

SCANDIT

Think Like Amazon

**How to create a digital in-store
retail experience for less with
mobile computer vision**



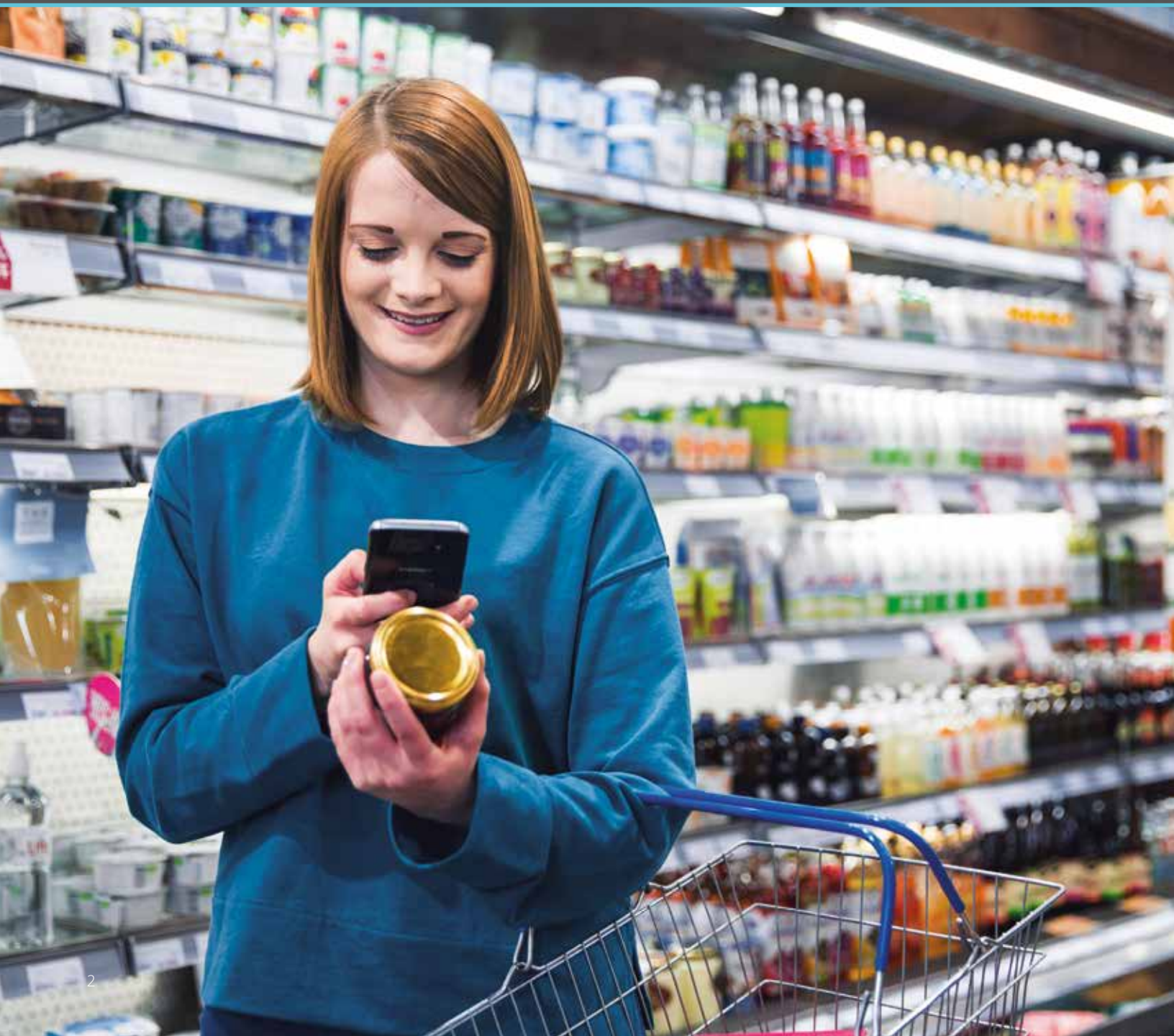
#ScanditLovedit


“

With the integration of Scandit, Coop has been able to deliver a robust, high performance mobile application that provides a personalized shopping experience for customers while driving revenue for the company.

August Harder
CIO at Coop Switzerland

”





We're in a retail revolution. And whilst some retailers are in crisis, others are flourishing and setting exciting new trends in consumer and employee experience.



We're seeing a resurgence of the physical store, repackaged for the 21st century as a smart digital consumer shopping experience. Amazon and Chinese retail giant Alibaba are amongst the leading revolutionists with their Amazon Go and Hema retail concept stores respectively.

Last year, we published 'Think Like Amazon' as a guide to how stores can effectively compete with such a global phenomenon. Now, it's more relevant than ever to walk through Amazon's doors again to see how you too could progress your thinking and remain a retail winner by digitally-enabling your stores.

In 2018, the Amazon Go concept hit the streets of Seattle and it is undeniably clever. Their use of computer vision together with machine learning and AI means customers can enter a store, take what they want and just go. A simple scan of the Amazon Go app on a customer's device when they enter the store and the value of their virtual cart is added up and charged to their account once they leave the store. No need for tills, checkouts or cashiers. With 3,000 Amazon Go stores planned by 2021, this is certainly a retail model that looks set to stay.

But Amazon Go and other similar models don't come cheap and are difficult to replicate because of the complex way in which they are deployed. The Amazon Go 'just walk out' concept takes the integration of hundreds of hard-wired infrared, depth and regular cameras covering every square centimeter of a store that have been trained for a year using deep learning. Plus weighing sensors are needed on every shelf to detect when an item is removed or put back.

This amounts to a very large capital investment in infrastructure within new custom-built premises. Only time will tell what the longer-term return is for Amazon, beyond the quick win of eliminating queues. It's certainly a very convenient way of shopping for customers and a great way for the retailer to gather real-time data about shopping habits, but some may view the significant reduction in human interaction as a step too far.

So, what if you could win your customers' hearts and minds with similar, yet more diverse, Amazon Go type experiences but implement them more simply and cost-effectively within your existing in-store environments.

At Scandit, we help retailers of all sizes, from corner shops to superstores, to interact digitally with customers and employees in many different ways without the pain of ripping out shelves or installing costly fixed digital infrastructure. And our computer vision technology is developed specifically for use on smart devices which are already in use everywhere so there is no need for purpose-built devices either.

Continuing to think like Amazon is certainly a fail-safe way of staying relevant, but the difference now is that to survive, you really need to start harnessing the power of mobile computer vision to blend digital and physical experiences in store.

In this, the second in the series of retail point-of-view papers, we'll explore how you can migrate effectively to an Amazon Go style of store, so you can create the same innovative experience step by step, but at a fraction of the cost.

Samuel Mueller
CEO and Co-founder, Scandit

Blend

A close-up photograph of a person's hands. The right hand holds a silver smartphone, and the left hand holds a white receipt. The receipt has some text and a barcode. The person is wearing a grey and white patterned sweater. The background is blurred, showing what appears to be a clothing store with racks of clothes. The word 'Blend' is overlaid in large, semi-transparent, light blue letters across the center of the image.



Physical with Digital

The physical and digital retail worlds are converging at immense speed. So much so that shoppers are becoming increasingly sophisticated in the way they shop as they interact with a constant stream of virtual information from their smartphones and from the physical store environment.

Today, customers are transient in their shopping habits, sometimes favoring shopping online and other times shopping in store, switching constantly from one brand to another. The best way therefore to grab the attention of the modern consumer is to create the e-commerce experience in store – where the physical and digital worlds come together as one. At Scandit, we call this the ‘digital in-store experience’. One that offers customers an online style of shopping experience in a physical store, while empowering employees to be more efficient on both the shop floor and back-of-house.

Amazon Book stores and the new Amazon Go concepts are great examples of bringing together physical and digital experiences for the convenience of customers. In Amazon’s brick-and-mortar book stores, customers still have the tactile experience of browsing and thumbing books but with the added benefits of digital experiences through the Amazon smartphone app - instantly reading reviews, purchasing books on the spot for home delivery or conveniently checking out in store.



75%

Online product reviews can boost in-store sales up to 75%.

Bazaarvoice survey data

Amazon Go takes the frictionless shopping experience even further. Using a proprietary combination of scales, pressure sensors, RFID tags and readers, as well as computer vision technologies, Amazon Go shoppers can pick what they want and simply go.

You too can be progressive and think like Amazon in the way they are bringing digital experiences in to stores. But instead of creating a costly fixed digital infrastructure, you can start with what you've got (barcodes, price tags and other unique product identifiers) and deploy mobile computer vision technology to enable customers and employees to interact with your products.

Mobile computer vision technology deployed on smartphones, shopping carts, robots, drones and wearables enables fast and accurate barcode scanning, text and image recognition. When combined with augmented reality, it delivers real-time actionable

data which helps users make the right decisions on the spot.

This is a different way of deploying technology in a less disruptive and less expensive way. It also delivers many more benefits besides Amazon Go's 'just walk out' experience. For example, product information and customer data is instantly accessible, plus self-scanning and mobile self-checkout save customers time.

Retail employees are also benefiting enormously from the digitalization of brick-and-mortar stores. It's revolutionizing many retail workflows from in-store processes to back-of-house operations. For example, instantaneous access to product and customer data is freeing up much more time for employees to provide a personalized service for customers. Mobile computer vision software, deployed on mobile devices, is streamlining laborious and time-consuming tasks such as shelf management, stock inventory and product fulfilment.

The move to digital in-store retailing is accessible to all retailers, large and small, mainly because of the widespread use of mobile devices and the dramatic improvements in mobile camera performance.

In the last ten years alone, the performance of mobile phones has improved 100-fold and the resolution of built-in cameras has increased by a factor of 40 at least. This means we can use computer vision to process everything in real-time, tracking live objects and augmenting them with up-to-the minute information – it's where the virtual world literally meets the physical world.

And, you can take incremental steps by firstly combining scanning with augmented reality within your existing infrastructure, utilizing exactly what you've got in place already.



The fast, reliable Scandit-powered scanning makes shopping frictionless and customers happy. We aim to triple the self-scanning adoption rate amongst members by the end of the year.

Simon Færch

Head of Digital Product Innovation and Digital Customer Experience, Coop Denmark



Revolutionize in-store retail experiences easily and efficiently

Scandit is changing the way retailers and consumers interact with everyday objects to give them richer and more time-saving experiences. Our mobile computer vision solutions integrate barcode scanning, OCR and augmented reality to deliver a cost-effective and versatile alternative to dedicated physical scanners:



Increase revenue by bringing e-commerce experiences to your retail aisles.



Deliver personalized services for customers including the convenience of self-scanning and mobile self-checkout.



Increase efficiencies in-store by deploying enterprise-grade scanning and mobile computer vision on smart devices.



Reduce the total cost of operation and equip every employee with a scanning smart device.



Minimize maintenance and operational costs.



Support BYOD for consumer and employee mobile apps.



Free-up employee time to better serve your customers.

Create Value Across the Retail Ecosystem

There are boundless opportunities to transform customer and employee experiences across the retail ecosystem. And it's all possible through the use of smart devices equipped with Scandit mobile computer vision technology.

We work with retailers to devise the best way to streamline and digitalize end-to-end processes in customers' home environments, in store and back of house. By transforming the retail buying cycle, you can continue to delight your customers and your employees, and at the same time, gain real-time insight into shopping habits and operational processes, to stay ahead in the retail game.

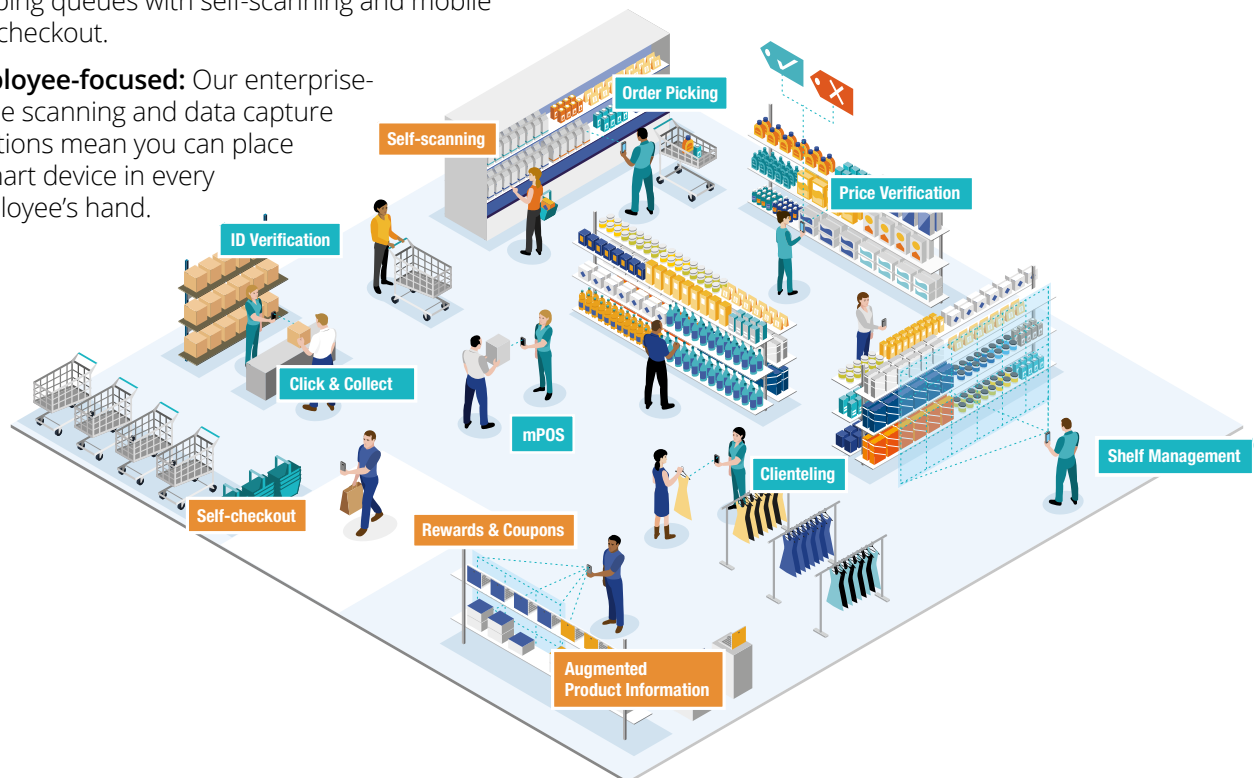
In Store

In-store interactions are two-fold:

Consumer-facing: Computer vision brings e-commerce direct to the retail aisles through the ubiquity of camera-enabled mobile devices. With advanced data capture solutions on mobile apps, customers can scan products to learn more about them, redeem vouchers or save valuable time by skipping queues with self-scanning and mobile self-checkout.

Employee-focused: Our enterprise-grade scanning and data capture solutions mean you can place a smart device in every employee's hand.

This empowers them to do a host of in-store tasks quickly and efficiently including efficient shelf management, discrete ID verification, click & collect, clienteling, price verification and helping customers with product information and point of sale transactions.



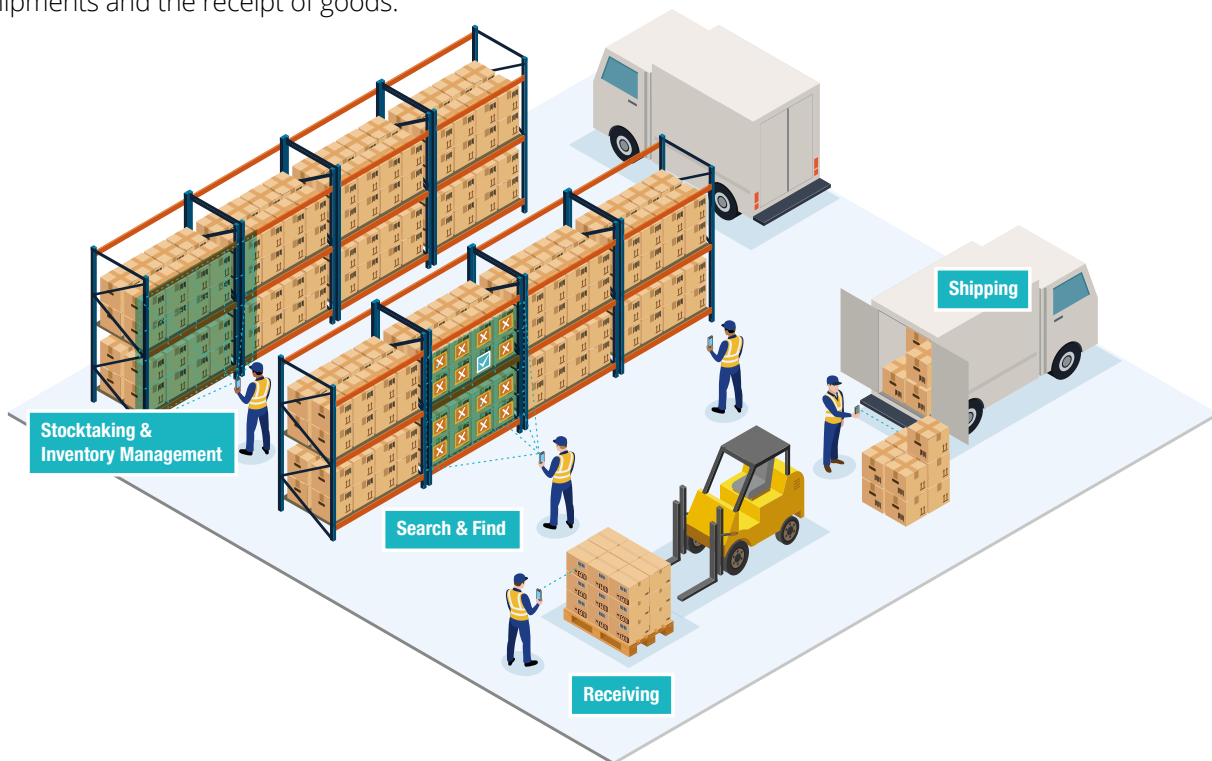
57%

of retailers are already working to integrate stores and digital channels.

Avanade Industry Insights
Jan 2018

Back of House

Digitalization of the back-of-house processes is about making operations more efficient and less mundane. By using Scandit-powered mobile apps, employees can support seamless customer interactions and cut the time it takes to search and find goods, manage stock inventories, shipments and the receipt of goods.



At Home

You can stay connected with your customers 24/7 in different ways at home or on the go. With the simple use of a barcode scanning-enabled mobile app, they can read reviews, learn about a product, buy it instantly and arrange for in-store pick up or home delivery. Every time they use the app, it puts your brand front of their mind, creating an enjoyable and rewarding digital shopping experience. Wherever they go, your retail brand goes too.



Digital In-store Retail in Action

Digital retailing is opening up exciting new opportunities for forward-thinking retailers. It's only really a matter of imagination in terms of what's possible and what's right for your business. Here we highlight just some of the ways you can enhance employee and customer experiences.



Augmented Product Information

Connect customers with products fast

You can enrich the in-store shopping experience by overlaying augmented reality in an easy-to-use Scandit-powered mobile shopping app to give customers instant product information as they browse aisles and shelves. By using their smart devices, customers can watch product videos, or read product reviews or generally browse and scan products to make specific lifestyle choices (selecting from specific criteria such as product performance, product ingredients, or product green credentials).



Self-scanning and Self-checkout

Cut the inconvenience of checkout lines

You can empower customers in-store with a Scandit-powered mobile app to scan products, purchase them and go, either via their smart devices or at a self-checkout terminal. This not only increases revenue by bringing e-commerce experiences to your retail aisles, but also negates the frustration of long checkout queues for your customers, saving them time, maximizing floor space and staff resources.



“

Customers' first experience on the app is scanning the product to check its nutritional quality. They are amazed at the speed of the scan and the phone's performance. It's part of the 'wow effect.' The product's barcode might be blurry, but it will still scan well with Scandit.

François Martin
CTO and Co-founder, Yuka

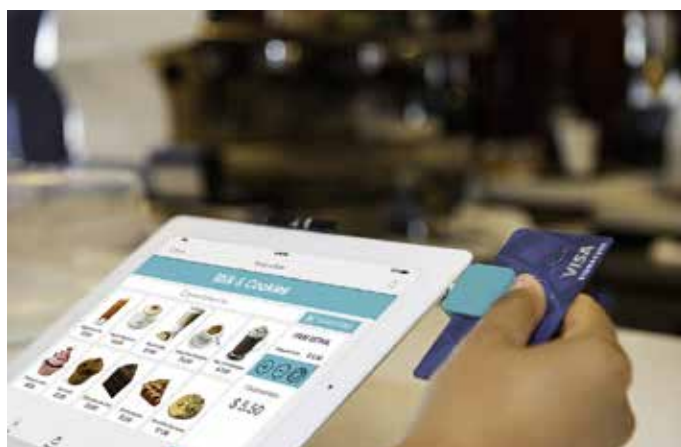
”



Clienteling

Get to know your customers inside out

With Scandit's computer vision technology you can take clienteling to a whole new level. Our mobile data capture solution gives your sales associates real-time access to product and customer data, allowing them to deliver a superior service and develop even better personal relationships with your customers.



Mobile POS

Give customers greater buying convenience

You can empower your employees to advise customers and process sales on the spot with Scandit technology. Our multiple barcode scanning feature for mobile POS solutions gives your customers a more convenient service, and cuts the time and costs associated with checkout lines.

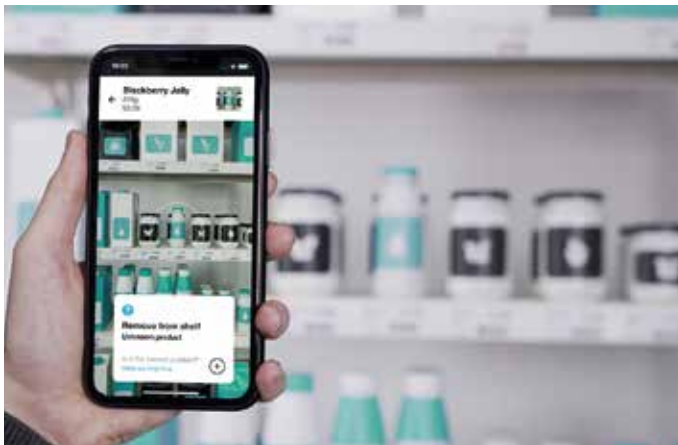
“

Previously, we had fairly low-res cameras on our tablets, but we found that the Scandit solution worked effectively, even in low light conditions. All feedback about the barcode scanner has been extremely positive and we regularly get told by sales teams that they could not live without it!

Rafal Hartzorne

Omnichannel Transformation Lead, Clarks

”



Planogram compliance

Correct product placement efficiently

You can quickly ensure predefined planograms are followed with precision and accuracy. By using mobile devices equipped with Scandit computer vision and augmented reality, employees can capture barcodes and images of all items on the shelves to check instantly on screen whether the planogram is being followed correctly.



Shelf management

Save employees time

Employees no longer have to check stock levels one at a time. Using MatrixScan and augmented reality, they can capture barcode data of all shelf items in an aisle, create aisle maps, identify items targeted for markdown, check stock and verify prices. This releases lots of time to focus on customer-facing activity such as clienteling and helping customers with product selection.



“

With the introduction of smartphones and MatrixScan, we are taking a big step forward in further digitizing our processes. Scandit gives us a future-proof solution for barcode scanning that is easy to use, fast, and very efficient.

Roman Melcher

CIO, dm-drogerie markt

”



Stocktaking and inventory management

Take the strain out of stock control

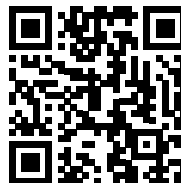
Your employees can instantly update stock or inventory levels, check product information and replenish stocks using a Scandit mobile app, equipped with computer vision. Barcode scanning-enabled smart devices can also document damaged or missing items in real-time, saving your team time and resources on the receiving dock.



See more Scandit technology in action

Explore ways to streamline retail workflows

Scan the QR code below with your smart device or visit: www.scandit.com/resources/videos



Getting Started

Scandit recognizes that a move to becoming a digital in-store retailer is daunting for many traditional retailers. And scaling the equivalent of an Amazon Go to already established retail outlets in the short-term is simply not viable or desirable because of its limited focus on self-checkout. That's why we have developed a way for retailers to start their transformation journey with what they have in place already.

We're helping to bring computer vision to the retail market by taking the solutions we've developed in advanced mobile barcoding, text and image recognition and enhancing it with machine learning and augmented reality. And the clever part is that you don't need to look any further than the widely used smartphone or other mobile devices to bring efficient and empowering digital in-store experiences to your customers and employees.

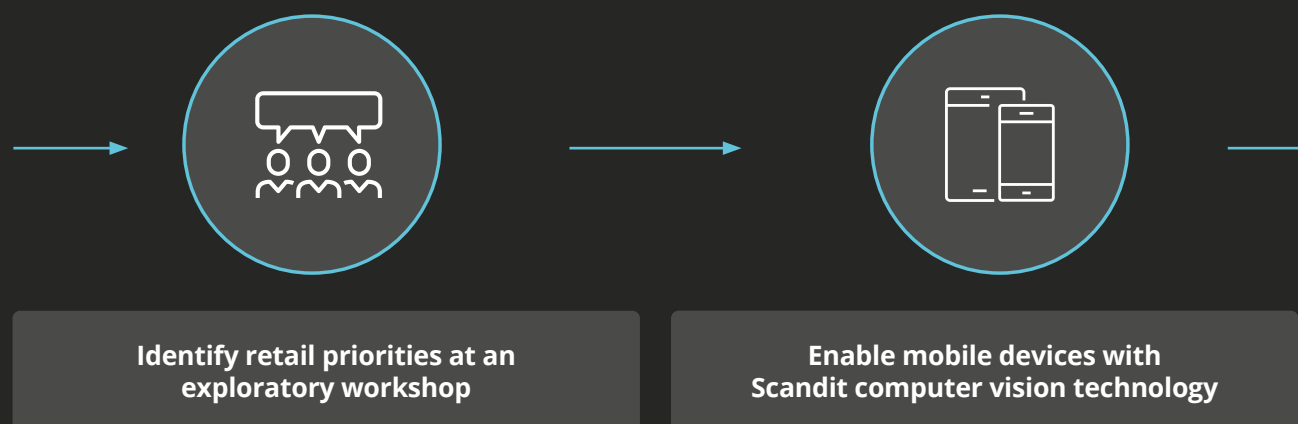
It's really a matter of what makes sense for your business and whether your priority is improving checkout or point of sale processes, consumer product selection and promotion, shelf management, planogram compliance or something else.

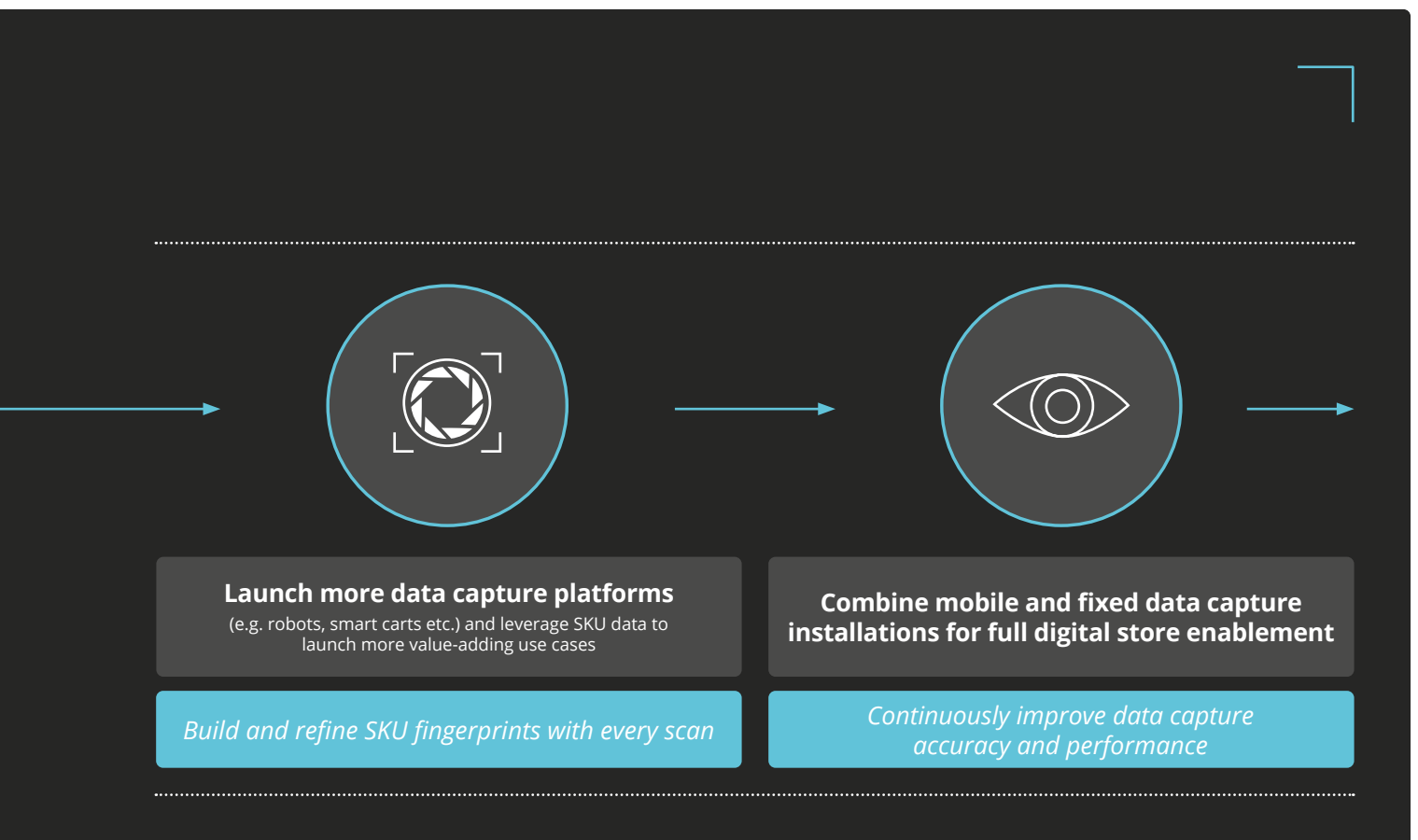
You can start immediately by deploying Scandit-powered mobile devices where the greatest efficiencies and cost savings can be made. With every scan you'll collect product data so that over time you'll create a rich database of accurate product data – something we call SKU fingerprints.

Step by step you can then build on this foundation and add more data capture technology like smart shopping carts, robots, wearables and fixed cameras. Over time this continuously strengthens your SKU fingerprints and scanning becomes faster and more accurate – ultimately giving you advanced data to power other digital tasks like planogram compliance.

The journey to full digital enablement

Start your digital transformation with what you already have like barcodes and smartphones





Why Scandit?

Scandit is the leading next-generation mobile data capture solutions provider, specializing in barcode, text and image scanning using mobile image recognition technology enhanced by machine learning and augmented reality. Scandit innovations bridge physical and digital environments through powerful mobile data capture technology and offer enterprises a transformative, software-based solution for real-time business insight and connectivity.

Benefits of using Scandit computer vision technology:

✓ Enterprise-grade scanning and data capture is readily deployable on consumer smartphones and tablets.

✓ Consumers' and employees' own devices (BYOD) can easily be equipped with Scandit-powered apps.

✓ Our barcode scanning solutions scan at high speed, any angle or distance, in low and glared lights and even scan damaged barcodes.

✓ More advanced computer vision and augmented reality are readily deployable on camera-enabled devices.

✓ The total cost of operation is up to five times lower than dedicated scanners over the device lifetime.

✓ Our advanced text recognition solutions can scan single text or multiple lines regardless of font, size and color in real-time.

✓ Our MatrixScan solution decodes multiple barcodes in a single scan and at exacting speed, reducing the time spent on tasks like receiving and stocktaking by around 40%.

✓ Our solutions can be added to virtually any IT environment including native or web apps plus standalone applications that cannot be changed.



Scandit Barcode Scanner SDK works out of the box. We have performed almost no configuration to its default settings.

Kristof Schraepen

Digital Transformation Manager, Colruyt Group



Leading retailers trust Scandit



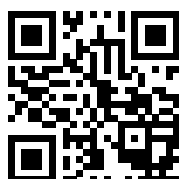


Interact with Scandit



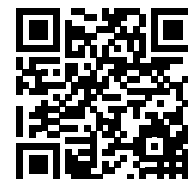
Scandit's technology is transforming the way many retailers do business. It's enabling them to compete effectively and establish a whole new paradigm of employee and customer engagement. Learn more about what we could do for you and take your first step towards your in-store digital future.

Visit our website:



www.scandit.com

**Check out retail
innovation use cases:**



www.scandit.com/industries/retail



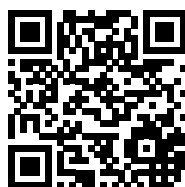
**Watch Scandit
solutions in action:**



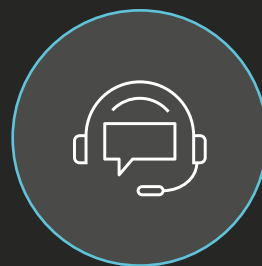
www.scandit.com/resources/videos



**See how it works
with a demo app:**



www.scandit.com/resources/demo-apps



Contact us:

Worldwide: +41 44 586 4540
USA: (415) 528 5050



www.scandit.com/contact-us

About Scandit



At Scandit, we help enterprises to harness the power of mobile computer vision, so they can create efficient and empowering digital experiences across entire supply chains. We bring the physical and digital worlds together by changing the way people interact with everyday objects. It's establishing a new paradigm of employee and customer engagement across retail, post and parcel, transportation and logistics, manufacturing, healthcare, government and many other sectors.

Our computer vision technology combines our advanced barcode scanning, text, image and object recognition to deliver real-time insights through augmented reality. And the great news is that it can be implemented through the use of enterprise-grade apps on standard smartphones and other camera-enabled mobile devices. It's giving enterprises unprecedented insights into processes and workflows, and a plan of how to make them more efficient, more fulfilling and innovative. It means you can deliver exceptional levels of service through an empowered workforce - better decisions, faster delivery, lower cost and happy customers. Today, we have thousands of Scandit-powered data solutions, taking billions of scans every year for customers across the globe.

Don't just take our word for it. Many of the world's most progressive and successful companies are already reaping the rewards of Scandit's computer vision technology. As well as being the preferred mobile barcode scan technology provider of GS1, clients include Sephora, Louis Vuitton, DHL, and Levi Strauss & Co.

SCANDIT

Scandit AG

Förrlibuckstrasse 181, 8005 Zurich, Switzerland

Scandit, Inc.

535 Mission Street, Floor 15, San Francisco, CA 94105

www.scandit.com

