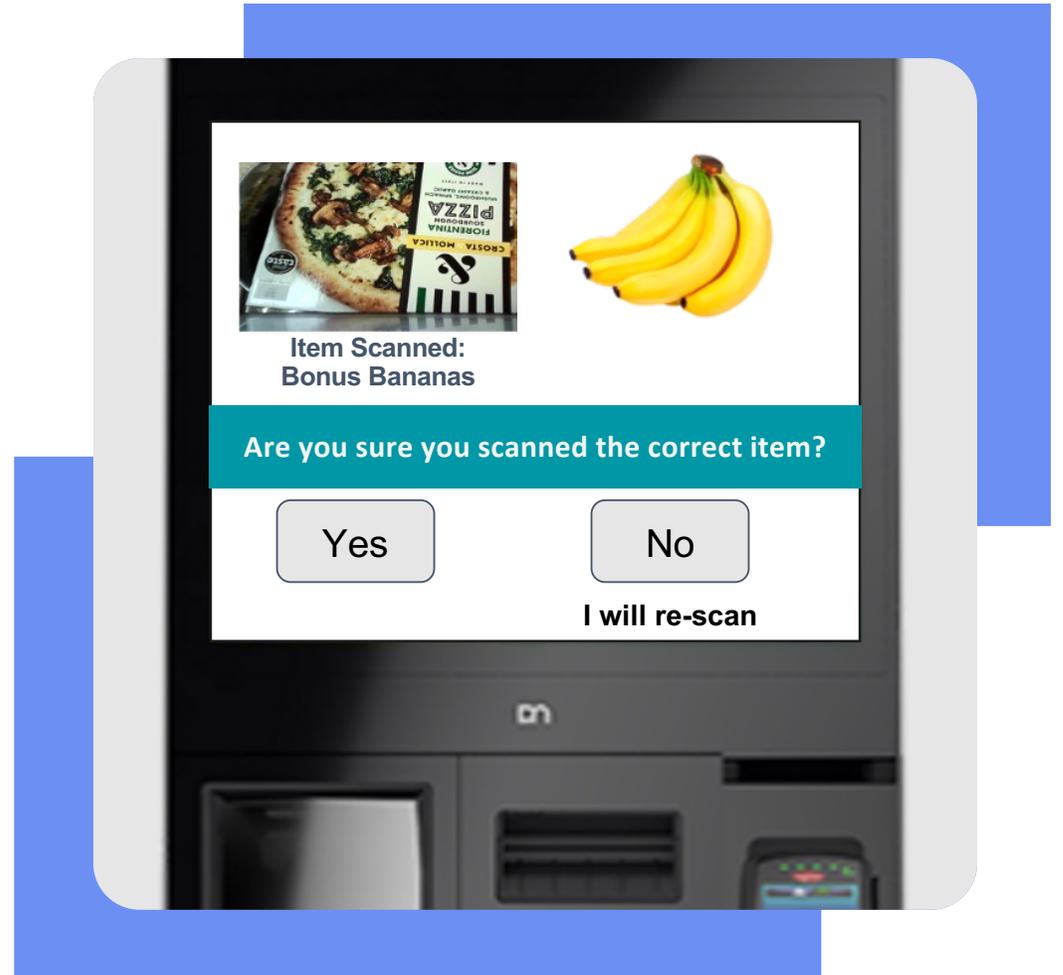
- 1 Attendant receives a silent alert on their handheld device
- 2 Attendant can view the image of the scanned item vs. the scanned barcode
- 3 Attendant locates the suspected session and monitors the shopper
- 4 Attendant has the opportunity to resolve the issue remotely



## 2. Loss Prevention Flows: On Screen

### Details:

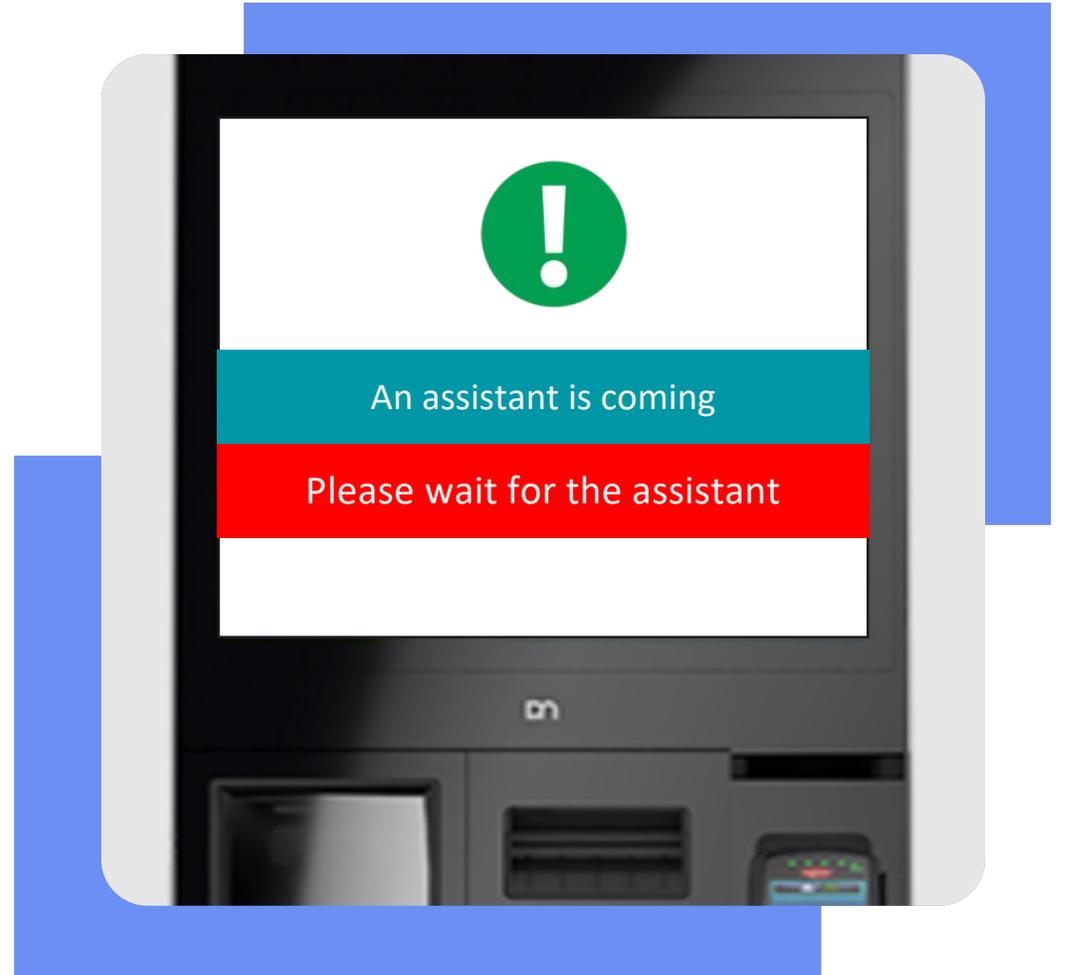
- 1 Shopper receives an on screen mid-session nudge & request for resolution
- 2 Shopper decides to continue with or without resolving the issue(s)
- 3 If the customer chooses not to self resolve: option to proceed to flow 3.



### 3. Loss Prevention Flows: On Screen + Attendant

#### Details:

- 1 Shopper chooses not to resolve the issue(s)
- 2 Hard stop on screen; ending the shopper session and preventing them from completing their transaction
- 3 The Attendant can engage the Shopper by offering assistance and intervene before the shopper completes their transaction



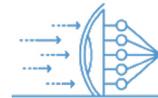
# Edgify.ai/retail



The Fourth ACM/IEEE Symposium on Edge Computing  
Washington DC, November 7-9, 2019



The 23<sup>rd</sup> IEEE International Conference on Intelligent Transportation Systems



CVPR 2021  
Conference on Computer Vision and Pattern Recognition

Online\*  
June 19-25, 2021

Edgify – Mitigating Label Noise



NeurIPS 2019  
33<sup>rd</sup> Conference on Neural Information Processing Systems

Vancouver, Canada  
December 8-14, 2019

Edgify – Federated Curvature



Edgify – Batch Normalization with Non-IID data