

SCANDIT

# IoT-based Future of Barcode Scanning

Blending Physical and Digital with  
Computer Vision and Augmented Reality

Samuel Müller, CEO

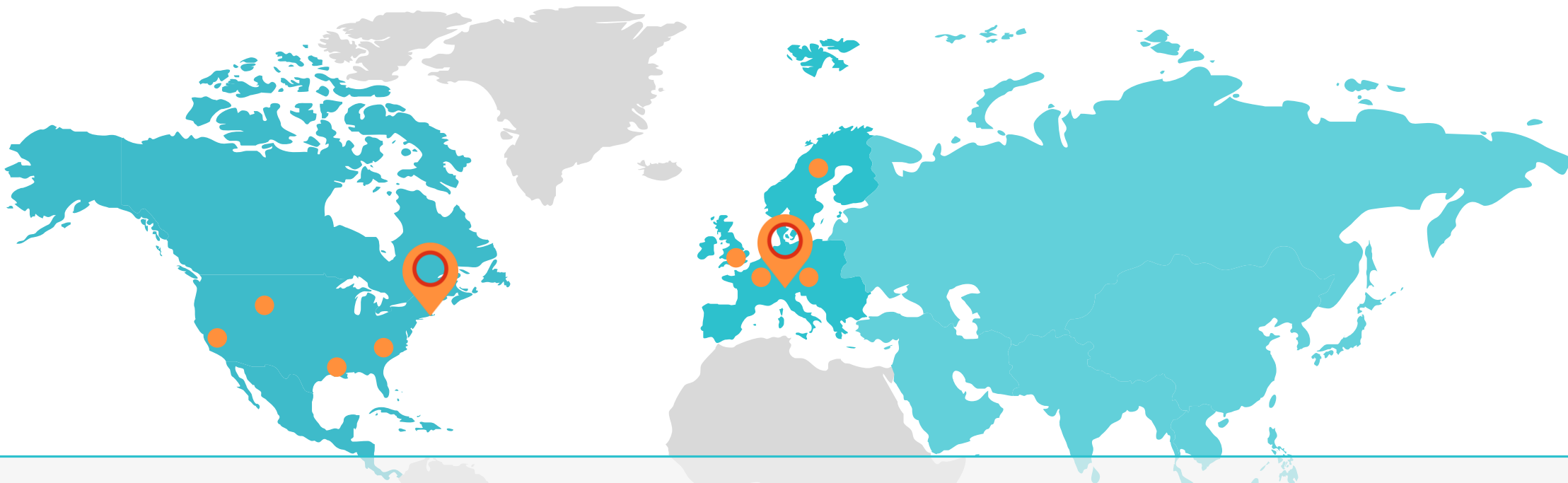
Scandit

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Confidential

# Scandit – Leader in Mobile Computer Vision for Enterprise Applications



## Established:

- Offices in San Francisco, Boston, London, Warsaw and Zurich (HQ)
- Backed by GV (Google Ventures), NGP Capital, Atomico and former SAP/hybris leadership

## Trusted:

- Global customer & partner base, across US, EMEA and APAC
- Preferred mobile barcode scan technology provider of GS1

## Proven:

- 1,000s of Scandit-powered data capture solutions
- 100+ million active mobile devices
- Billions of scans per year

# Leading Global Brands Trust Scandit

## Retail



## Wholesale



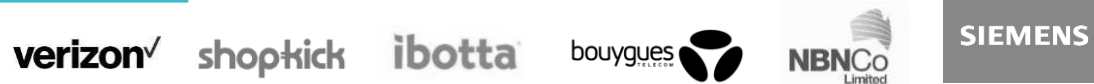
## Logistics & Transportation



## Manufacturing



## Technology

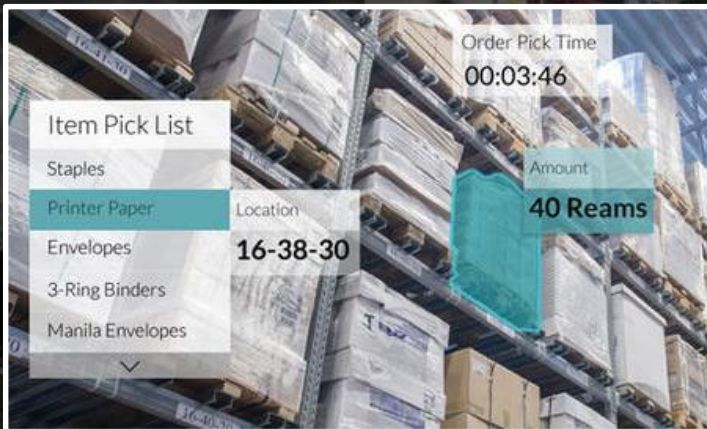


## Other





# Vision: Use Computer Vision to Extend the IOT Paradigm To Everyday Objects



Traditionally, IOT is all about connected devices with embedded computing and communication capabilities.

By leveraging camera-based vision technology we can bring the benefits of IOT in terms of improved efficiency and accuracy to the world of everyday objects.





# Barcodes and Computer Vision

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# Barcodes: Universal Identification for Global Commerce



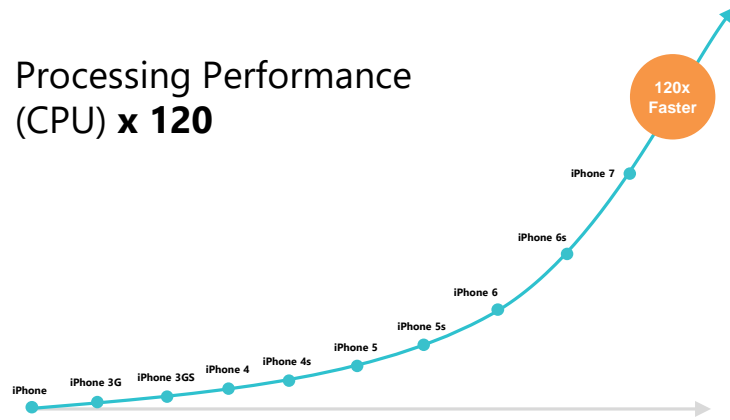


Reliance on industrial barcode scanners (**USD \$10B industry**)  
= **dedicated, costly hardware**

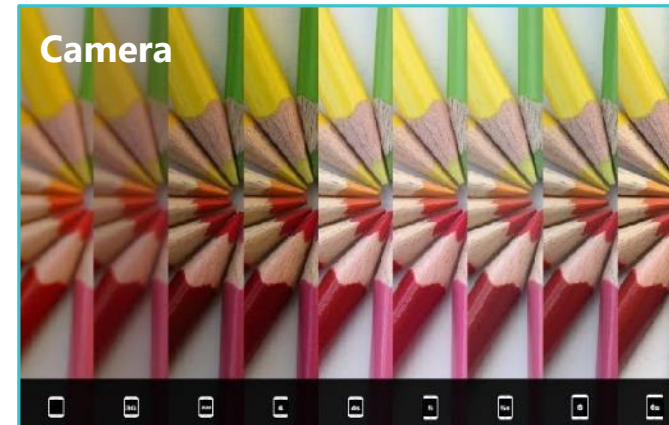
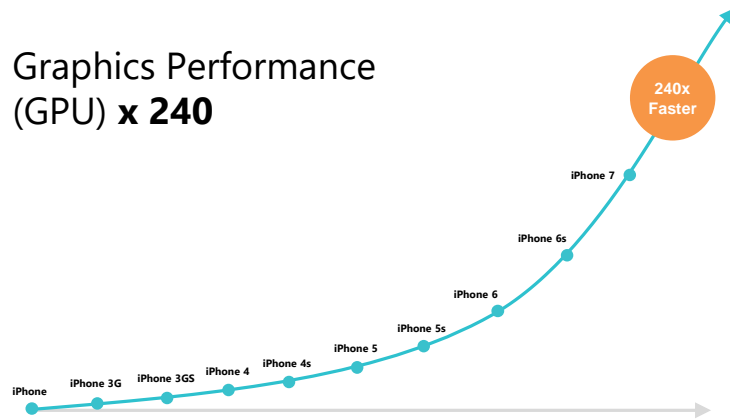
- 1 Users need to carry a dedicated, clunky HW device
- 2 Outdated mobile OS, dev platform and tools
- 3 Hardware-centric solutions limited to supply-chain & retail operations

# Smart Devices Can Run Sophisticated Computer Vision Algorithms

Processing Performance  
(CPU) **x 120**



Graphics Performance  
(GPU) **x 240**



**iPhone 1 vs iPhone 7**



# Economies of Scale

**320**

million units  
in 2017

**SAMSUNG**

**<150**

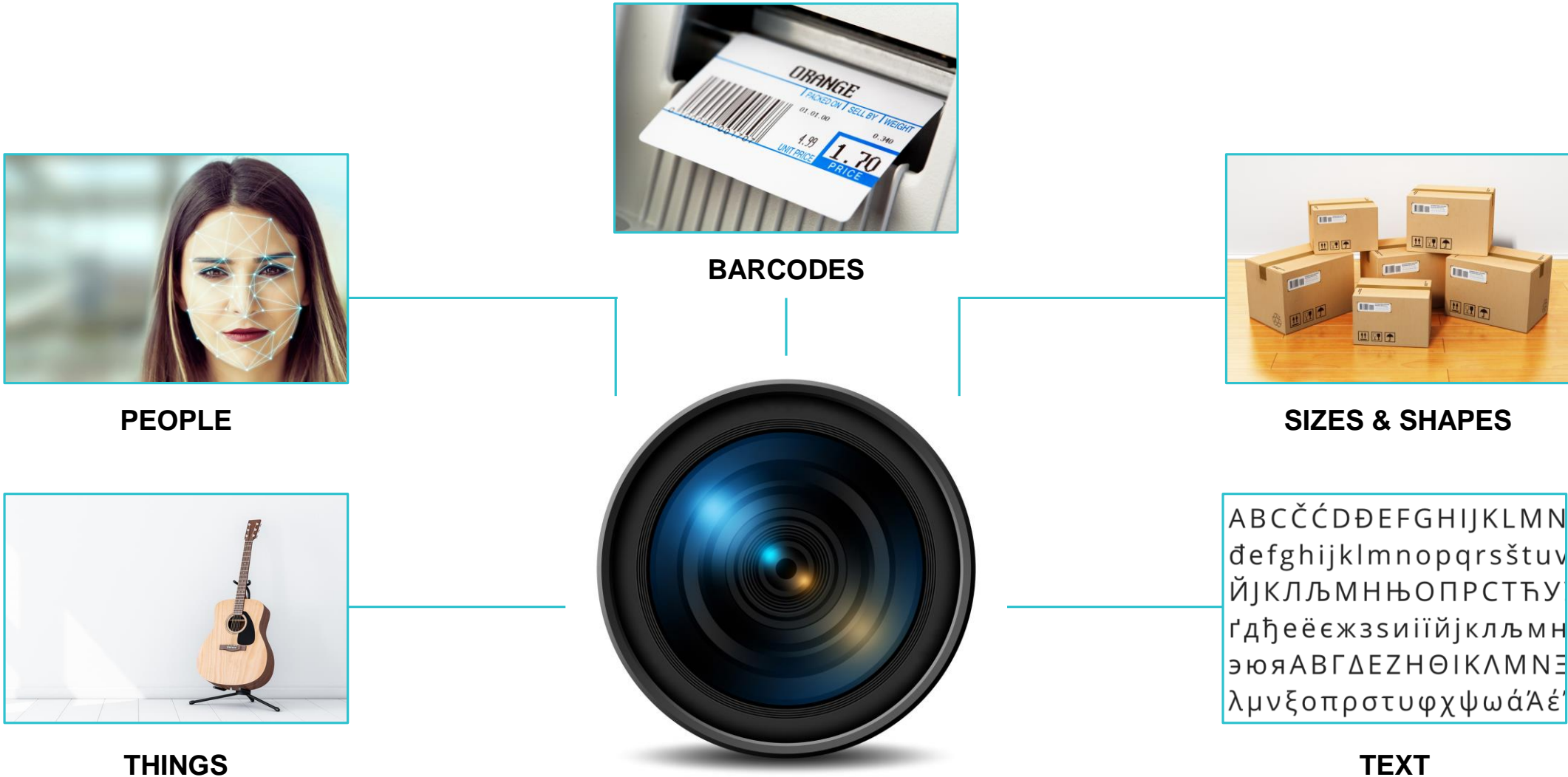
Million units  
in 30 Years

All dedicated  
AIDC Devices

Economies of Scale Lead to:

- Higher Quality Standards
- Lower Cost
- Higher Performance
- Faster Innovation

# Computer Vision Can Enable Interactions with Everyday Objects

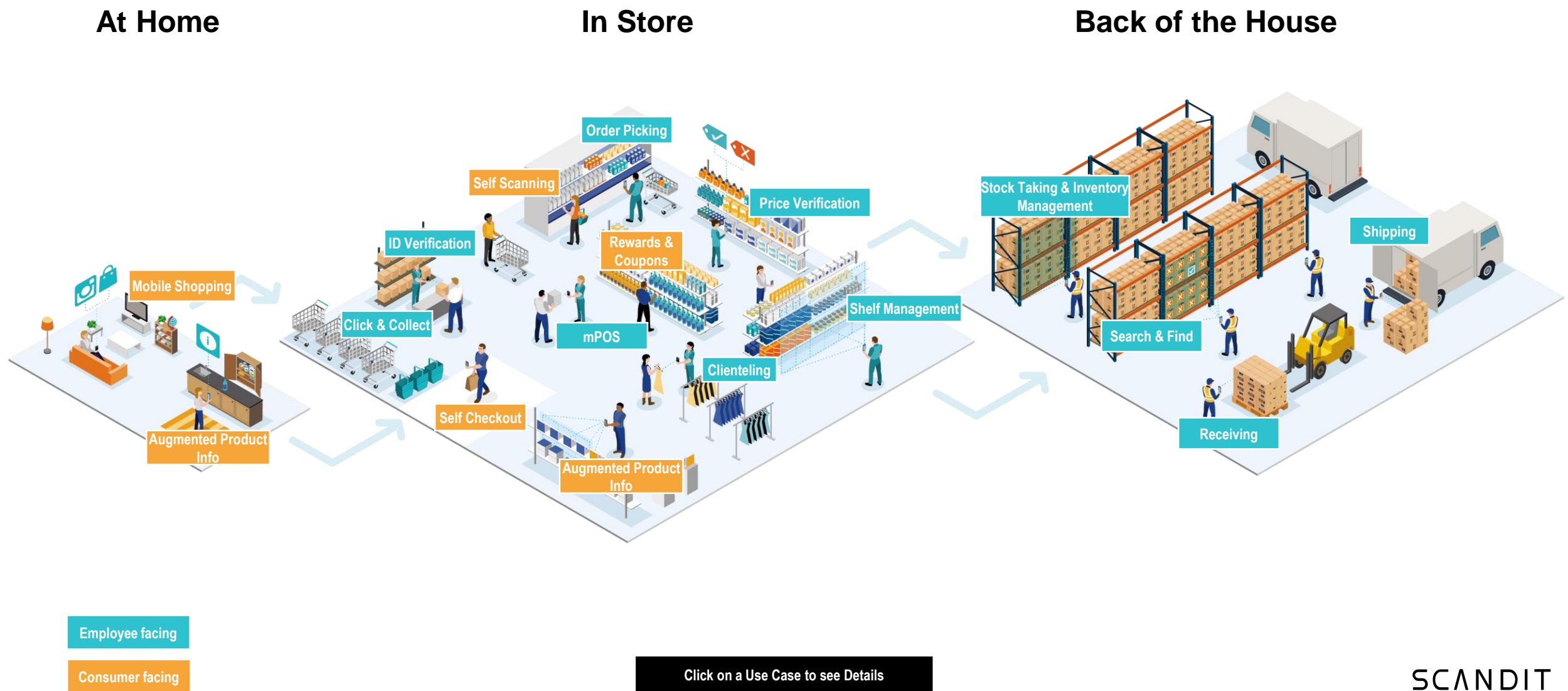




# Retail Use Cases



# Leveraging Barcodes to Create Value Across the Retail Ecosystem





# At Home

Consumer Use Cases

# Mobile Shopping

## Solution

Scan barcodes with smart phone camera in any condition from any angle at varying distances, instantly.

## Impact

Power your omni-channel deployment to let your customers explore, find, buy or re-order your products anywhere. No typing required.

TODAY

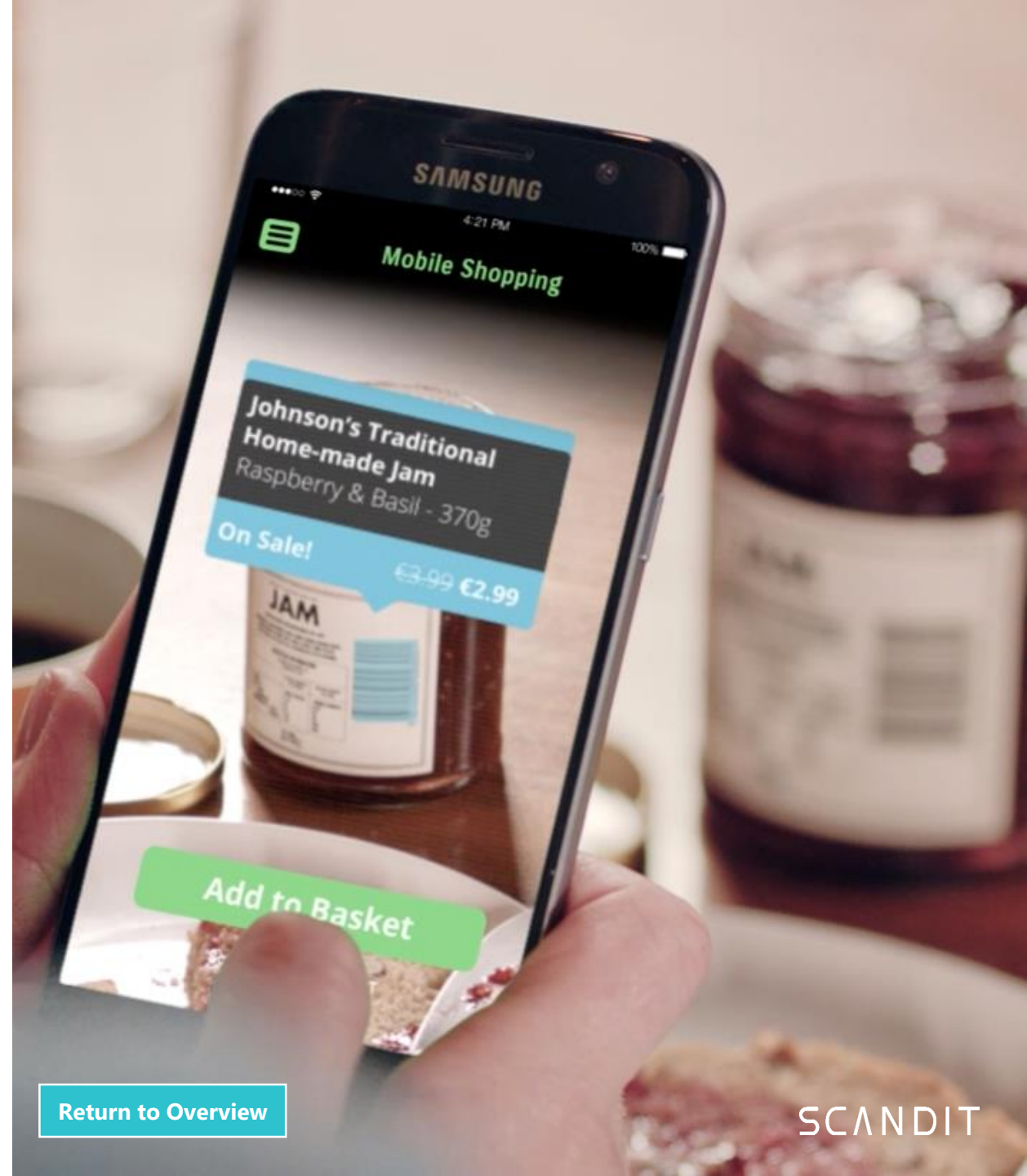
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FUTURE

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# In Store

## Consumer Use Cases

# Augmented Product Information/Clienteling (B2C & B2E)

## Solution

Blend virtual and physical worlds with Augmented Reality (AR) to overlay product information or ratings on products.

## Impact

Help your customers make better decisions and combine a great in-store experience with the benefits of online shopping.

Empower store associates to better serve the customers in store with relevant and up to date product information

### TODAY

### TOMORROW

### FUTURE

#### PLATFORMS

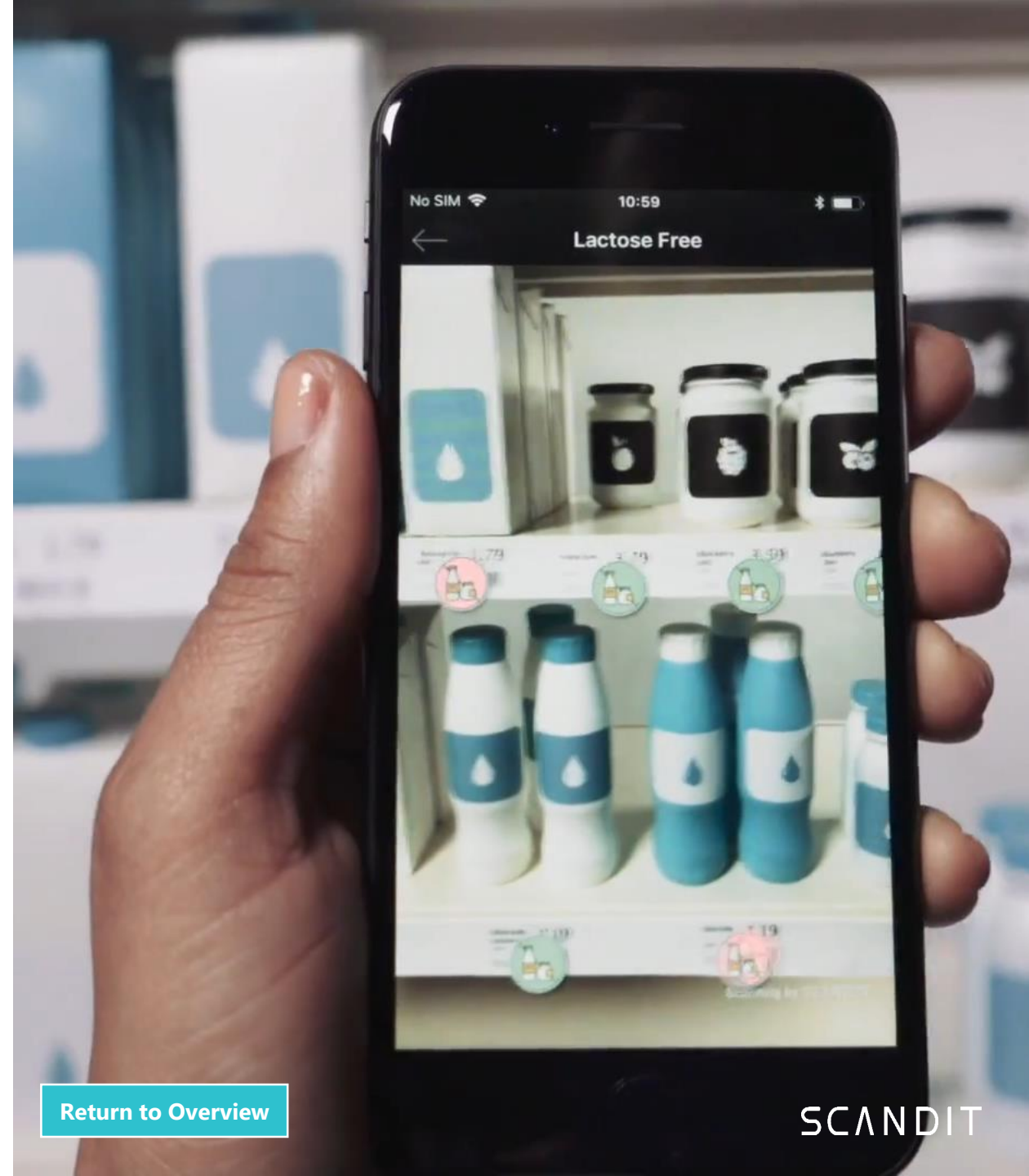


Clienteling only

#### DATA CAPTURE TECH

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# Self Scanning

## Solution

Scan barcodes on own smartphone to add products to virtual shopping basket and pay with a click of a button or at checkout kiosk.

## Impact

Customers who use their mobile shopping app for self scanning enjoy more personalized experience, spend more than three times as much per order (vs. stationary checkout customers) and don't need to wait in line.

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# Personalized Coupons

## Solution

Leverage AR to show personalized deals or product recommendations as the consumer is shopping.

## Impact

Increase upsell potential by maximizing the power of coupons. Build brand & store loyalty.

Initially for products that are visible in the screen, in the future for products that are nearby (gamification, hunt for deals)

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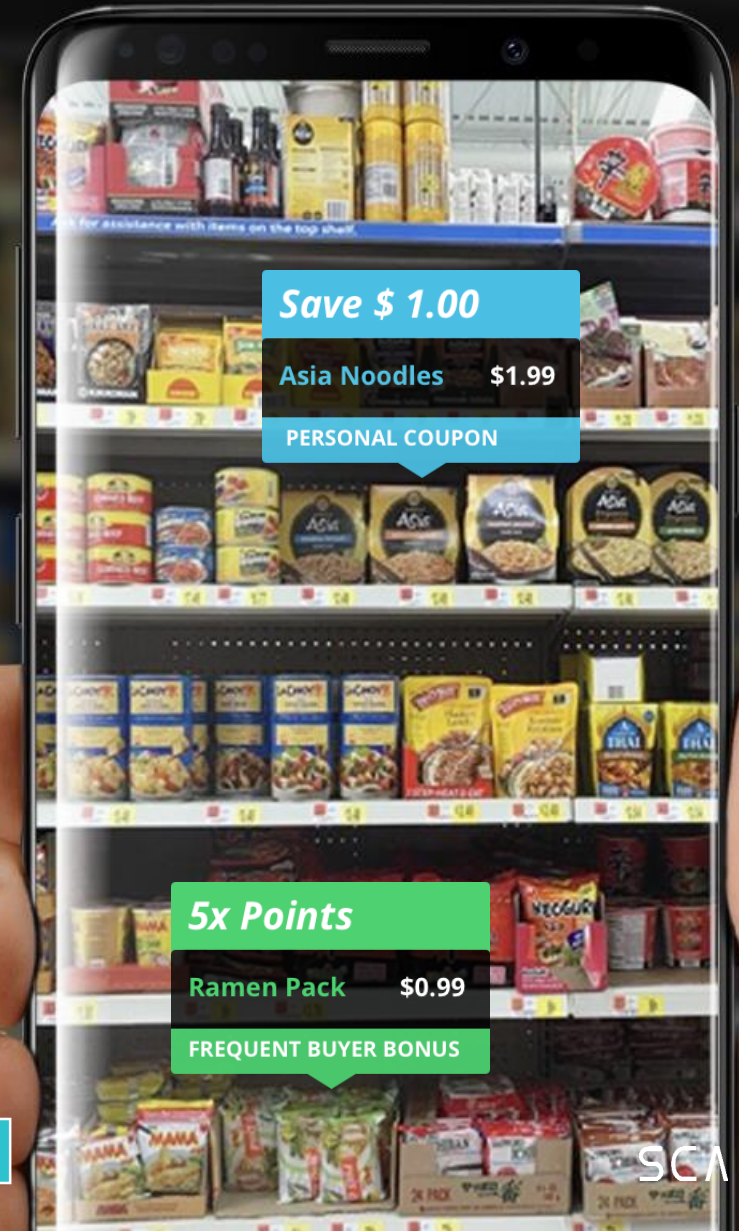
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# In Store

## Employee Use Cases

# Mobile Point of Sale (mPOS)

## Solution

Scan multiple barcodes as well as ID cards without the need for expensive and inflexible additional hardware

## Impact

Lower TCO than dedicated systems or sleds. Flexibility to upgrade devices independent of payment system. More efficient checkout (multi code scanning). Flexible deployments via front-facing and back-facing cameras.

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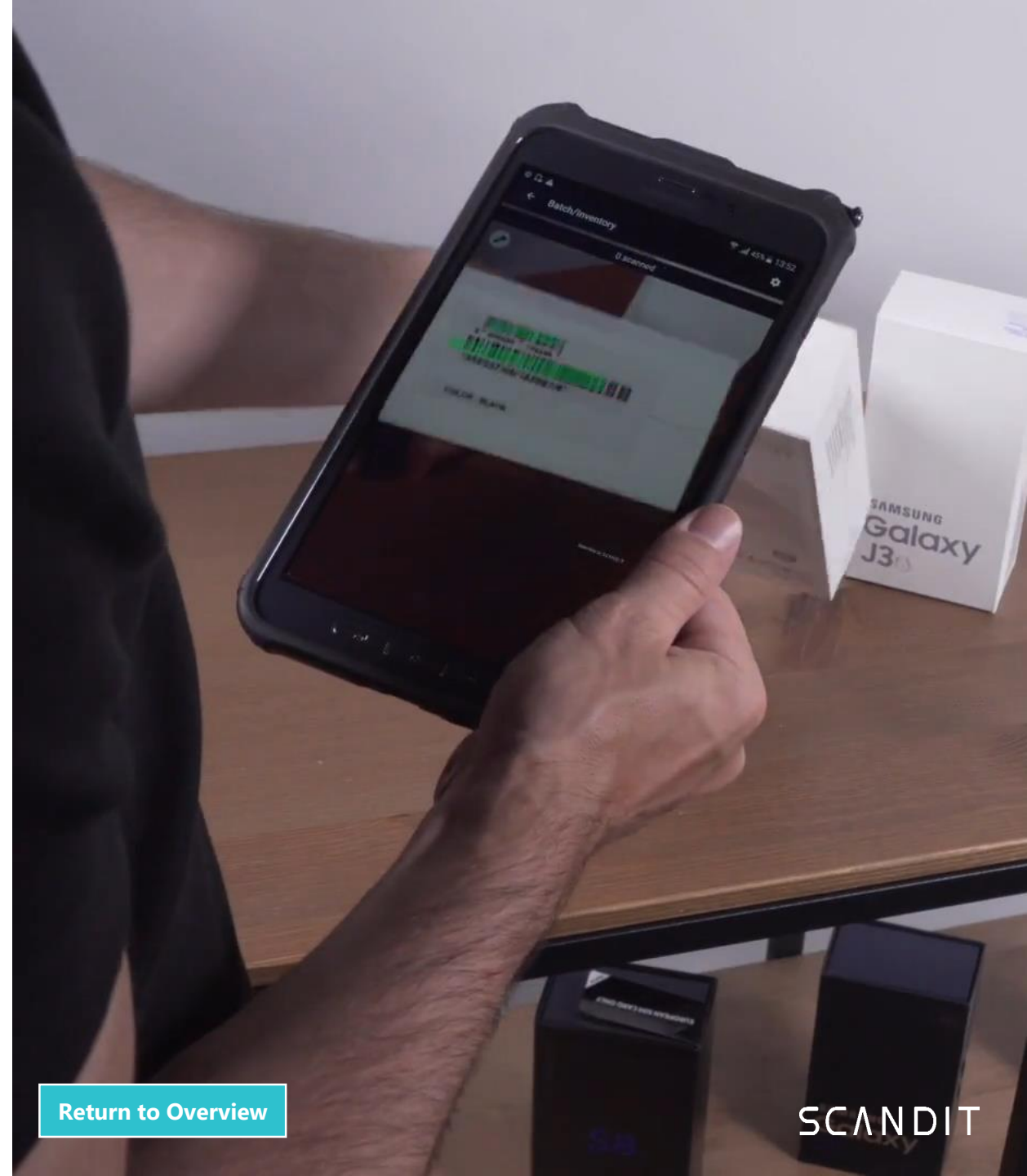


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# Shelf Management

## Solution

Leverage augmented reality overlays to get status on stock levels, delivery dates etc. and take action.

## Impact

Store associates have an intuitive and efficient way to solve issues on the shelves or provide customers with information. Saves time and empowers the workers.

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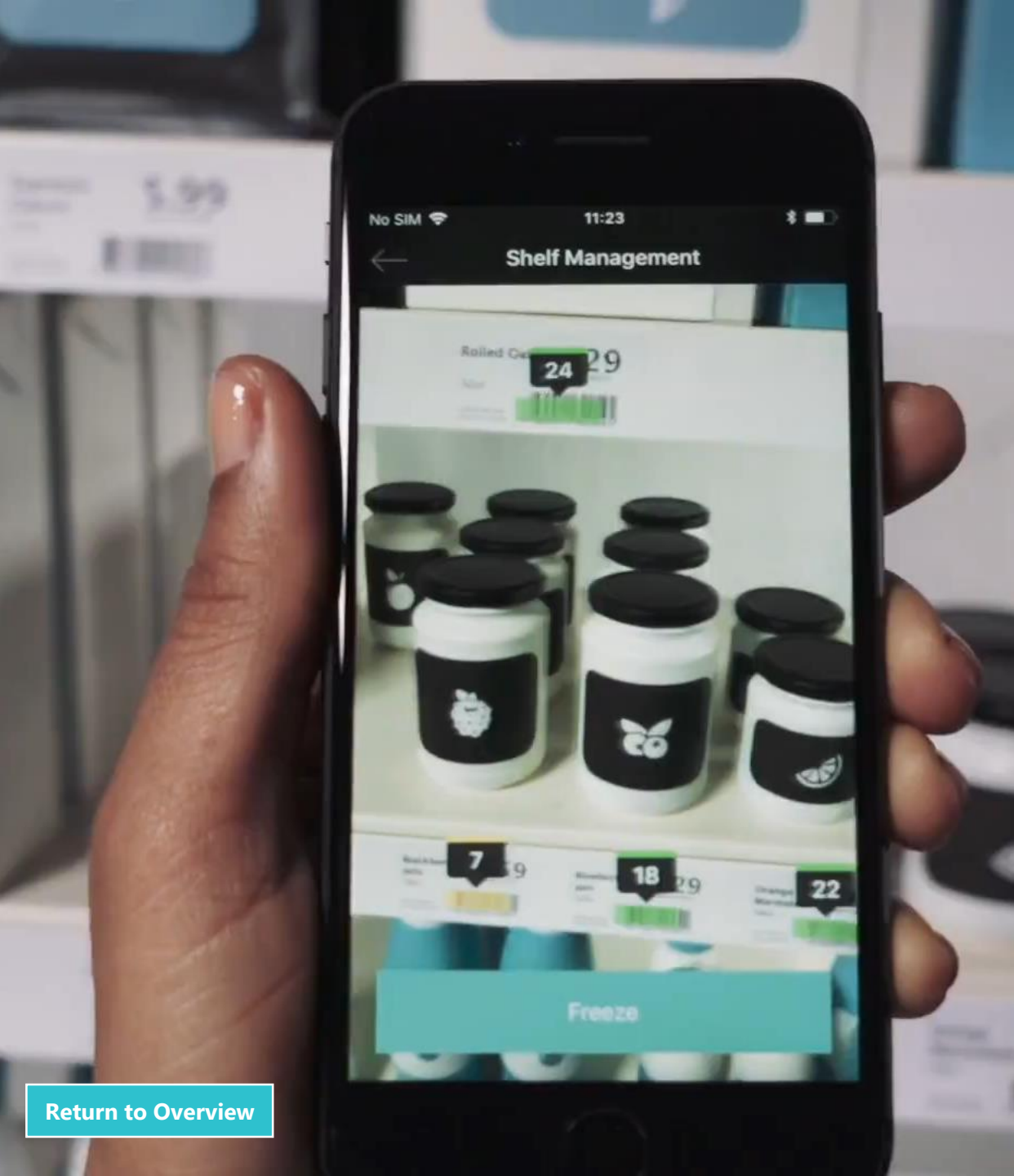
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# Price Verification

## Solution

A combined barcode and price scan (OCR) provides intuitive and instant feedback if a price label is correct.

## Impact

Significantly speed up price verification and reduce human error.

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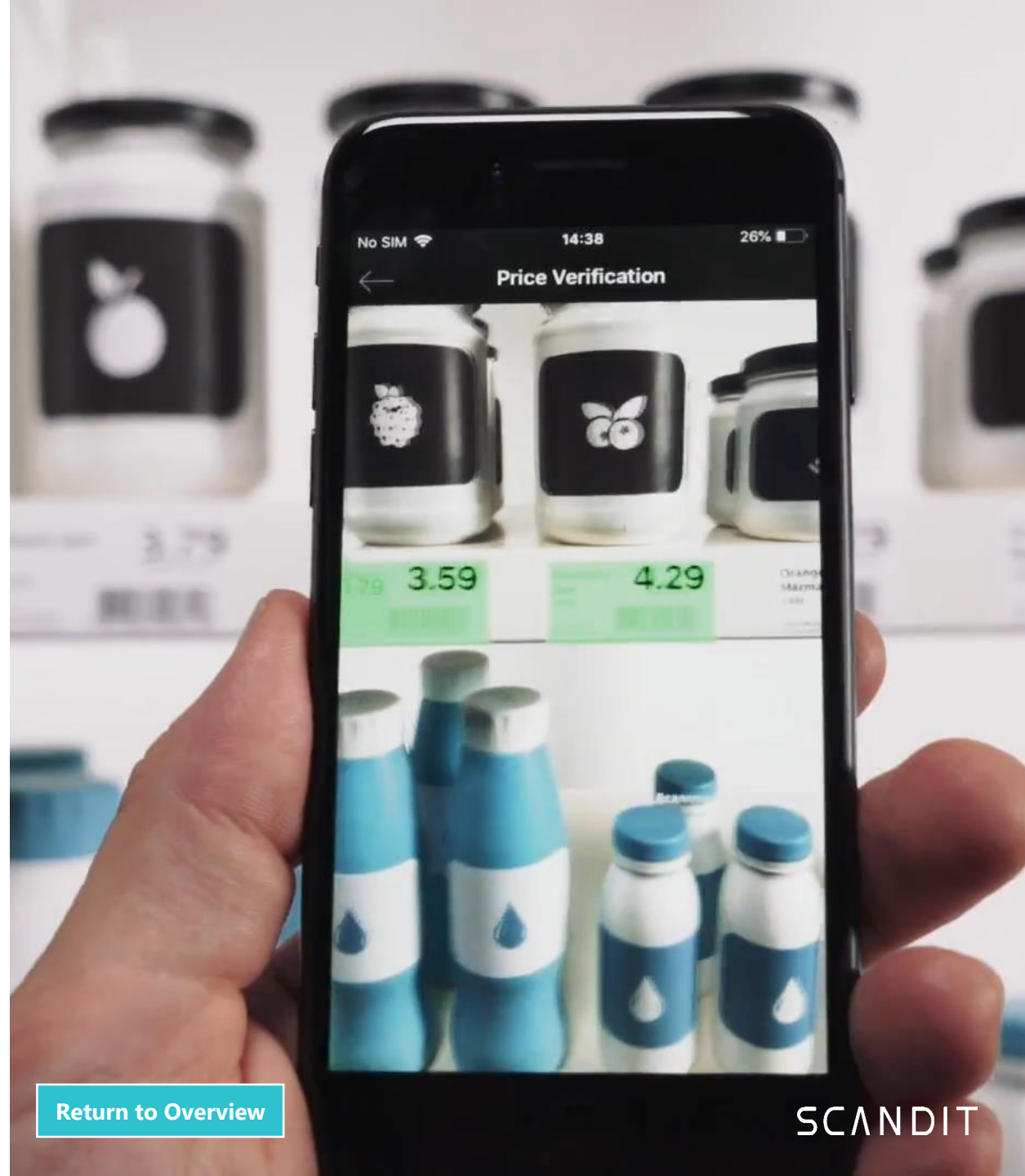
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# Click & Collect Buy-Online-Pickup-In-Store (BOPIS)

## Solution

Augmented Reality-supported search and find helps better serve your click and collect customers. Scan the barcode on the customer receipt and swiftly locate the order.

## Impact

Save time for store associates and faster order fulfilment for customers resulting in increased customer satisfaction

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# Back of the House








# Inventory Management

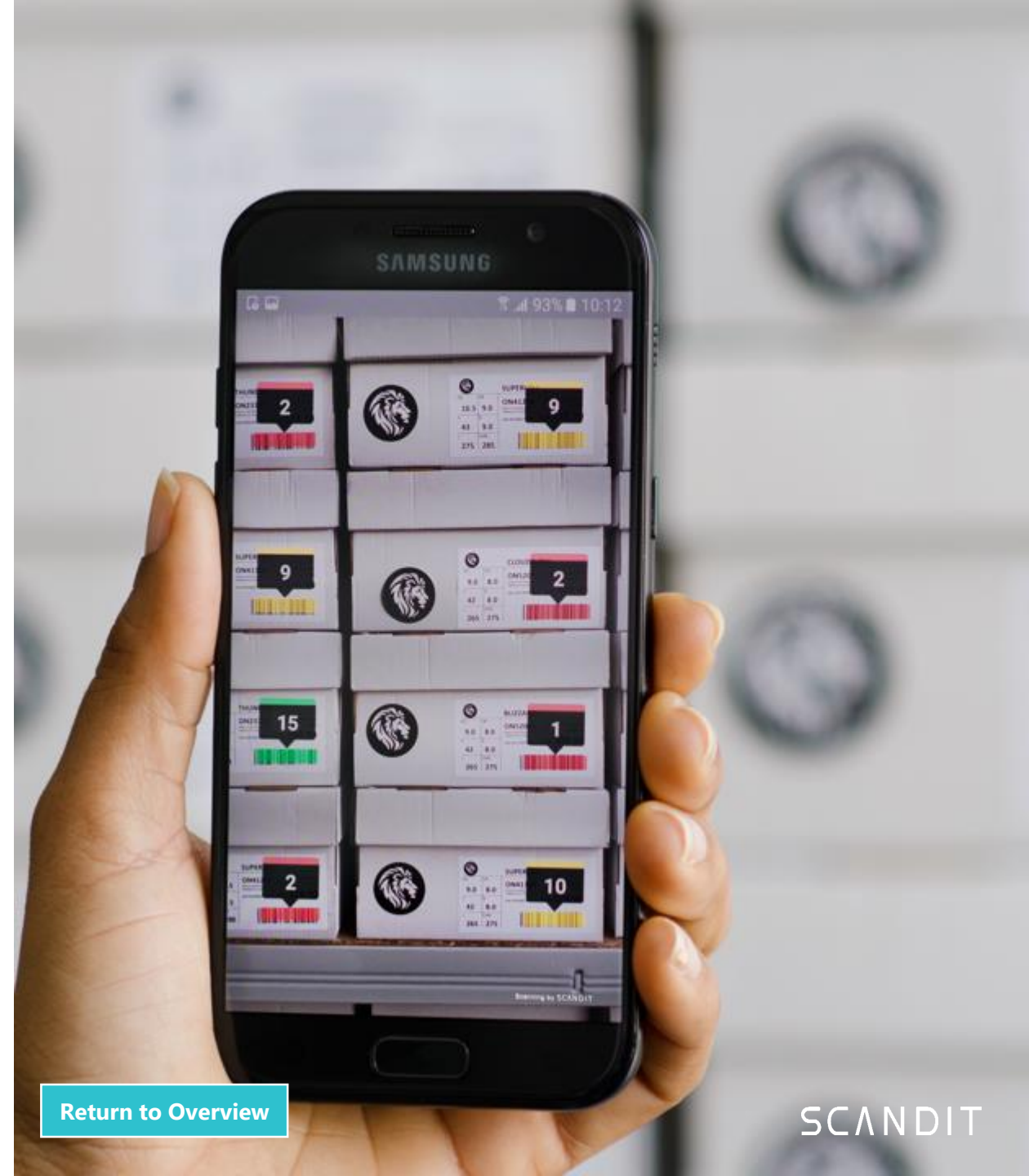
## Solution

Empower your employees to update stock or inventory levels, get detailed product information and manage replenishment on the sales floor, at the point of sale or in a warehouse environment.

## Impact

Fast, accurate barcode scanning with smart devices eliminated the need for recounts. Employees instantly connect to enterprise systems to replenish items immediately.

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# Shipping & Receiving

## Solution

Capture all the data from a shipment in a single scan and dramatically reduce the time required to prepare goods for shipment or receive goods at the dock

## Impact

Authenticate shipments and instantly report damaged or missing items

Document damaged goods or shipments sent to the wrong store in real time.

TODAY

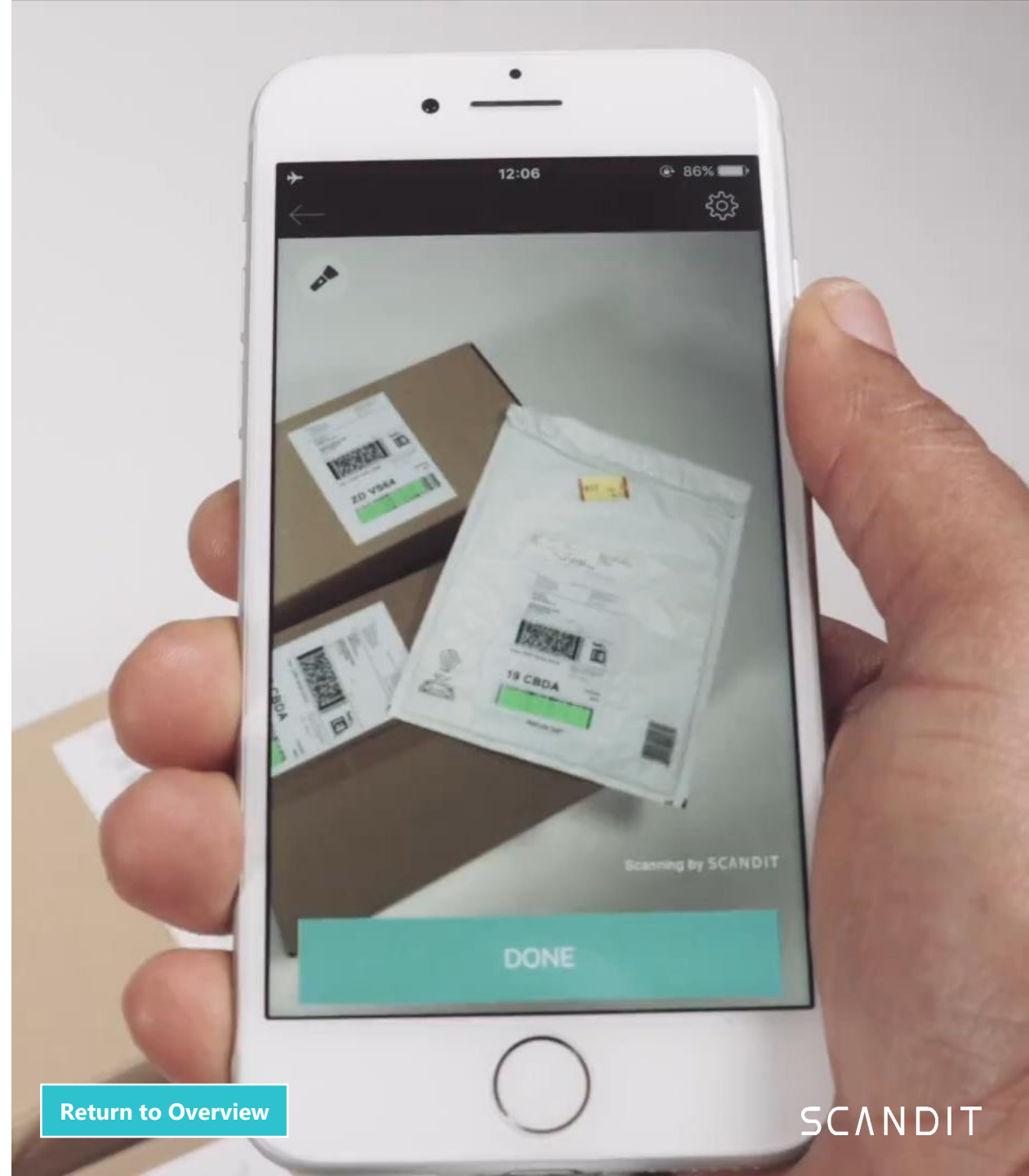
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Bringing it all together



[Video](#)





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**Scandit.**  
**Found it.**  
**Bought it.**

Samuel Müller, CEO  
Scandit  
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