

By Guy Lerner

Retail automation

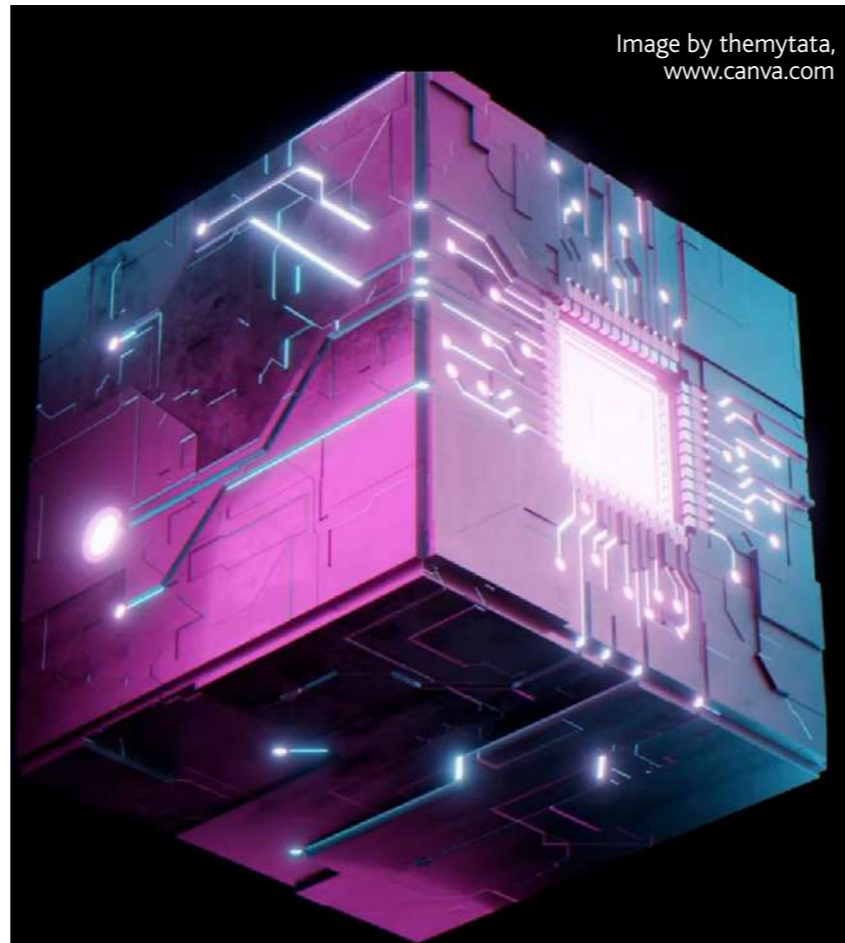
The key to continued growth

Automation. It's a word that crops up whenever we discuss progress in South African retail. It's also a word that encompasses a plethora of different systems and processes which, together, work to deliver a standout beneficial impetus: growth.

Growth is the common thread that runs through the four current major retail automation trends in South African retail, whether it's the surge in e-commerce, advances in artificial intelligence (AI), the growth in loyalty programmes, or the explosion in delivery services since Covid.

Just look at the statistics. According to a World Wide Worx report, South Africa's e-commerce sector peaked at a record-setting R71 billion in sales in 2023, 29% higher than 2022. So fast has been the growth that online sales now represent 6% of the total South African retail sector.

With as many as 63% of South African shoppers willing to share their personal data with retailers in exchange for more personalised service, expect retailers to increasingly adopt advanced technologies such as AI, machine learning, and robotics to streamline their operations and enhance inventory management, customer service, and personalised marketing.

Image by themytata,
www.canva.com

What is machine learning?

ML or machine learning enables computers to learn from data to make decisions or predictions without being explicitly programmed to do so. ML uses AI to learn – it's a branch of artificial intelligence – and uses statistical models to draw inferences from patterns in data. Machine learning is used most effectively in demand forecasting, inventory optimisation, promotion and pricing, waste reduction, and shelf management. Machine learning is how a computer system develops its intelligence.

Those same customers are, on the whole, also subscribing to loyalty programmes for similar reasons. The latest Truth & BrandMapp Loyalty White Paper, published in 2022, shows that 73% of South Africans use loyalty programmes consistently, and on average they subscribe to more than nine each.

Finally, we can't ignore the steep growth in home delivery services, boosted initially by the Covid lockdowns, and then taking on a life of their own once the advantages to both retailers and shoppers were made clear. According to Statista, delivery service penetration is expected to hit 7.8% this year, growing to more than 10% by 2029. This represents an annual growth rate of 11.27%, resulting in a projected market volume of more than R26 billion.



Laurian Venter

Laurian Venter, Sales Director at OneDayOnly.co.za, was recently quoted as saying that if retailers don't conform to the way their customers prefer to shop, they will be left behind by consumers who choose to spend their money with those that do. This makes it imperative that retailers embrace and invest in the automation systems, technologies and processes that will help them deliver the services their customers want.





ALL NEW UROVO PRODUCT OVERVIEW

BARCODE SOLUTIONS

UROVO focuses on the design, R&D, production, and sales of smart data terminals, smart payment terminals, and special printers.

LEARN MORE

www.dciscanning.co.za

DT50S ANDROID 13 ENTERPRISE MOBILE COMPUTER



OPTIONAL ACCESSORIES



CT58 ANDROID 12 ENTERPRISE MOBILE COMPUTER



CT48 ANDROID 12 MOBILE HANDHELD COMPUTER



RT40 COLD STORAGE + XLR INDUSTRIAL MOBILE COMPUTER



FR1000 FIXED UHF RFID READER



LEARN MORE

FR2000 DESKTOP CHECKOUT RFID READER



Digital transformation

Digital transformation is crucial to retail automation in South Africa as it enables the integration of the previously mentioned advanced technologies (AI, machine learning, and robotics). It supports e-commerce growth, data-driven decision-making, and personalised marketing, all of which are essential for competitiveness and efficiency in the evolving retail landscape.



Mark Templemore-Walters

Mark Templemore-Walters, Operations Director at Cash Connect, says that digital transformation touches almost every part of the retail supply chain, from warehousing and logistics to the financial back office and the customer experience.

“Cloud-based platforms and connected devices such as RFID tags and smart shelves enable retailers to automate areas such as inventory management and customer service,” says Templemore-Walters. “At the same time, AI and machine learning are personalising customer experiences, improving inventory management, and enhancing demand forecasting. Robotic process automation is also being widely adopted to manage repetitive tasks such as data entry, order processing, and customer service interactions.”

Other retail automation initiatives include self-checkout stations and mobile payment solutions that speed up the checkout process, reducing wait times and improving customer satisfaction.

Major retailers such as Pick n Pay and Checkers have experimented with self-service kiosks and mobile payment options to streamline the shopping experience, although the widespread use of these technologies has yet to catch on.



<https://enterpriseproject.com/>

What is Robotic Process Automation?

RPA or robotic process automation uses software 'robots' or bots to automate repetitive high-volume manual tasks. It can be used for calculations, filling in forms, collecting data from your website, processing payroll, processing orders on e-commerce sites, processing invoices and handling customer queries, and that's just the tip of the iceberg. RPA reduces human error, improves efficiency, improves customer service and streamlines operations.

Rise of the machines

AI plays a crucial role in retail automation by enhancing various operational aspects and customer interactions.

For example, it enables personalised marketing by analysing customer data to deliver tailored

recommendations and targeted advertisements, increasing engagement and sales.

At the front desk, AI-driven chatbots and virtual assistants help improve customer service by providing instant responses to enquiries, reducing the need for human intervention. In the back office, AI optimises inventory management through predictive analytics, ensuring that stock levels are maintained efficiently and reducing instances of overstock or stockouts.

Image by themytata, www.canva.com



AI also supports dynamic pricing strategies, adjusting prices in real time based on demand, competition, and other market factors.

“AI features and tools are becoming common in software that retailers already use, for instance e-commerce platforms such as Shopify and customer relationship management systems such as Salesforce,” says Templemore-Walters.

“We are seeing even small and medium retailers starting to use AI for applications such as personalised recommendations, 24/7 online sales and

PRICER

1 Search



2 Locate



Up to 10 years of battery life

Geo Location Positioning

More than 25000 stores worldwide

Sub-second Flashing

3 Flashing label



Bringing trust to Retail

pricersales@nec.xon.co.za



Electronic Shelf Labels with sub-second flash response and 10-year battery life

The integration can even enhance omni-channel experiences like Buy Online, Pickup In Store (BOPIS) and Click and Collect, making them more seamless and convenient for customers.

Trusted Supplier

NEC XON offers transformative retailer and customer shopping experiences. It provides digital solutions that improve operational performance and retail experiences. Moreover, the use of insightful analytics from ESLs empowers retailers to make informed decisions about shelf-edge and back-office strategies. This data-driven approach improves overall store management, boosts sales by ensuring better product availability, and lowers operational costs through streamlined processes.

Digitally empowered retailers benefit from efficient supply chains, with safe, pleasant omni-channel customer experiences that include BOPIS, Click and Collect, Reporting, Kerbside Pickup, and In-Store Fulfilment powered by integrated AI-driven platforms. Comprehensive managed services and solutions from a single source improve availability and performance.

Exclusive African partner

NEC XON has been the exclusive African partner for Pricer ESL since 2006. Experienced, certified, and trained consultants, technicians and engineers design and deploy Pricer, the world's leading physical and digital retail solutions, for some of Africa's and the world's largest and most respected retail groups.

We help retailers enhance store operations and stock availability, simplify their operations, lower costs and reduce support challenges, improve availability, and deliver an integrated, unified platform. Robotics-driven, AI platforms are globally tried and tested to deliver transformative retail solutions that improve revenues, gross profit and Customer experience. The solution is being used:

- In more than 25 000 stores worldwide
- By the biggest retail groups in Africa
- By over 650 large and small retailers in South Africa and Africa
- In more than 70+ countries

Imagine a retail shopping experience where customers can quickly and easily find in-store prices, promotions, and product details without confusion or delays – for a smoother shopping journey and increased satisfaction. Then imagine if store owners could rapidly update pricing and promotions across all shelves in the store – consistently and with zero errors.

Now imagine extending that efficiency to managing inventory, as Electronic Shelf Labels (ESLs) integrate with AI-driven platforms to optimise stock levels, minimize out-of-stock situations and ensure that stock is always visible on store shelves.



Our specialised sales team can take you through a proof of concept that generates margins for one of South Africa's leading retail brands. Book your time with them today. **+27 11 237 4500**
Pricersales@nec.xon.co.za

service, inventory management, marketing, pricing optimisation and even data-driven loans.”

But that’s not where it stops. AI is increasingly being used to enable and automate more advanced initiatives. French software-as-a-service company Veesion has already piloted its AI-driven gesture detection software at several Pick n Pay and Spar outlets to help identify suspicious behaviour by customers in retail shopping environments and automatically alert staff to respond.



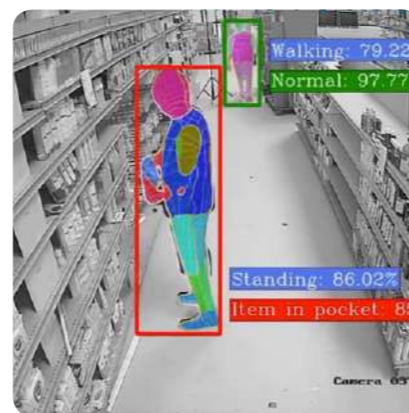
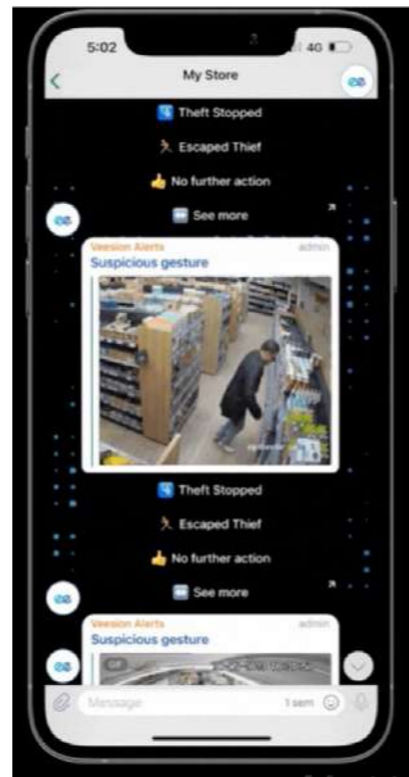
Miguel Inocentes

Veesion’s solution connects a computer-sized server to existing security camera setups, eliminating the need for additional system modifications. Veesion account executive for South Africa, Miguel Inocentes, explained in a recent interview that the deep-learning model operates on three levels ...

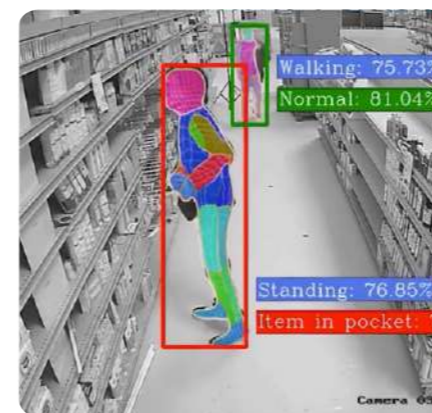
“The first detects humans, the second recognises products on shelves, and the third analyses gestures, identifying those deemed suspicious.”

Instead of having, say, five security guards and three people in a monitoring station, you can now have two security guards along with our software feeding them real-time information so they can act more efficiently, then use our alerts to go directly to problematic situations.”

AI is also playing a growing role in automating app-based shopping and its associated home



Images: <https://veesion.io/en/>



delivery services. For example, Pick n Pay has integrated smart AI search technology into their app to help customers find products easily, and to offer pre-selected alternatives when items are out of stock, enhancing the shopping experience by providing personalised and relevant results.

Likewise, Checkers Sixty60 employs AI for route optimisation in its delivery service, improving delivery times and reducing fuel costs.

New ways to pay

In South Africa, contactless payment and digital wallet options have seen significant growth and adoption, driven by convenience and the need for secure, efficient transactions.

For instance, the widespread use of RFID (radio frequency identification) in debit and credit cards has made tap to pay technology

a popular choice for local consumers, allowing quick and easy transactions without the need to enter a PIN for smaller amounts. This technology is widely supported by major banks and retail outlets.



www.camcode.com/blog/what-are-rfid-tags/

QR code-based payment systems such as SnapScan, Zapper, and Scan to Pay (previously Masterpass) have also





HOLD ONTO EVERY RAND AND CENT

SAVE UP TO 40%

BY AUTOMATING YOUR CASH HANDLING

FREE CONSULTATION



cash connect

ATM

VAULT

cash.connected.co.za





Then there's the increasing adoption of international digital wallet services – Google Pay, Apple Pay, and Samsung Pay – that allow users to make payments using their smartphones or wearable devices, adding another layer of convenience and security. Apple Pay and Samsung Pay have partnered with several local banks, making it easier for South African consumers to link their cards and use these services for everyday transactions. Templemore-Walters says ...

become increasingly prevalent. These systems enable customers to scan QR codes using their smartphones to complete transactions, offering a seamless and secure payment experience.

SnapScan and Zapper are particularly popular in smaller businesses and markets due to their ease of setup and use, while Scan to Pay integrates well with various banking apps, enhancing its accessibility.

Digital bank cards and mobile banking apps are widely used, with major banks such as FNB, Standard Bank, and ABSA offering robust mobile app functionalities that include digital wallets and secure online payments. These apps often support additional features that include budgeting tools, instant payments, and integration with other financial services.

“Fintech payment companies offer a wide range of card and digital payment acceptance solutions, including phone-based apps for smaller retailers and value-added services (VAS) terminals, devices that enable merchants to sell virtual products such as airtime and accept card payments.”

“Moreover, digital wallets aren't just for consumers. Once a retailer deposits cash into a retail cash vault, some providers allow them to store the funds in a digital wallet. The retailer can then use an app to purchase stock or pay bills with suppliers that are on the same system without having to pay a cash deposit fee. Alternatively, they can cash out the funds from the wallet to their bank accounts in real time.”



Crowdfunding

Raising money or funding a business by getting small amounts of capital from a large number of people.

Mira Norian
www.investopedia.com/

Financing retail automation

For all its potential returns and proven efficiencies, most retail automation solutions still require upfront investment and longer-term commitments for retailers who want to stay in the game. Thankfully, local retailers looking to finance their retail automation projects have several viable options to consider.

First, exploring government incentives and grants specific to technology and innovation can be fruitful. New initiatives such as the Department of Trade, Industry and Competition's support for industrialisation and technological advancement, in conjunction with Microsoft, could provide significant financial backing in the coming months and years.

Second, leveraging partnerships with technology providers who offer financing or lease options tailored to automation solutions can spread costs over time while ensuring access to meaningful technology. Tapping into local or international banks that specialise in project financing for

Experience the **adumö** advantage!



adumo.com

[#IntegratedPayments](#)



that are centred around our cash management platform,” says Templemore-Walters.

“They can, for example, access opportunity capital of up to R5 million in just 24 hours from Capital Connect.

Automation: the future of retailing

Retail automation is on the up and up. It enhances operational efficiency by reducing human errors and streamlining processes, which is particularly beneficial in a diverse and geographically vast country like South Africa. This efficiency leads to cost savings, improved customer service, and faster transaction times, all of which are critical in our competitive retail market.

The adoption of automation technologies also aligns with global trends towards digitalisation and technological advancement. South African retailers are increasingly recognising the need to integrate digital solutions and advanced AI technologies into their operational processes in order to stay relevant and meet evolving consumer expectations.

Lastly, by deploying technologies such as self-checkout systems, inventory management software, and AI-driven analytics, retailers can use automation to address other relevant local challenges, such as labour shortages and rising labour costs, making it an attractive long-term investment.

technological upgrades could also provide favourable terms and flexibility in repayment schedules.

And third, crowd-funding platforms or venture capital aimed at supporting digital transformation in retail may offer alternative financing avenues for innovative automation projects.

“We have built a complete fintech ecosystem that gives retailers access to powerful solutions

“This short term, unsecured fintech finance offering, or business loan, can be repaid in small daily instalments instead of a large debit order at the end of the month, making repayments affordable and ensuring the retailer maintains cashflow levels. For retailers with a Cash Connect retail vault, the daily repayments can be deducted straight from the cash in the vault, or retailers can opt for a daily debit order.”

Who are we?

A trusted source of retail information for over 65 years, our magazine informs and empowers retail business owners to grow whilst tackling current industry topics.

How can we help you?

We connect FMCG brands, and Equipment and Service suppliers to retail decision makers around South Africa. Elevate your brand with our wide variety of digital offerings.



SCAN TO VIEW MAGAZINE



Let our team help you with a digital strategy that targets real decision makers

Contact 011 728 7006

info@supermarket.co.za

www.supermarket.co.za

Want to target real decision makers?

Want to improve your efficiency and profitability?

Integrated retail management solution

for the edge in retail



Retail

In-store stock & margin control



Enterprise

Manage multiple stores centrally



Mobile

On-the-floor access to operational info



Accounting

Operational data flow to financial system



Loyalty

Reward loyalty & obtain customer info



eStore

Integrated online shopping platform



eReplenish

Fully automated procure-to-payment



Value Adds

Convenience and efficiency at POS



Fuel

All-in-one integrated forecourt solution

+27 21 556 2724
webinfo@archretail.com
www.archretail.com





Best practices for retail automation

Retailers embarking on automation and digitisation projects should consider these best practice techniques to ensure smooth implementation and significant returns on investment:

- **Take a customer-centric approach:** prioritise the needs and preferences of your customers by using data analytics to better understand their shopping habits.
- **Integrate your omnichannel strategies:** develop a seamless experience across all your channels – online, mobile, and in-store – allowing your customers to seamlessly interact with your stores and brands.
- **Employ sustainable practices:** integrate sustainability into your digital transformation initiatives to reduce waste and improve energy efficiency.

- **Adopt agile and scalable technology:** invest in agile technologies that can quickly adapt to market changes and scalable systems that grow with the business, such as cloud-based solutions and modular software.
- **Conduct employee training and engagement programmes:** ensure that employees are well-trained in and engaged with the new technologies you're implementing. Regular training sessions and workshops can help staff better understand

and effectively use digital tools, improving overall productivity and customer service.



- **Secure your data:** implement robust cybersecurity measures to protect customer data and ensure compliance with data protection regulations. This builds customer trust and safeguards your business from potential cyber threats.
- **Create a collaborative ecosystem:** foster partnerships with technology providers, fintech companies, and logistics firms to leverage their expertise and enhance service delivery. Collaborating with startups and tech companies can bring innovative solutions into your retail space.
- **Encourage customer feedback and continuous innovation:** regularly seek customer feedback and stay updated with the latest technology trends to continuously innovate and improve their shopping experience. Set up a dedicated team or innovation lab to experiment with new ideas and technologies. **SR**

Sources:

<https://mitsloan.mit.edu/ideas-made-to-matter/https://progressivegrocer.com/how-machine-learning-can-maximize-inventory-management>
www.automationanywhere.com/rpa/
<https://enterpriseproject.com/article/2019/5/>



Guy Lerner, writer and photographer, writes across diverse topics in business, technology, and retail, including consumer technology, telecommunications software, user experience technology, security, and power systems. He has worked with multinational companies in South Africa and Australia and is currently based in Cape Town. Guy holds a B.Sc. Honours degree from the University of Witwatersrand). Contact Wilkins Ross Communications (www.wilkinsrossglobal.com) or guy@wilkinsross.co.za.



Pricewizard has been in the retail industry for over 40 years. We are extremely proud to represent Hanshow, one of China's leading electronic shelf labelling manufacturers & distributors in the Chinese & European markets.



The Polaris Pro range of Electronic Shelf Labels

from



pricewizard
ELECTRONIC PRICING SYSTEM



Polaris Pro Electronic Shelf Labels, features ...

- Multiple Colours.
- 8 pages storage.
- 7 colours flashing.
- 10 year battery life.
- Thinner & Battery – replaceable design.
- More flexible in placement.
- Green and low carbon design.
- Higher screen to body ratio.
- Larger display, Thinner Bezel.
- 3H surface hardness for better scratch resistance.



2.6" vertical height = 3.1" vertical height



Contact details: www.posisolve.co.za

M: +27 (0)83 777 7043

O: +27 (0)86 166 6349

info@posisolve.co.za | vernon@posisolve.co.za | positronpmb@wol.co.za

