

SCANDIT

Self-Scanning in Retail

Best Practices for Testing, Implementation and Adoption



#ScanditLovedit

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Self-Scanning Serves Up Superior Shopping

Satisfying consumer demand for self-scanning shopping

Self-scanning is a great choice for customers who want to save time. A SOTI survey in 2018 showed that 66% of shoppers preferred self-service and self-checkout, with 67% saying retailers that used more mobile technology saved them time. With over 2.5 billion people using smartphones today, the tool is readily available.

Scandit uses computer vision technology to transform any camera-equipped smart device into a reliable barcode scanner. Retailers use our software to make it easy for shoppers to scan barcodes with their own smartphones – and then either pay for goods at a self-checkout kiosk or pay through an app with Scan-and-Go.

Remove friction because friction kills sales and puts revenue at risk

The critical success factor in implementation is user experience – customers rarely give a second chance if the app doesn't work first time, and every time. This means the scanning engine must reliably scan on all device types, with all barcodes and in real-life conditions which could include bad light, glare and damaged labels.

Other important considerations are the visibility of barcodes on shelves (e.g. for fruit and vegetables), the space given to self-checkout kiosks and a consistent re-scan policy (to control potential theft/shrinkage).

This paper offers the best practice we and our retailer clients have learned during self-scanning implementations, to help you make your self-scanning service the best it can be, whether self-checkout or Scan-and-Go.

Then add augmented reality (AR)

Another use of self-scanning is shoppers scanning products to view additional information – such as product reviews and videos, ingredients, detailed specifications, or perhaps coupons. Adding this AR feedback to a self-scanning app, can help retailers drive up adoption, retention and customer satisfaction.

Retailers today need to be laser-focused on capturing consumers' attention to attract them into physical stores. Scandit offers a surprisingly low-cost way to achieve this by bringing some of the benefits of online shopping into stores with self-checkout and Scan-and-Go.



Christian Floerkemeier

*VP Product, CTO and
co-founder, Scandit*

Best Practices for Mobile Self-Scanning

Scandit has helped many retailers develop and implement successful mobile self-scanning services across the world. It's one of the reasons we've received industry awards for our technology innovation in the retail industry.

Our clients typically choose to work with us because they want the best performing scanning software for their mobile apps plus great technical support and industry knowledge. They also want to work with a technology partner that continues to innovate. Here are a few lessons we and our clients have learned during implementations of self-scanning.



User Experience – Good Enough is Never Enough

You can't put too much effort into creating a fantastic user experience for your customers. Adoption will ground to a standstill if something goes wrong or is difficult to fathom, so attention to detail in the design, build, implementation, testing and roll-out is critically important.

The scanning must work first time, every time. If it doesn't, your customers will feel let down, your staff will waste time handling queries and complaints and your shopping app will not meet business targets or deliver on the investment.

Scanning performance

Reliable scanning is obviously paramount. We recommend testing the scanning software in real-life conditions to ensure it's fast and accurate in a variety of ambient conditions – such as in bad light, with glare on packaging or damaged labels and at challenging angles and distances. Scanning errors cause problems for customers and cost retailers time and money to rectify.

Mobile device types

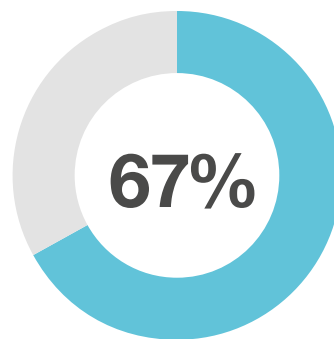
Customers use thousands of different smart devices and software versions. So the scanning engine in your app must be able to work reliably on any type of smartphone – from expensive handsets with the latest hardware, to less sophisticated models. It's important to check what devices are supported by any scanning software you're considering and whether the software is regularly updated when device manufacturers make changes.

Barcode symbologies

With a number of different types of barcodes on different retail products in a store, you'll need to check that your scanning software supports them all. The most obvious ones are UPC or EAN codes, but there are also DataBar as well as the EAN-2 and EAN-5 supplement codes to consider.

Reliable WiFi network

Your customers will need a stable data connection to use your self-scanning app in stores. Most customers are likely to have 3G/4G connectivity on their smartphone, but loss of signal is always a risk. In some locations, 3G/4G coverage is so poor that installing a WiFi network for customers is essential. Note that if you are using a 2D code at the store entrance for customers to activate the app, it can be set up to automatically connect them to the WiFi.



67% of US consumers said retailers that used more mobile technology saved them time.

SOTI Survey, 2018

Successful Adoption – Remove First-Time Friction

Customers want an answer to the question, what's in it for me? As well as clearly explained features and benefits in the marketing and promotion of the app, special offers and discounts for first-time users will boost initial adoption.

Support

Although in theory, a good intuitive app shouldn't need customer support, it's advisable to have employees on hand at launch to attract attention, answer queries and promote incentives. They need to be experts in the app so they can answer any questions quickly – What do I do if an item has an anti-theft tag? How do I scan an item that's been marked down?

Registration

Download, registration and using the self-scanning app for the first time, must be effortless for your customers. Instead of the standard 'email + password' registration, consider using the customer's phone number, with a four-digit SMS code sent to the device for validation, and which fills in automatically. This is quicker and creates the best digital experience right from the start.

Activation methods

Retailers do not want their entire price and product database to be accessible from outside stores, so a trigger for customers to activate the app from inside a store is required. We advise against the use of geolocation as the activation trigger for your self-scanning app. Since GPS signals can be unreliable, this will just cause frustration for your customers.

A more customer-friendly method is to place large 2D codes (QR or DataMatrix) at the entrance to your stores for customers to scan to activate the app. This code could also include an automatic connection to the store WiFi network, if available. To mitigate the risk of a competitor taking a photo of one of these 2D codes to access your database from outside the premises, digital screens that

periodically change this 2D code can be installed.

Make ALL products scannable

It is imperative that all items in the store can be self-scanned. If not, frustrated customers are likely to put products back on the shelf (a lost sale for you) or leave them in their trolley (shrinkage for you). On top of the self-service weighing scales for items sold by weight, make sure all items sold by piece (e.g. bakery, fruits and vegetables) do have a barcode next to where they are located, which is clearly visible and easy to scan. Make it part of your internal store evaluation KPIs to ensure shelves are always set up in this way.

Self-checkout kiosks or in-app payment

One of the promises of self-scanning shopping is that customers no longer have to wait to pay. The best customer experience is to make payment in the app, which will also lower POS hardware related costs. Do also offer e-receipts – because even if the legislation in your country still forces you to print a physical receipt for each transaction, self-scanning customers like to have all their e-receipts stored in the app.

If your self-scanning customers will be paying at self-checkout kiosks, it's important to create dedicated self-checkout lanes, with a separate checkout process. These areas should be easy to identify (prominent in-store displays) with staff on hand to help customers.

\$4bn

The self-checkout market is estimated to surpass \$4 billion dollars by 2024.

Global Market Insights, 2018



Globus achieves six-fold increase in self-scanning app users in five months

Globus CZ wanted to expand self-scanning across more stores and offer more choice by adding a self-scanning mobile app as an option to customers. After unsuccessfully trying open source scanning software, they selected Scandit for its high performance and reliability and then grew the user base six-fold in five months.

"Scandit performed superbly on damaged and used labels especially, which were a significant problem for open source and compelled Globus CZ to change labels frequently."

"Individual stores initiated advertising and promotion of the app and Globus CZ used "gamification" to increase competition among stores. Aggressive promotion of the 'Můj Globus' app has resulted in more than 570% adoption growth in a matter of months."

Jiří Budinský, Head of Product Department, Globus CZ



Retention and Growth

If the mobile self-scanning app works well and delivers as promised, retention will be high. Monitoring usage and customer feedback enables you to grow the user base and keep innovating to keep customers coming back.

Usage data is always insightful and sometimes surprising

Usage data provides information such as which customers are using the app, frequency of use and basket sizes. This insight shapes ongoing improvements and developments to your app, including the addition of features such as augmented reality (AR) overlays to provide new information to customers (if you're using Scandit software).

Clients are often surprised by some of the insight. For example, contrary to expectations, self-scanning apps are typically used as much by older customers as by younger ones. Some older customers enjoy the digital audit trail for budgeting purposes while others like shopping at their own pace and not being time-pressured by people waiting at checkouts. Also, basket-sizes are not smaller with mobile self-scanning, and in some cases they're larger.

Speedy re-scans are essential

To manage the risk of potential theft, you'll need a system to trigger re-scans – where a customer has their shopping re-scanned to cross-check against what was self-scanned. It's essential to make these re-scans happen efficiently and instantly, with no waiting for the customer. Inform customers about these re-scans at initial registration and consider offering discounts against the customer's next shopping trip as a thank you and goodwill gesture.

One important rule of thumb is to make partial re-scans the norm, and full re-scans the exception. For example, full re-scans can be used just with customers who repeatedly have an item missing during their partial re-scan. Ideally, have a separate space for full re-scans.

Measure overall business impact

Successful customer self-scanning will have a positive effect on the efficiency of store operations and the bottom line. Tracking app usage activity alongside regular business KPIs will assess progress – for example, store footfall, check-out wait times, buying patterns, basket sizes, revenue, costs, customer satisfaction and brand perception.

"We want to make it easy for customers to make the most informed decision possible in the store and at the same time set up a longer-term sales cycle when an in-store purchase is not made"

Josh Feldman, Senior Product Manager for Mobile, Guitar Center

25% 

Retailers stand to gain a 25 percent revenue upside by delivering a great digital customer experience in the store.

BRP 2018 Retail Research Report



Frictionless shopping at Coop Denmark with Scan & Pay app

Customers use a Scandit-powered Scan & Pay app to shop and pay for goods with smartphone-based scanning. No need for cash, physical receipts or credit card terminals. It's proved to be equally popular with older and younger customers during the initial 500 store roll-out.

"The Coop DK shopping app has been downloaded 1.1 million times, and on a good day, 250,000 people use the app and spend an average of 4 minutes on it."

Simon Færch, Head of Digital Product Innovation, Coop Denmark



Augmented Reality (AR) as the Next Step

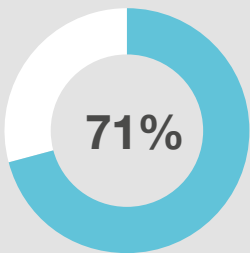
The addition of AR to a self-scanning mobile app can provide a competitive advantage and further boost the bottom line.

AR is interesting to consumers because it allows them to dive into aspects of the product that are not readily available in the physical world, such as reviews, ratings, specifications and availability. This insight can influence purchase decisions.

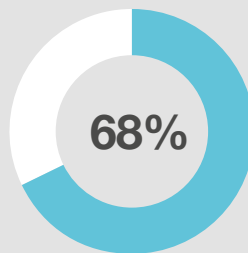
Assume an additional 2% or 5% in revenue at the checkout, and the impact of AR can be significant.



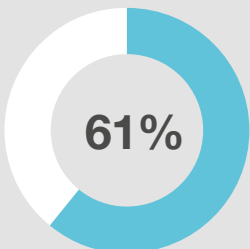
Shopping with AR



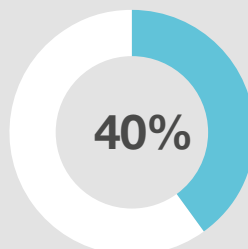
71% of shoppers said they would shop more often if they could use AR.



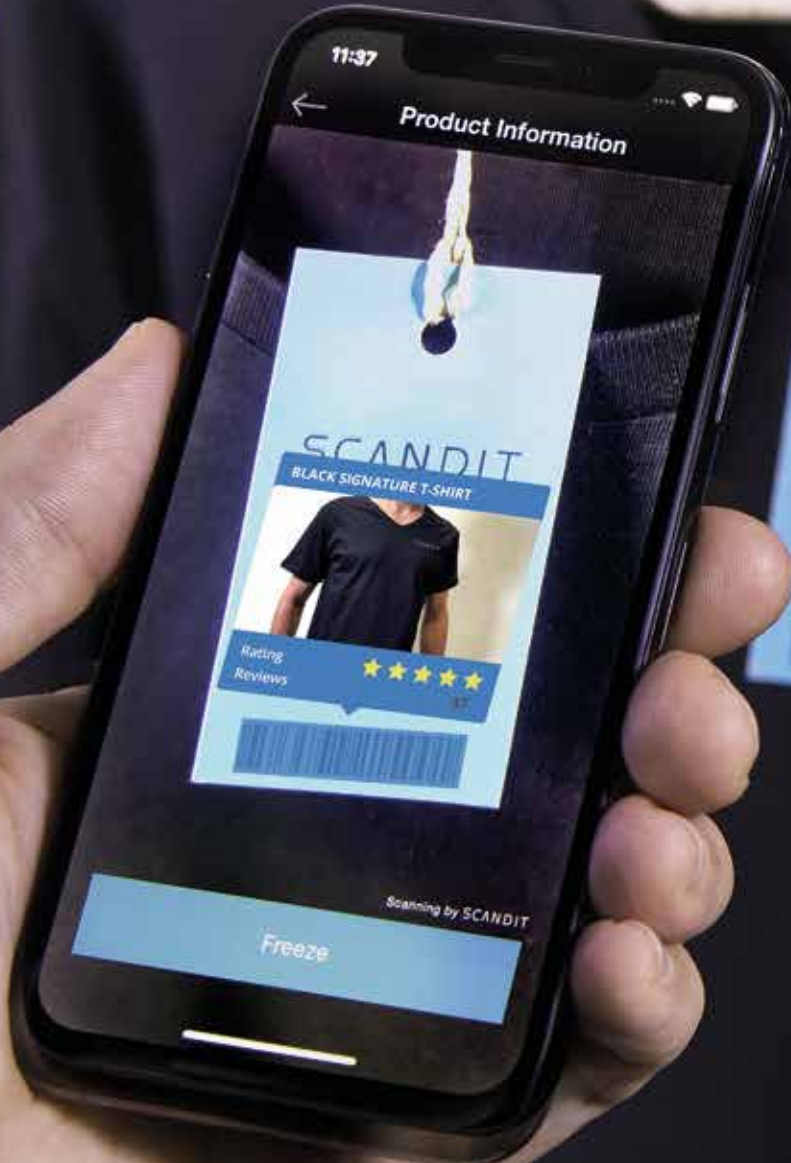
68% admitted they would rather spend more time at the shop if they could use AR.



61% said they preferably choose stores with AR over those without it.



40% of shoppers consider they are ready to pay more for a product if they were allowed to test it through AR.



11:37

Product Information

SCANDIT
BLACK SIGNATURE T-SHIRT



Rating
Reviews
★★★★★



Scanning by SCANDIT

Freeze

SCANDIT



The Business Case for Mobile Self-Scanning

There are three big measurable benefits for retailers implementing customer self-scanning on mobile devices:



Increased revenue



Reduced costs



Improved customer satisfaction and brand value

Reduced costs with mobile self-scanning

Giving your customers reliable and user-friendly self-scanning through their own mobile devices avoids the need to invest in costly hardware scanners, associated infrastructure, labor and maintenance costs. By reducing the footprint at kiosks, floorspace is created and employees have more time to focus on higher value tasks including customer service.

The average space occupied by scan-specific devices (racks, counters, support, devices) is roughly **50** square feet. If average revenue per retail square feet is around **\$500**, that's **\$25,000** worth of retail space that can be put back into active use. For an average grocery store chain store count, that number adds up rapidly.

\$25,000

Poor quality self-scanning puts revenue at risk

If a customer can't scan a product, they'll either put it back on the shelf or leave it in their trolley. Both actions will lose revenue – either in a lost sale or in shrinkage – and cause frustration. So the scanning engine is the critical success factor for any self-scanning shopping app. It needs to work perfectly every time and if it doesn't, the benefits to customers and retailers will not be realized.

For example, for a retail outlet with **300-500** stores and a basket size of just **two items** (self-scanned), even a **5%** deterioration in scan performance can put **>\$20M** at risk if per store revenue is touching **\$1M** per month.

>\$20m



Contact us for support determining your business case and the value of identified benefits:

www.scandit.com/contact-us



Self-scanning as a revenue generator

With billions of lost revenue each year due to long queues and waiting times, self-check out and Scan-and-Go services are obvious considerations to boost customer satisfaction and your bottom line.

“Introducing convenient and trusted technology into the user experience can rapidly increase consumer expenditure. A recent survey showed 80% of customers are willing to spend more with businesses that offer a better shopping experience and 1 in 10 would increase their spend by more than half.”

CapGemini, 2017

£15.7bn/
€17.9bn

Retailers lost £15.7bn / €17.9bn in potential sales to their competitors over the last 12 months because of customers making a purchase elsewhere due to long queues.

Ayden, 2018 European Retail Report

Scandit Self-Scanning Customers

Our retail clients are using self-scanning in different ways, and all are bringing more customers into the aisles of their stores. Here are some examples.



Owned by



Owned by



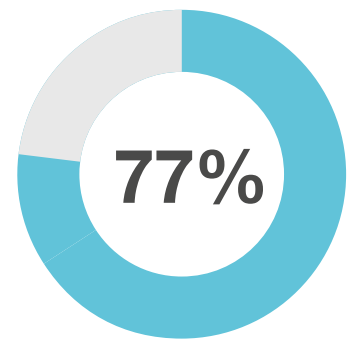
Owned by



Switzerland

Denmark





Self-checkout is so popular that 77 percent of consumers would be very or somewhat comfortable in a retail setting where only self-checkout technology was offered.

SOTI Survey, 2018



Scan.Pay.Go mobile app helps customers and employees in Spar and OKay stores

Colruyt switched from lower performing open source scanning software to Scandit software to power their self-scanning app so customers have ease of use with reliable scanning and employees have more time to look after the store.

"Scandit Barcode Scanner SDK works out of the box. We have performed almost no configuration to its default settings. We were concerned the open source scanner wouldn't satisfy our needs. In a realistic setting, such as a store, lighting can be an issue. Our customers are not used to scanning product barcodes themselves, so we wanted to make sure we had the best barcode reader available in our app."

Kristof Schraepen,
Digital Transformation Manager,
Colruyt Group



Valora launches 24x7 cashierless stores with Scandit-powered customer app

The Swiss trading company Valora is setting new standards with the avec X and the avec box future store at Zurich's main railway station. Using the Scandit-powered avec app, customers can simply choose, scan and pay for goods.

"We had already recognised Scandit as an innovative technology partner from previous projects and we knew that we could rely on their scan engine for the avec app. It works quickly and reliably, even in difficult light conditions. With the Barcode Scanner SDK from Scandit it was easy to integrate the scan function into the app."

Dominique Martin,
Manager Consumer Application,
Valora



Why Customers Choose to Work with Us

Our industry-leading computer vision and augmented reality (AR) software brings unrivaled barcode scanning and text recognition (OCR) performance to any app on any camera-enabled smart device, turning it into a powerful data-capture tool. Our software is proven through customer testing to outperform other software solutions.

Work directly with us or through your ISV. We have partnerships with point solution providers in retail – for example adding powerful scanning functionality to SAP applications.

Performance

✓ Fast and accurate scanning on any mobile device, even low-end models, and with all major barcode types.

✓ Super reliable self-scanning with 99.8% success rate with the unmatched ability to scan in bad light, at any angle, long distance and with damaged labels.

Software Integration

✓ Multi-platform (iOS, Windows, Android) and development framework support.

✓ For self-scanning without an app, Web SDK adds scanning to your website to allow users to scan barcodes while browsing to your website from their smartphones.

✓ For self-scanning mobile apps, Barcode Scanner SDK adds scanning quickly to any native mobile app and supports most development platforms and frameworks.

Support

✓ Developer documentation that developers say is beneficial.

✓ Innovation partnership that helps customers to continually evolve and future-proof their organizations.

✓ Our solution consultants provide best practice and technical support during design and implementation. Technical support and analytics options are available during live service.

"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




Getting Started with Scandit

We will work closely with you to support your strategic business objectives through digital transformation. Adding Scandit's computer vision technology to your mobile platform will provide innovation today and into the future.

We can advise you on the use cases best suited to meet your needs and goals, supported by business cases and KPIs (key performance indicators).

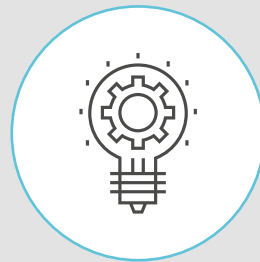
When integrating our technology into your own tailored apps using our SDKs (software development kits) the possibilities are limited only by your imagination. We also offer solutions to add scanning to existing enterprise apps where no integration is needed. Developers tell us they appreciate our well-structured and easy-to-use documentation.

Our solutions consultants provide technical and best practice expertise to help you navigate these key steps:

	Identify the business goals and/or pain points What needs to change and why?
	Select a use case that can enable this change e.g. Self-Scanning or others in retail such as Product Information, Clienteling, Mobile POS etc.
	Requirements gathering Specify the solution and business case and set KPIs
	Deliver solution Configure, build and user test
	Field test Monitor in live scenario and track analytics
	Validate business case Assess KPI results and learnings, and adjust the solution and processes as necessary
	Roll-out Manage roll-out plan and assess KPI results and ROI
	Build out Develop business case for additional use case solutions



Interact with Scandit



Scandit's technology is transforming the way many retailers do business. It's enabling them to compete more effectively and establish new ways to engage employees and customers.

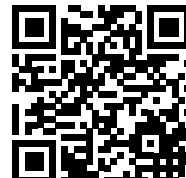
Learn more about what we could do for you and take your first step towards your digital future.

Visit our website:



www.scandit.com

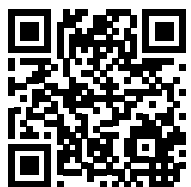
Browse our retail use cases:



www.scandit.com/industries/retail



Watch Scandit solutions in action:



www.scandit.com/resources/videos

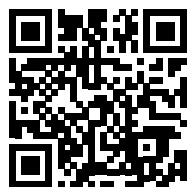
See how it works with a demo app:



www.scandit.com/resources/demo-apps

Contact us:

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USA: (415) 528 5050



www.scandit.com/contact-us

About Scandit

At Scandit, we help enterprises harness the power of mobile computer vision to bring unrivaled scanning performance to mobile devices for their customers and employees. We bring the physical and digital worlds together by changing the way people interact with everyday objects.

Our computer vision software combines advanced barcode scanning, text, image and object recognition to deliver real-time insights through augmented reality. And what's clever is it can be deployed through enterprise-grade apps on standard smart devices, turning them into enterprise-grade scanners and powerful data-capture tools. 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 happier 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, other clients include Sephora, Louis Vuitton, Clarks, dm-drogerie markt, Levi Strauss & Co. and DHL.

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