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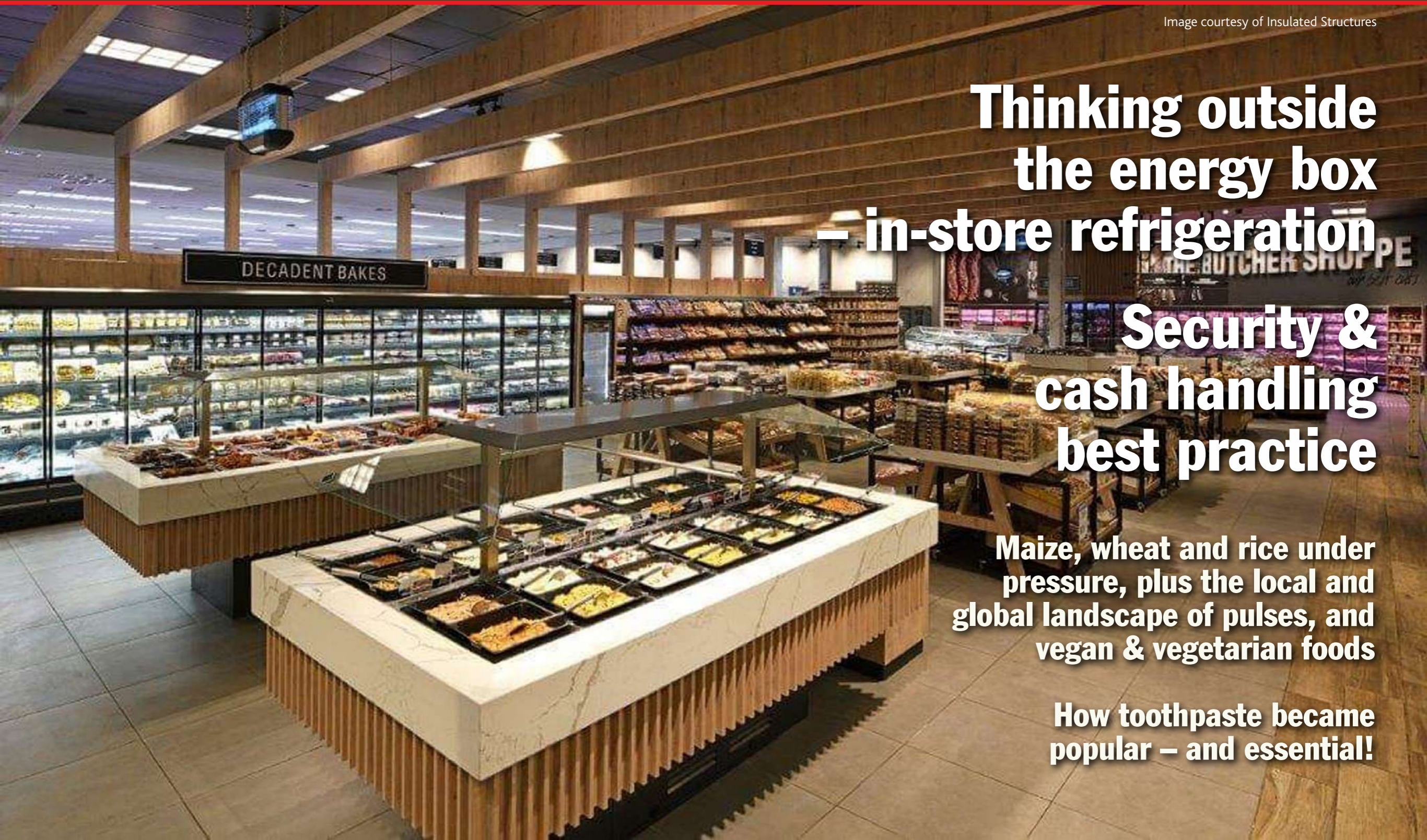
Image courtesy of Insulated Structures

**Thinking outside
the energy box
– in-store refrigeration**

**Security &
cash handling
best practice**

**Maize, wheat and rice under
pressure, plus the local and
global landscape of pulses, and
vegan & vegetarian foods**

**How toothpaste became
popular – and essential!**



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Image: Andrea Schettino, Pexels
Image: Markus Spiske, Pexels

Refrigeration: Outside the energy box

Ann Baker-Keulemans has found that industry research and development is still focused on producing the most energy efficient model possible, while also decreasing carbon footprint and minimising environmental impact.



Image: Greengrey Darya, Pexels

Maize, rice, & wheat – Including pulses, and vegan & vegetarian foods

Ann Baker-Keulemans and Linda Wilkins say these staple commodities play a critical role in food stability locally and

globally. 30% of the world's supply of wheat comes from Russia and Ukraine. The war in Ukraine and global supply chain backlogs from the Covid pandemic cause uncertainty in the market, with some exporters holding onto their crops in anticipation of shortages.

Security & cash handling best practice



Visual: Depositita

Minimising risks and maximising cash handling safety in business is a mix of organisational best

practice, and effective policies and procedures – reducing the amount of cash on site, situational awareness, and using technology to advantage.

COLUMNS

How toothpaste became essential!



Rodnae Productions, Pexels

Aki Kalliatakis discusses how pioneer advertising dramatically increased sales of existing consumer products like beer, oats and soap bars.

NEWS

B2C Digitised selling

While the vast majority of digital transformation initiatives in manufacturing targeted internal processes, they've thrown up other opportunities too – most notably, it has fundamentally changed how manufacturers can sell to their customers.

Vegan Yogurt report

Plant-based diet has grown in popularity among the consumers, with many people trying to replace dairy products with plant-based alternatives, including yogurt.

Edible fungus future market

Edible fungi have many of the nutritional characteristics commonly found in meat, beans or grains. With an increasing number of consumers looking for meat alternatives, the demand for edible fungus is expected to rise.



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Is it cold enough for you?

Ann Baker-Keulemans discusses ...

- Legislation: South Africa moves towards a low-carbon economy
- Achieving an energy efficient refrigeration system
- Natural refrigerants – combining 'green' energy with efficiency
- Choose the right case, lighting, and closures
- Refrigeration displays and accessibility
- Power outages and load shedding
- Refrigeration and HVAC
- Thermal energy storage: energy-saving innovation
- Heat recovery systems

And a special thanks to Insulated Structures for the cover picture for this issue.

Feature: Maize, rice, wheat pasta and pulses and food source for vegans and vegetarian

Maize, rice, wheat and pulses are staple commodities in South Africa and globally, while providing a solid food source for vegetarians, vegans and flexitarians everywhere.

Maize, wheat, and rice provide the foundation for mealtimes for millions of South Africans. These staple commodities play critical role in food stability locally and globally.

The war in Ukraine and global supply chain backlogs from the Covid pandemic are causing great uncertainty in the market, with some exporters holding onto their crops in anticipation of shortages. Learn more in this issue

Aki Kalliatakis goes deeper into the psychology of consumer spending and how you can leverage this in your retail store

"The crucial, magic lever is that we need to learn the right human psychology regarding triggers and rewards. It's the same in your personal life when you want to create a new habit, like a more regular fitness routine. If you get your running shoes on, even if you are tired after work, but promise yourself a drink with your friends afterwards"

Helen Maister

Helen Maister



Helen Maister

The first winter cold front has hit the country. Load-shedding is on level 4. The stop-start of April is behind us and we are in the full swing of 2022.

No better time to discuss refrigeration

South Africa is still in the thick of an energy crisis. In the

middle of every crisis, though, says the Chinese proverb (and Albert Einstein) lies great opportunity.

With refrigeration units, chillers, freezers, cold rooms, and HVAC accounting for a significant portion of a store's electricity bill and one of the biggest expenses overall, finding alternative solutions also offers a way to reduce costs and trade in a more environmentally friendly manner.



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How toothpaste became popular – *and essential!*

This is the next article in a short series on how behavioural economics and 'being human' affects your business.



Aki Kalliatakis

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Until a few decades ago, toothpaste was not a big thing. Indeed, brushing your teeth was not something that most people ever did, never mind twice a day. And yet a little more than a century later, very few of us don't use it.

How on earth did this transformation in human behaviour happen?

You can blame it on legendary advertising pioneer Claude Hopkins. In his work in the early 1900s, he had managed to dramatically increase sales of existing consumer products like beer, oats and soap bars. Interestingly, all the promises made in the campaigns were not about something new and spectacular about these products but, by intensely studying them and the companies that produced them, he was able to come up with some unique examples that he knew would appeal to customers, using what has today become known as 'augmentation-by-addition'.

For example, for Schlitz beer, he stated that they

cleaned their bottles with 'live steam' – but of course everyone did that. He created seductive fantasies for women by proclaiming that Cleopatra had washed with Palmolive soap, despite the outraged protests of Egyptologists and historians. But these thoughts somehow stuck and became ingrained in the daily behaviours and habits of consumers.

So, let's come back to toothpaste – and the brand Pepsodent in particular. There were some factors that created a good and rational reason for using toothpaste. As people around the world started prospering and living better, eating more processed foods and sugar led to tooth decay, and this became an endemic problem because the rate of cavities started rocketing. But still most people didn't brush their teeth despite what they saw happening around them. In fact, one estimate said that only 7% of Americans actually owned a toothbrush.

In his book published in 1923, he stated, "The most successful toothpaste advertiser never features tooth troubles in his headlines. Tests

“An idea is nothing more nor less than a new combination of old elements.”

James Webb Young,



Image courtesy of Rodnae Productions, Pexels

have proved them unappealing.” It's therefore understandable that at one stage, Hopkins thought it was a lost cause, and didn't see how he could persuade consumers through education.



No, he had to try another tactic to change habits – an increase sales.

What desirable human cravings could he tap into that could act as cues or triggers to consumers brushing their teeth every day? He tried appealing to their sense of vanity – “your teeth will be whiter and look better”- but that had only small success. But his extensive research into the prospective consumers led him to identify something very important. Everyone has a natural film of plaque on their teeth, whether one brushes or not. This has existed for as long as humans have lived on the planet, and it was neither dangerous, nor did it seem to bother anyone. (Indeed, to get rid of it, all one had to do was rinse out your mouth, eat an apple, or brush with water alone. Toothpaste makes no difference.)

But what he did appeal to was the ‘yuck factor’. His advertising messages for Pepsodent distributed in all media and public places said things like: “Just run your tongue across your teeth... You’ll feel a film — that’s what makes your teeth look ‘off colour’ and invites decay.” (I bet as you read this you just did that!) And when this was combined with the problem of possible bad breath, it became irresistible for consumers, impossible to ignore. And there was a reward used to entice consumers. After all, who doesn’t want to be more beautiful and have a prettier smile? And who doesn’t want fresher breath? Particularly when all it takes is a quick brush with Pepsodent?

The power of this strategy is one that can be used in just about any business. It is definitely used in



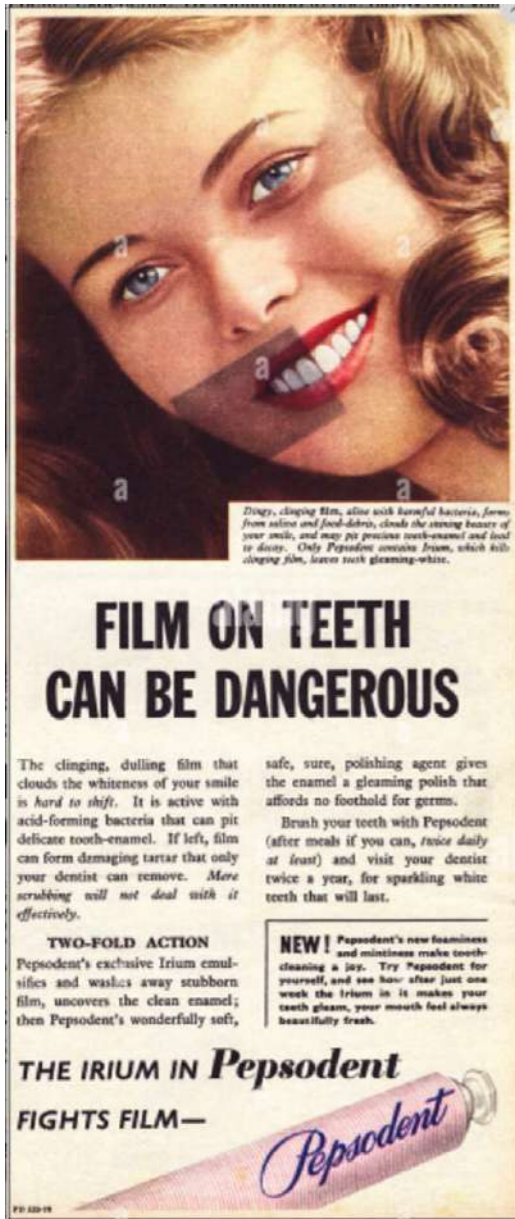
the video game and electronics industry, by casinos, by food, sugar and cigarette companies, in sales, and many other industries. In its simplest form, it goes something like this ...

- Identify a simple craving that people have, and if you want to, create a new one that they never even thought about.
- Use this to trigger or cue a very specific behaviour that you want your customers to take.
- Immediately follow up with an enticing and powerful reward – even if it’s an emotional reward only.

- This then powers the new routines behaviours and habits.

The crucial, magic lever is that we need to learn the right human psychology regarding triggers and rewards. It’s the same in your personal life when you want to create a new habit, like a more regular fitness routine. If you get your running shoes on, even if you are tired after work, but promise yourself a drink with your friends afterwards. Or improving your diet: research on dieting shows that creating new food habits requires a prearranged and programmed cue — such as planning your menus in advance — and a simple reward when





you stick to your goals. This is not weird stuff. It's all based on science.

One final point needs to be emphasised here ... In the Pepsodent example, it wasn't only the clever tactics that made it successful, because it turns out that the same claims made about the film of plaque were made by other dental products. What was additionally different this time was that included in the tube of toothpaste was something that affected the taste. They also added citric acid and mint oil to the flavour that made your mouth tingle when you brushed your teeth, and consumers saw this as evidence that it was working.

Hopkins didn't only promote beautiful teeth, but also a sensation that people craved, and that they equated with cleanliness. As Charles Duhigg later wrote: "The tingling doesn't make the toothpaste work any better. It just convinces people it's doing the job."

For your business, getting to grips with the science of cravings may be ground-breaking. If you can use these you will succeed far better than your rivals, and the best news is that all you have to do is take the time to observe yourself and the people around you. New habits are driven by cravings, not magic or mystery, and these cravings become the transformational triggers for what you want your customers to do. **SR**

Aki Kalliatakis is the managing partner of The Leadership LaunchPad, a company dedicated to helping clients become more customer driven. He can be contacted at (011) 640 3958, or via the website at www.leadershiplaunchpad.co.za



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Testing

Food safety: Chemistry testing

When you think of food products, do you think of chemicals? As a food or beverage manufacturer you should. Food chemistry – or chemistry testing to be more specific – plays a significant role in food safety and quality.

Sending your products to a chemistry testing lab is not only a necessity, but it can be beneficial to you. Remember, consumers are loyal to products that have consistently good quality. But, before you can get started, you must have a solid understanding of chemistry testing. So, here's what you need to know.

The meaning of chemistry testing

Food chemistry testing is the process of confirming the contents of the product. That's the basic definition.

To dig deeper, it involves analysing samples of products to find various elements or specifications. For instance, chemistry testing can tell you how much of each macronutrient – like carbs, proteins and fats – are in your product.

It can also indicate whether there are allergens, heavy metals or toxic substances present and tell you the levels of moisture in the item. All of this helps you to ensure that your produce is safe for human consumption, and that it is of good quality.

The laws on chemistry testing

The law doesn't say "you must do chemistry testing" in so many words. However, there are laws that necessitate chemistry testing. For example, the Foodstuffs, Cosmetics and Disinfectants act, 1972 (Act 54 of 1972) requires that all products come with nutritional labels. To get the information for these labels, you must do nutritional profiling and, that is a form of chemistry testing.



Essentially, the law requires you to name the components present in your product and list the amounts of each per food item. This is exactly what is done in a chemistry lab.

Further, you will have to provide information about additives, preservatives, sweeteners, colourants, allergens and more, on your product. There are also laws on the number of preservatives and antioxidants allowed in products. Chemistry testing can help you comply with regulations in this case too.

The same goes for toxins. Certain toxins like mycotoxins and biotoxins – and heavy metals like mercury – can be very harmful when consumed. You are required to ensure that your products are free of these compounds, or only contain them in extremely small amounts.

The benefits of chemistry testing

Apart from the fact that you need to do chemistry testing to ensure that you're abiding by regulations and standards, there are other reasons to do it too.

Safety – By doing chemistry testing, you can ensure that you keep consumers safe.

Reputation – As a result of the above, you can avoid having to recall products and thus avoid damage to your reputation and financial damage.

Taste – The process can also assist you in finding a balance between ensuring safety and making your products tastier.

Product performance – You can also ensure better quality in terms of shelf life and longevity. Chemistry testing also allows you to improve the appearance and texture of your product.

Operational improvement – Testing your products can also reveal presence of harmful chemicals in your facility.

Consumer trust – When you produce consistently good products and provide accurate labelling, people are likely to trust you more and keep coming back.

The risks of not doing chemistry testing

If you decide against chemistry testing your products, you could end up in a lot of trouble, losing all the benefits mentioned above. You risk making people sick, financial loss, and even may face legal battles. Learn the lesson from other people's mistakes. For example, a beverage manufacturer had to recall its juice brand due to the presence of patulin (a mycotoxin) in some of the products. A recall involves a lot of work and a lot of refunding. It could also be a PR crisis if you aren't careful. It's best you avoid this at all costs.

Bringing it all together

Sampling and testing your products may seem tedious. And, you may be put off by the additional expense. But the fact is that you can't do without it. What's more is that the benefits out-weigh the costs, so it's more than worth it. Contact AssureCloud to learn more. **SR**



Thinking outside the energy box

In-store refrigeration 2022

South Africa is still in the thick of an energy crisis. In the middle of every crisis, though, says the Chinese proverb (and Albert Einstein) lies great opportunity.

“ With refrigeration units, chillers, freezers, cold rooms, and HVAC accounting for a significant portion of a store’s electricity bill and one of the biggest expenses overall, finding alternative solutions also offers a way to reduce costs and trade in a more environmentally friendly manner. ”

Legislation: South Africa moves towards a low-carbon economy

Energy efficiency and sustainability have been watchwords in the industry for quite some time now, and this is not about to change. To the contrary, efficiency and sustainability are going to become increasingly important as local and international legislation comes into play and business starts paying the price of carbon tax. Industry research and development is still focused on producing the most energy efficient model possible, while also decreasing carbon footprint and minimising environmental impact.

In a recent newsletter published by The Conversation titled South Africa’s carbon tax rate goes up



Image courtesy of Andrea Schettino, Pexels

but emitters get more time to clean up, Lee-Ann Steenkamp writes about the Climate Change Bill (formally introduced in parliament on 18 February 2022) and the carbon tax rate increase announced in the National Budget Speech on 23 February 2022. This transition to a “low-carbon and climate-resilient economy” means that retailers will feel the pressure to have the most efficient systems installed to reduce electricity consumption and carbon emissions.

Under a carbon tax, a government sets an amount that must be paid for each ton of greenhouse gas emissions.

An increase of the carbon tax rate to R144 (about US\$9) was announced in the budget speech and, in order to uphold South Africa’s COP26 commitments, the rate will increase each year by at least US\$1 (currently about R16) until it reaches US\$20. This rate will increase in 2026 as the South African government aims to reach at least

“ Smart technology paired with easy-to-use dashboards make keeping track of pertinent data relatively easy, and changes can be spotted quickly. Investing in the latest technology is not an unnecessary expense. ”

US\$30 by 2030, and US\$120 by 2050. Despite an extended first phase for the roll-out of the carbon tax, business and the built environment will start to see an impact in the not-too-distant future and should be prepared for this by engaging with refrigeration and cooling suppliers, implementing environmentally friendly processes and systems, and taking advantage of energy-saving and carbon footprint-reducing technology.

Achieving an energy efficient refrigeration system

In addition to new tech and innovative design, there are several steps that can be taken to maximise efficiency and savings that don't involve investing in an entirely new set up. This includes effective maintenance, digital monitoring, and switching to natural refrigerants.

Preventative maintenance is based on effectively monitoring your system and picking up on small problems before they become major issues. Planned maintenance and repairs reduce unexpected downtime and can also maintain a superior level of efficiency, which can help cut costs as even a small loss of efficiency can mount up. Intelligent digital monitoring is an essential part of effective maintenance.

Smart technology paired with easy-to-use dashboards make keeping track of pertinent data relatively easy, and changes can be spotted quickly. In this case, investing in the latest technology is not an unnecessary expense.

“ The transition to a “low-carbon and climate-resilient economy” means that retailers will feel the pressure to have the most efficient systems installed to reduce electricity consumption and carbon emissions. ”



Image courtesy of Chris Leboutillier, Pexels

Natural refrigerants – combining 'green' energy with efficiency

When it comes to new refrigeration systems, the technology has developed to such an extent that the energy efficiency of a freon-based system versus that of a natural refrigerant system such as propane, ammonia or CO₂ is negligible as they all have a COP (coefficient of performance) of around 2. The terms COP (coefficient of performance) and EER (energy efficiency ratio) describe the heating and cooling efficiency of any heating engine. These terms indicate the ratio of heating or cooling provided by a unit relative to the amount of electrical input required to generate it.

A good coefficient of performance is around 4.5. The higher the COP the more efficient the system.

Some older systems that are being run using HFC refrigerant can be successfully converted to a natural refrigerant, and this can positively affect the efficiency of the system. Older refrigeration systems that have reached end-of-life and that need to be replaced, however, often cannot be replaced like-for-like as they use banned refrigerants.

According to Jason George, Director at Energy Banq Consult, "A new CO₂ system will be significantly more efficient than legacy, existing freon systems because of advancements in



Up to 40% energy saving with our Close the Case Glass Doors

Ways to save

With energy costs rising and food retailers looking to improve the shopping environment for customers, Insulated Structures has developed an effective solution to reduce the cost of in-store refrigeration while enhancing the customer experience.

Insulated Structures doors are easy to retrofit on in-store cabinets to reduce the energy required to keep chilled foods at the correct temperature.

Meanwhile, customers are able to clearly see and access the products on offer. Reduced energy requirements means smaller refrigeration plant selection for new stores. These savings will offset the cost of the doors. Up to 40% reduction in refrigeration requirement has been achieved.

Benefits

- Reduced energy consumption
- Extended product shelf life
- Double glazed argon filled void for Better insulation
- Optimal product temperature
- Glass doors have optional mullion lights
- Handles included
- Up to 40% energy saving
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- Doors are spring loaded
- Less cold air spillage - warmer aisles
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refrigeration technology in general. Upgrading an existing refrigeration system can result in an electrical efficiency increase of 15 – 30%.” This means that with the current cost of electricity, you will likely see an ROI sooner rather than later.

Certain freon-based refrigerants are still available as they claim to be more environmentally friendly than older, now-banned versions, but as these have only been available for a handful of years the long-term effects of using these refrigerants are as-yet undetermined. CO₂ and ammonia have a demonstrably decreased environmental impact. Of the two, carbon dioxide is practically odourless, non-toxic, and can be run using a single plant system, whereas ammonia requires two plants. CO₂ systems have an added environmental advantage of replacing freons and removing CO₂ from the atmosphere. While the option is yours, from an environmental perspective choosing a CO₂ refrigerant is the most sensible choice.

Choose the right case, lighting, and closures

When it comes to refrigeration cabinet types, the latest technology and innovations keep competition fierce and, to some extent, level the playing field. To choose the right solution for your needs, you will need to take into consideration your specific refrigeration requirements, your store’s footprint and design, and of course your shopper profile which determines the stock you carry in these cabinets. There are several options to choose from, such as upright, plug in or self-contained, and semi-vertical.

Miniplex, polyplex, and modiplex systems all have their benefits, and thanks to the latest technology and energy efficiency innovations, new systems will always ensure savings when compared to or existing systems. In addition, refrigeration

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Energy Comparison

System	Energy Efficiency
Miniplex	High (Purple bar)
Aqualoop	Very High (Blue bar)
Polyplex	Medium (Green bar)
Modiplex	Low (Yellow bar)

Note:
 • Miniplex and Aqualoop require increased installation, setup and maintenance skills
 • Better suited for urban areas with skills availability

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suppliers are constantly investing in research and development to ensure their offering meets and surpasses the expectations of their customers. A good example of this is Colcab’s trademarked Aqualoop design. It is an ultra-efficient waterloop refrigeration system, however much like a miniplex system, it requires increased installation, set-up and maintenance skills from all the technicians involved and, as such, may be better suited to more urban areas.



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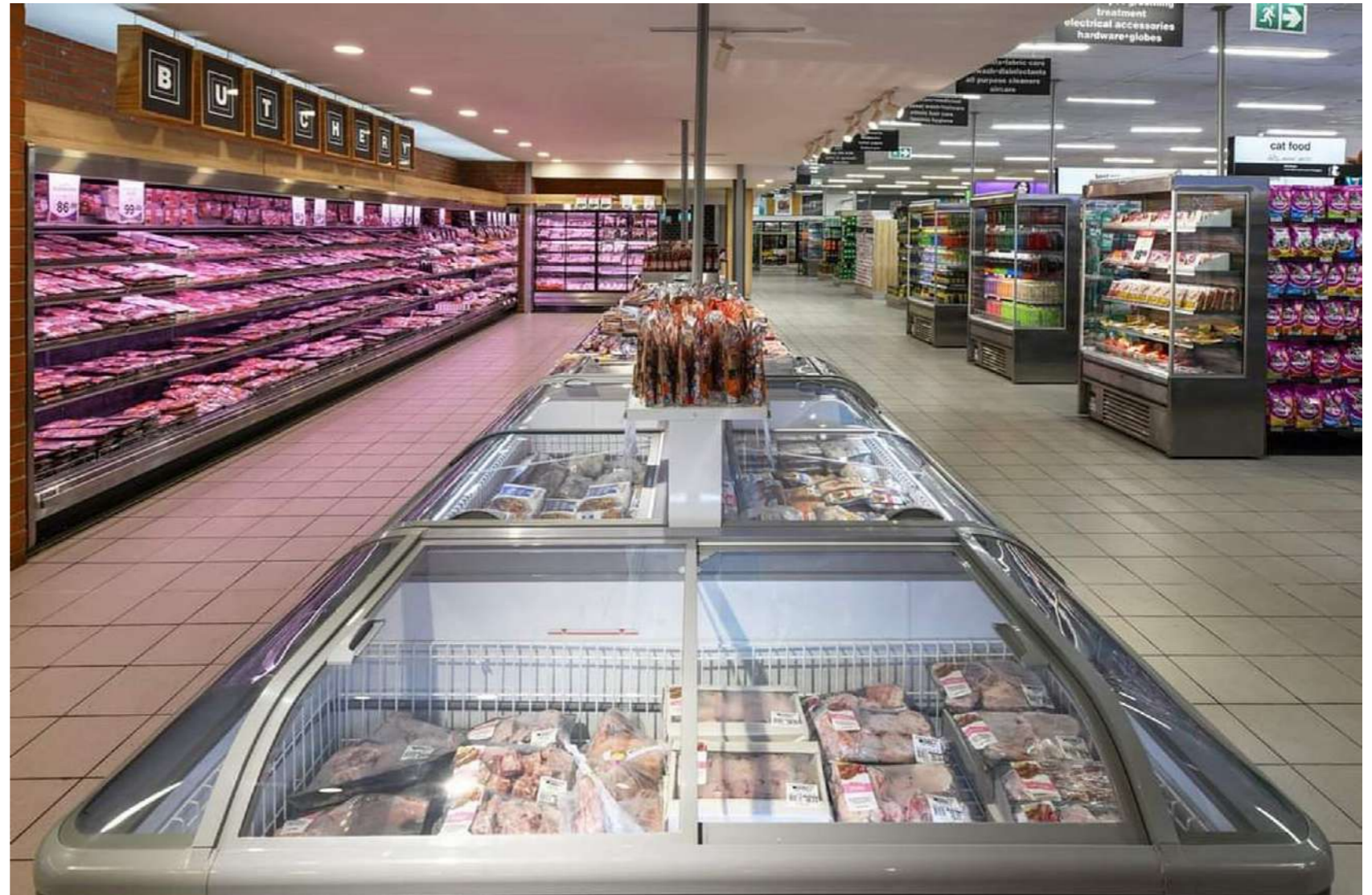
Refrigeration displays and accessibility

“ Choosing the right refrigeration solution, from the system right through to cabinet styles, is also about product display and accessibility, as well as food safety and product shelf life. ”

Choosing the right cabinet style is as important as filling it with the right products.

While starting from the design stage is always going to give you the best results in terms of the latest design options and a fresh, clean look, there are many retrofit options available. These can take an older system and upgrade it functionally as well as aesthetically.

By changing the siding and panelling, replacing any old lighting with energy efficient and effective LED lighting that enhances your displays, and incorporating effective and easy-to-use close-the-case solutions to your fridges and freezers, you can revamp your entire refrigerated and frozen display. Close the case solutions, including hinged doors



Images courtesy of Insulated Structures

and sliders, have the added benefit of increasing energy efficiency by preventing the excessive

escape of cold air, and help maintain a steady temperature which can extend product shelf-life.





Staycold International, a South African manufacturer of self-contained commercial fridges and freezers, ensures that all units they manufacture are tested and fully comply with stringent international safety standards. This includes their latest range of even more environmentally friendly coolers which utilise flammable hydrocarbon R290 refrigerant. Staycold therefore have their Letter of Authority (LOA) that is issued by the National Regulator of Compulsory Standards (NRCS) in South Africa.

There are no independent 3rd party testing laboratories in South Africa that offer full IEC (International Electrotechnical Commission) testing of hydrocarbon refrigerant units to IEC 60335, so Staycold have to send their cabinets to SGS's laboratory in Turkey for it to be assessed and tested to this requirement. Without this test report confirming their compliance, Staycold would have been unable to obtain their LOA from the NRCS.

One of Staycold's hydrocarbon units, their HD1140-HC cooler, last year was listed in the London-based Environmental Investigation Agency's (EIA) Pathway to Net-Zero Cooling Product List. The product list has been designed to support and accelerate the race to zero emissions by 2050. The flammable refrigerant (R290) used in the HD1140-HC and its sister products is a net-zero compatible alternative to more common HFC-based systems. Safety measures and compliance to internationally recognised standards are paramount in these products, to safeguard the public and other users of these coolers throughout their lifespan.

Retailers, corporates, and independents alike are thus encouraged from a procurement due diligence

perspective to ask suppliers to provide evidence that their products comply fully to a recognised test standard as well as provide a valid LOA from the NRCS at the same time.

The context to this move to hydrocarbon refrigerants and the subsequent safety compliance of cabinets which include this flammable gas, is in relation to the global warming emergency that exists and the contribution of refrigerants to the presence of greenhouse gases in our atmosphere. The Kigali Amendment to the Montreal Protocol requires a HFC (hydrofluorocarbons) refrigerant Phase-down – HFC's such as R134a have been the prevalent gas used in refrigeration since the phase out of CFC refrigerants in the late 80's and early 90's. South Africa is one of the 150 countries that have signed the Kigali Amendment, and have agreed to reduce HFC consumption by 80% by 2047. SA has an initial freeze date of 2024 and the first phase down step then follows in 2029. It aims to have 80% phased out by 2045 and if achieved globally, this could avoid more than 0.4C of global warming by the end of the century. Hence Staycold's R&D department have been working on this urgent transition to hydrocarbon and making all their units safe.

A background note is that refrigerants are compounds typically found in either a fluid or gaseous state. It readily absorbs heat from the environment and can provide refrigeration or air conditioning when combined with other components such as compressors

and evaporators. CFC's was a refrigerant found to be depleting the ozone layer, but the effort to get rid of CFCs resulted in many chemical manufacturers choosing to replace them with two groups of chemicals with a different problem – hydrofluorocarbons (HFCs) and hydrochlorofluorocarbons (HCFCs). These refrigerants break down ozone molecules far less, but are extremely potent greenhouse gases. The transition to the more climate friendly hydrocarbons is now accelerating, but brings with it additional safety measures to consider.

Lena le Roux, Staycold's MD had this to say, on the topic that is gaining momentum ...

“ Staycold units are manufactured in our ISO 9001:2015 certified factory in Parys, and are fully compliant and registered with the South African regulatory body as well as tested to internationally recognised safety standards, giving our customers peace of mind as always. ”



For more information on the safety measures Staycold's coolers and freezers have undergone, contact ...

056 819 8097

www.staycold.co.za

<https://www.linkedin.com/company/staycold-international-pty-ltd/>



Power outages and load shedding

Load shedding is an inescapable reality for South Africans, but alongside that is the instability and unreliability of a system that regularly experiences reduced production caused by equipment failure, damage to power generating stations, and reduced production of renewable energy due to weather conditions. is.



Image courtesy of Los Muertos Crew, Pexels

Constant load shedding puts undue strain on an already compromised system, resulting in extended unplanned power outs when components of that system fail. Many electrical systems are adversely affected both by load shedding and by unpredictable and sometimes immensely powerful electrical surges.

Retailers need to engage with their suppliers and ask the right questions to make sure their systems

“ Many electrical systems are adversely affected both by load shedding and by unpredictable and sometimes immensely powerful electrical surges. Backup power systems are non-negotiable, and whether you opt for generators or solar power linked to a new-generation lithium-ion batteries, the need for an alternative power source is inescapable. ”



Image courtesy of Pixabay, Pexels

can withstand these conditions. Backup power systems are non-negotiable, and whether you opt for generators (keeping in mind the rising cost of fuel and unpredictable fuel availability as the war in Ukraine continues) or solar power linked to a new-generation lithium-ion batteries, the need for an alternative power source is inescapable.

Retail refrigeration needs a continuous, seamless energy supply to prevent damage to the system and a loss of efficiency.

Energy Banq’s George, who consults with Matador Refrigeration on clean and green energy, energy-efficient solutions, and power generation, says, “You need to go as high-end as you can afford to. Retailers need more advanced refrigeration control systems and infrastructure to protect

their refrigeration system from potential issues caused by frequent power outages. Matador has invested in substantial R&D to best adapt and optimise their refrigeration offering, considering practical issues such as frequent power outages. For example, specific blowoff reduction controls, as well as system infrastructure to save clients on the amount of CO₂ that needs to be replaced due to system stagnant time during power outages, are two areas that can assist with protection from damage caused by power outs.”

In short, your alternative power supply needs to provide a seamless transition between grid and back-up power, and both your UPS and battery bank should have top of the range controllers to protect against surges and unpredictable supply.



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access to fresh food being the global norm rather than the exception.

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Refrigeration and HVAC

For South African retailers, refrigeration and HVAC combined can cost up to 50% or more of your monthly electricity bill. This does depend on your overall floorspace, and your floorspace to- refrigeration-needs ratio, as well as ambient temperatures and climate, but it's safe to say that together, these are your two biggest energy consumers.

Traditionally, refrigeration and cooling/HVAC are two separate systems that work in isolation, but the question – asked by among others the team at Matador, says George, resulted in research and development by the company of CO₂ systems that provide not only a system's refrigeration requirements, but also cooling requirements for air conditioning. This combined refrigeration

and cooling system offers cost, footprint, and environmental advantages because a single plant is servicing two client requirements. This is a big change in thinking, particularly for the South African built environment, but it is one that makes good financial and environmental sense.

George says, "Combining your systems has several benefits. You save on footprint because you only need space for a single system, and your installation and maintenance costs also decrease. A single system will use less electricity, and you decrease your carbon footprint."

A combined heat exchanger can also make a difference to your energy savings. One of the greatest benefits of combining your system is that you can take real advantage of Thermal Energy Storage (TES).

Taking savings a step further – Condensation collection

In tests run by Matador Refrigeration, relatively clean condensate was collected from their cooling and refrigeration coils. This condensate can be used in grey or bio water systems, which means there is no need for it to go into the general drain system and end up at a wastewater treatment plant. This is a small saving, to be sure, but for businesses interested in reducing their environmental impact, it is an important one.



In many Houston buildings, HVAC condensate is discarded, simply sent down the sewer. However, at Rice University, a long history of environmental stewardship makes that kind of waste unacceptable.

Instead, the condensate from Brockman Hall and six other buildings is captured and pumped back for reuse on campus, primarily as makeup water for the central plant's cooling towers. Knezevich figures that Rice recovers about 14 million gallons of water per year, and that is probably a conservative estimate. That means that instead of buying 14 million gallons of treated, potable water from the city to replenish its cooling towers or tapping the university's own well, Rice saves a precious resource and a considerable amount of money.





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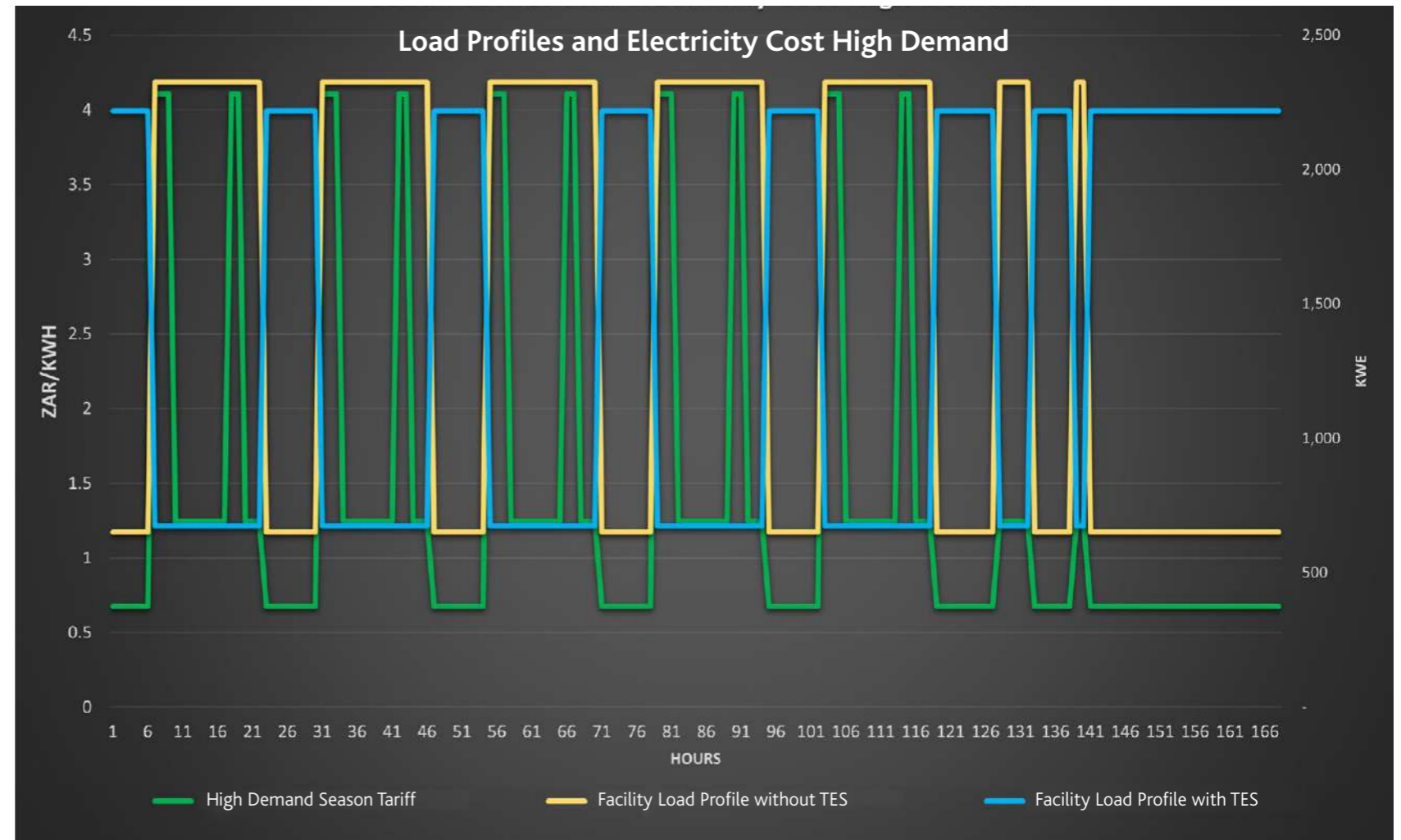


Thermal energy storage: energy-saving innovation

As anyone who pays for electricity in South Africa knows, our tariff system can make energy consumption during peak hours a costly undertaking. However, this same tariff structure means there is significant scope for cost saving by producing and storing cooling at night during low tariff times and deploying the stored cooling during the day during high tariff times.

The benefit here is two-fold. You still use as much energy as ever, but you are using it during off-peak hours, which makes it cheaper. You are also reducing the load on the grid during peak hours, which can help stabilise the system and reduce the need for load shedding. George explains, "By using the active components of your refrigeration and cooling system and running it at night, you can see a massive cost saving. For example, during May, June, and July in South Africa, peak tariffs can have electricity costing more than R4/KWh, whereas off peak costs can be as little as 90c/KWh. Store cooling is produced at night and stored in ice, which is then deployed during peak hours to provide cooling for the facility." This can reduce energy consumption annually by about 60%. The current technology works for HVAC, but research and testing are underway to see how it can be used for refrigeration as well. A combined refrigeration and HVAC system would see optimal savings from thermal energy storage technology.

TES also means that cooling systems can be sized more appropriately, as the active component



Thermal energy storage lowers aggregated electricity tariffs by operating cooling systems at night during low tariff times. Annual aggregated tariffs graph courtesy of Energy Banq Consult

of a cooling system is sized for approximately 50% of the maximum cooling requirement of the facility. The maximum cooling requirement only occurs for a few weeks in the year, so sizing the cooling system for this requirement means that the cooling system is severely oversized and less efficient for most of the year. Because it operates at a turndown ratio, the contribution of the cooling system to the facility's maximum monthly MVA (Mega Volt Amp) charge is higher. The good news is that TES technology can, in many cases, be retrofitted to an existing system. The caveat is that this would need to be confirmed by a qualified

technician and while most existing refrigeration systems should be able to incorporate this, not all legacy HVAC technology will be compatible with a TES retrofit.

Heat recovery systems

Retailers and refrigeration/cooling suppliers are no strangers to heat recovery systems. The idea of harnessing waste heat produced by your refrigeration and HVAC systems to heat water for the facility is not new but gauging the overall efficiency and energy savings provided by a heat recovery system can be tricky. According to

Environmentally Energy Efficient Future Proof Refrigeration Systems



CUBO2 Smart is a compact, plug & cool, high efficiency CO2 transcritical condensing unit equipped with a brushless DC variable speed compressor with an advanced control system.



The MWT SMKT & MWT Industrial BOOSTER product lines are high efficiency CO2 transcritical systems that can be configured as MT only or booster MT/LT.

The modular design allows for superb customization as well as system optimization for control, configuration and layout. This makes the MWT SMKT/Industrial range the best option for supermarket & industrial applications.



SCM Ref Africa, distributed through Metraclark supplied Natcool with a MWT SMKT BOOSTER CO2 transcritical system for Pick n' Pay in Randfontein.

The system supplied is a high efficiency 6 compressor MWT indoor Booster LT/MT unit. (3xMT+1xIT+ 2xLT)



THERMAL ENERGY STORAGE

Systems without Thermal Storage	Solutions with Thermal Energy Storage (TES)
<ul style="list-style-type: none"> ● No thermal storage → no cooling during upset conditions. HVAC needs to be on backup power leading to a bigger generator ● HVAC is sized for maximum cooling demand which occurs <5% of the year → For most of the year, the HVAC is oversized and not running at its best efficiency point ● HVAC needs to run when cooling is required which is during the Peak and Standard tariff hours 	<ul style="list-style-type: none"> ● TES provides cooling during upset conditions. HVAC does not need to be on backup power ● TES and HVAC are each sized for 50% of maximum demand → HVAC is not oversized and more efficient ● HVAC builds ice during Off-peak tariff hours and does not have to run during Peak and Standard tariff hours
	<ul style="list-style-type: none"> ● TES: Reduces electricity consumption (kWe) due to increased efficiency ● TES: Reduces maximum demand (kVA) due to small HVAC ● TES: Lowers average cost of electricity since HVAC runs during Off-peak tariff hours (ZAR/kWh) ● TES: Reduces backup generator size which saves CAPEX ● TES: Can provide cooling during loadshedding or other upset conditions

The beneficial effect of Thermal Energy Storage on energy consumption and efficiency is significant. Table courtesy of Energy Banq Consult.

The Renewable energy Hub UK, The Carbon Trust (www.carbontrust.com) estimated that fitting a low-grade heat recovery system for a smaller system or a superheater for a larger retail refrigeration system can offer good savings on waste heat could supply between 75 and 90% of the hot water demand of an entire supermarket.

Heat recovery from ventilation systems is more variable, however, with The Carbon Trust estimating that thermal wheel ventilation units can deliver a maximum of 80% efficiency, and typical values can vary between 65 and 75%. Plate heat exchangers offer a maximum efficiency of 80%, with normal variations between 55 and 65%. Run around coil systems have a maximum of 55% with typical values between 45 – 50%. Heat pumps can produce 60% as a maximum, typically varying between 35 – 50%. And finally, heat pipes can produce a high efficiency rating of 70% with typical values of between 50 and 65%.

The best place to start is to engage with your in-house refrigeration experts and specialists, talk to your suppliers and find the most suitable and efficient solution for your existing system. Utilising reliable suppliers and forming effective partnerships is also imperative, as your system is only as good as the people who are installing it, monitoring it, and maintaining it.

Thinking outside the box

As technology continues to advance and environmental concerns continue to affect legislation, retail refrigeration suppliers are guaranteed to continue innovating. What is clear is that it is time to start thinking outside the box, challenging your existing refrigeration system, and making changes that benefit both your business, your customers, and the planet. **SR**



Image courtesy of Singkham, Pexels

Energy-saving tips

- Replace legacy systems using freon with alternate technologies like CO₂ or other natural refrigerants.
- Thermal energy storage reduces electrical consumption of cooling systems by up to 60%, depending on the size of the cooling systems, load profile, and electrical tariff structure of the facility.
- New cooling systems are 15 – 30% more efficient than older cooling systems.
- Combining HVAC and refrigeration systems to be powered by a single plant can save 10 – 20% of associated costs, such as the electrical, maintenance, consumables, installation, and project costs.



Ann Baker-Keulemans, a highly experienced business and consumer journalist, is published in numerous print and online platforms, writing on topics related to business, lifestyle, and health, with extensive knowledge on the SA retail and wholesale landscape. She holds a Bachelor of Arts degree in English Literature (British and Commonwealth) and Media Studies and is a member of the Golden Key Honour Society. ann@wilkinsross.co.za

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CASE CLOSED

Energy Saving Solutions

Glacier Door Systems has introduced the Air Shield ('Close the Case') Glass Door retrofit solution for refrigerated supermarket display cases, as well as the Eco Leaf Replacement Glass Door for existing glass door freezer rooms and glass door freezer display cabinets. Both solutions guarantee energy-savings in an ever-increasing energy cost environment. Part of the well-established Universal Industries Group, Glacier has 26 years' experience and are acknowledged industry leaders in refrigeration door technology. Innovative and forward-thinking, the company is built on cutting-edge technology, technical expertise and a customer-centric approach.

Air Shield Glass Doors

Features and Benefits

- Double glazed glass doors with Argon gas fill for superior insulation.
- Glass durability and clarity with torsion bar for positive closing.
- Glass door heating option for high humidity environments.
- Glass doors available with hold open brackets and LED lighting options.
- Flex modelling means glass panels are customised to fit existing cabinets and are tailored to suit each store's specific environment.

A quick and easy energy-saving retrofit solution, Air Shield Glass Doors can be fitted to any existing open refrigeration case, saving up to 40% on energy consumption.



Note: The value proposal is based on R1.31 per kWh and 40% energy saving. These are averages based on our experience and can be validated per store.

The value benefit

- High-quality locally manufactured solutions featuring the latest energy-saving technology.
- Demonstrated good pay back periods can be expected.
- Customised solutions to suit your store.
- ISO 9001 accredited factory.
- Safety toughened glass in accordance with SABS/SANS certification.
- Flexible installation timing to offset any customer disruption.
- Financing options available.

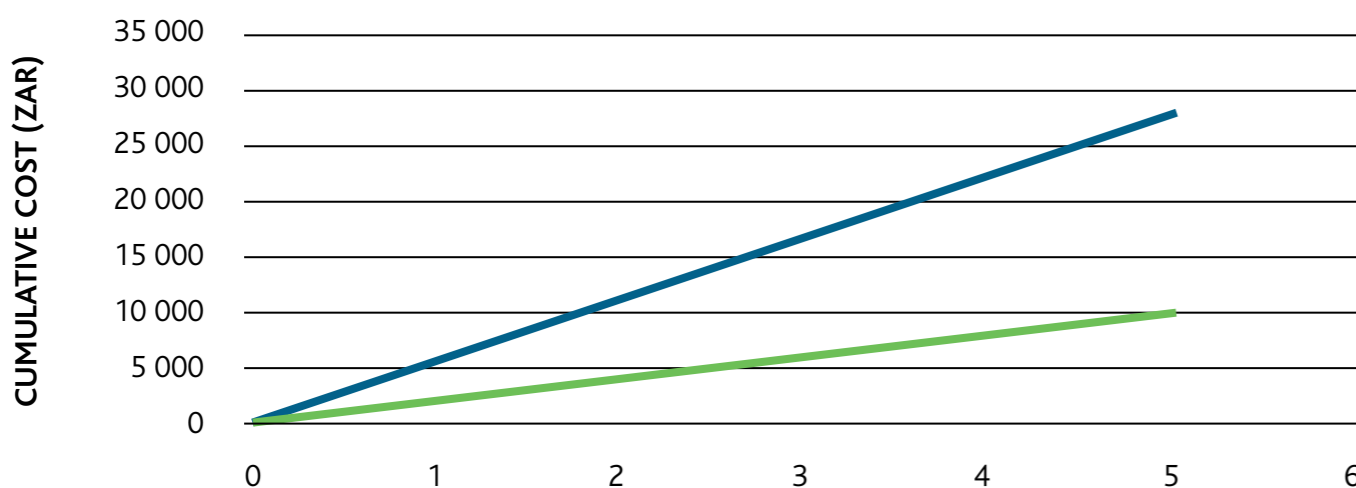
You can trust a Glacier door



Eco Leaf Freezer Doors

Designed as a 'swop-out', energy-saving replacement glass door utilising 220V technology that eliminates the need for voltage-reducing capacitors. This results in an amperage reduction from 1.29A on the standard door to 0.46A (64%) with the replacement Eco Leaf Door.

The Eco Leaf door is 64% more efficient than the standard door. The value proposal is based on R1.31 per kWh and 64% energy saving. These are averages based on our experience and can be validated per store.



	AMPS	VOLTS	WATTS
Glacier Eco Leaf Door	0,46	230	105.8
Glacier Standard Door	1,29	230	296.7



This article is based on information provided by the RACA Journal.

FRIGAIR 2022's theme is 'Natural refrigerants'

Since 1980, FRIGAIR has been a leading influence in the HERVAC sector's most relevant topics. The 2022 event will carry this forward as the world makes quick moves towards better choices in environmental impacts and the drive to mitigate climate change.

South Africa, as a signee to the Kigali Amendment to the Montreal Protocol is legally bound to the forced phasedown of hydrofluorocarbons (HFCs). HFCs are commonly used alternatives to ozone depleting substances (ODS) used in the past. While not ozone depleting substances themselves, HFCs are greenhouse gases which can have very high global warming potentials (GWPs).

Hydrochlorofluorocarbons (HCFCs) were developed as transitional substitutes for the high ODS and GWP refrigerants and will also be subject to a phaseout schedule in the near future. The theme selection of FRIGAIR 2022 was therefore simple as natural refrigerants will be the norm of the future and are in fact already here as replacement refrigerants have to be implemented.

Natural refrigerants have zero ODS and zero to extremely low GWP figures, and therefore are aligned to mitigate the challenges of environmental effects in the HVAC&R sectors.



Image courtesy of Polina Tankilevitch, Pexels

Non-Article 5 parties		Article 5 parties – Group 1 (South Africa)		Article 5 parties – Group 2	
Baseline	Average HFC for 2011–2013 + 15% of HCFC baseline*	Baseline	Average HFC for 2020–2022 + 65% of HCFC baseline	Baseline	Average HFC for 2024–2026 + 65% of HCFC baseline
Freeze	–	Freeze	1 January, 2024	Freeze	1 January, 2028
10%* reduction	1 January, 2019	10% reduction	1 January, 2029	10% reduction	1 January, 2032
40%* reduction	1 January, 2024	30% reduction	1 January, 2035	20% reduction	1 January, 2037
70% reduction	1 January, 2029	50% reduction	1 January, 2040	30% reduction	1 January, 2042
80% reduction	1 January, 2034	80% reduction	1 January, 2045	85% reduction	1 January, 2047
85% reduction 1 January, 2036					

HFC phase-down schedules for developed and developing countries.

Department of Forestry Fisheries and the Environment



Natural refrigerants include hydrocarbons (HCs), hydrofluoroolefins (HFOs), ammonia (NH₃/R717), carbon dioxide (CO₂/R744) and water – which is not very well developed as a refrigerant at this point in time.

These natural refrigerants are seen as the most sustainable replacements for existing options as they are able to reach the temperature requirements of the end user, they meet legislative and legal aspects, they meet environmental requirements and are also reasonably priced. These refrigerant solutions are also highly efficient in operation – so essentially tick all the boxes.

Globally, trends have been moving towards natural refrigerants for quite some time with CO₂ systems gaining a lot of traction and being known currently as a specialised field for engineers and technicians alike and are therefore still relatively 'unfamiliar' on a larger scale in South Africa.

Their deployment and associated training has seen only selected participation in the industry. Until now, CO₂ systems have also been considered suitable for cooler regions due to the high pressures required in system operation.

Ammonia as another popular choice has in fact been around for more than a hundred years and has an established and stable market, particularly in the industrial space. Due to the fast adaptation of produce development, ammonia could soon be found in commercial air conditioning applications as well.

On the domestic market, hydrocarbon R600a (isobutane) has already been used for several years



and in the retail sector R290 (propane) has seen large adoption too – specifically in display fridges. R290 is already being used in other countries for unitary air conditioning products and it is just a matter of time that these will find their way to the local market. R290 further has the scope to be used in commercial and industrial air conditioning applications as well as the greater refrigeration market.

As with all refrigerants, natural refrigerants are also subject to concerns around certain safety aspects. With the correct design and mitigation of potential risks these concerns are easy to resolve or avoid. The limit of a system charge being smaller has also reduced risk significantly.

This then opens the conversation around training which has seen considerable review and development recently. The new national safe handling of refrigerants framework is but one example. Local training centres are equipped with many resources

“ Natural refrigerants are also subject to concerns around certain safety aspects. With correct design and mitigation of potential risks these concerns are easy to resolve or avoid. ”



already to be able to offer required training in natural refrigerants and updating of certain elements of that training is ongoing.

Resistance to change forces companies and individuals to become ignorant (to the inevitable in this case) and in so doing the usual response is to be apprehensive or unwilling to change their mindset – while natural refrigerants, when handled correctly, don't pose any more danger than older refrigerant choices.

One of the South African Institute for Refrigeration and Air Conditioning's (SAIRAC) premier events, the FRIGAIR expo is the largest dedicated HERVAC trade exhibition in Africa. Dates are set for 01 – 03 June 2022 and will be held at the Gallagher Convention Centre in Midrand. This event is brought together by SAIRAC partners Interact Media Defined and Specialised Exhibitions – a division of the Montgomery Group. **SR**



Grains under pressure

Local and global landscape: maize, wheat and rice

Maize, rice, wheat and pulses are staple commodities in South Africa and globally, while providing a solid food source for vegetarians, vegans and flexitarians everywhere.

Maize, wheat, and rice provide the foundation for mealtimes for millions of South Africans. These staple commodities play critical role in food stability locally and globally. The war in Ukraine and global supply chain backlogs from the Covid pandemic are causing great uncertainty in the market, with some exporters holding onto their crops in anticipation of shortages.

The current wheat landscape

At the time of going to print, around 28 million tons of grain were stuck in Ukrainian ports, blockaded by Russia as a blackmail effort to have sanctions against it reduced.

Ukraine grows enough food to feed 400 million people annually, and 30 percent of the world's supply of wheat comes from Russia and Ukraine, according to the World Food Program.

Exports of wheat from Russia and Ukraine account for more than a quarter of the crop's trade worldwide and a fifth of corn sales. As at May 2022, the grain storage silos at Ukrainian ports

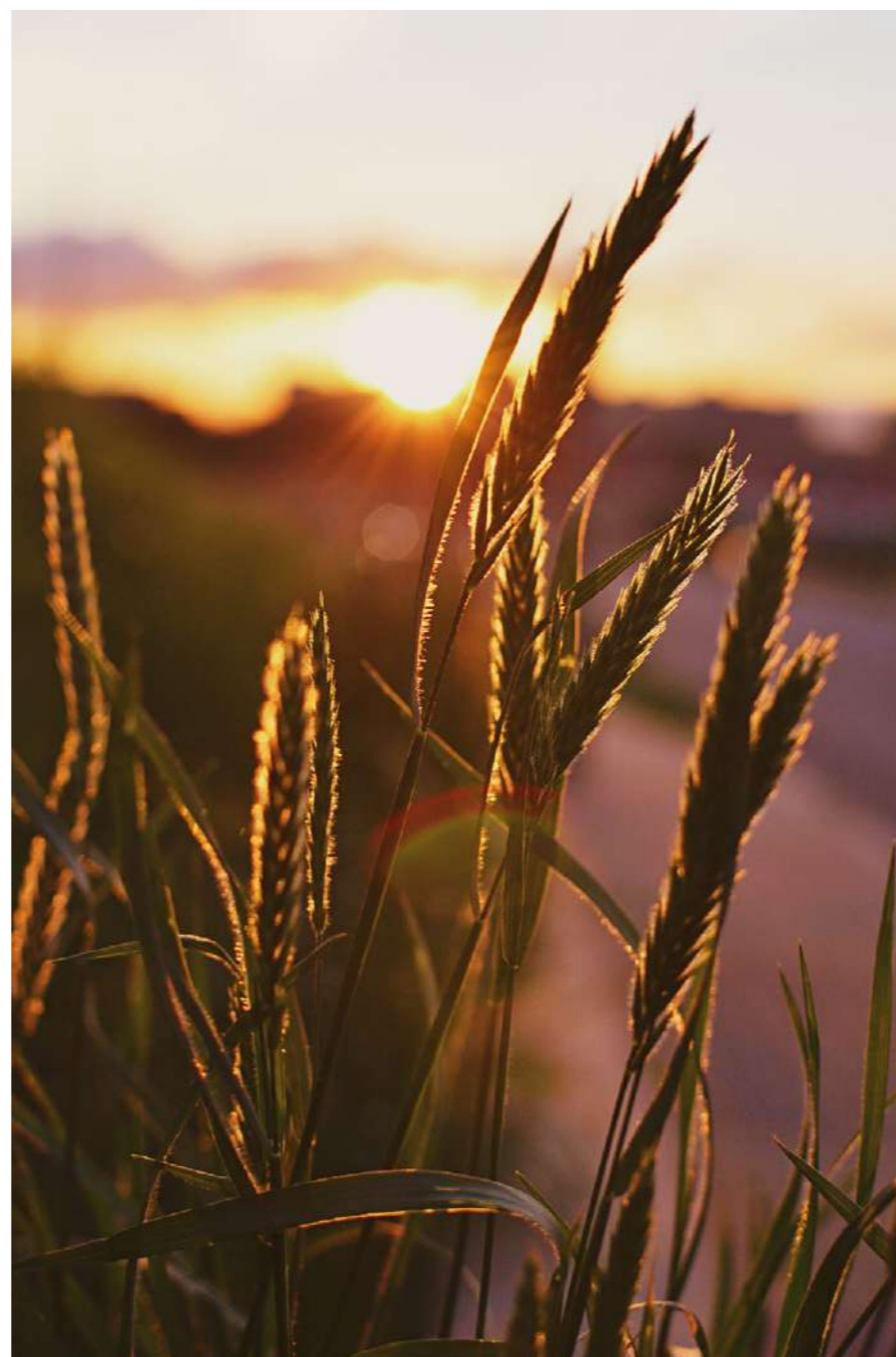


Image courtesy of Greengrey Darya, Pexels

were full, meaning there will be nowhere to store the new harvest due to be shipped to port in July and August, leading to further food instability.

Some countries in Asia, the Middle East and Africa are particularly vulnerable. For example, Egypt gets between 75-80% of its wheat supply from Ukraine and Russia, according to U.N. statistics. More than 60% of wheat imported by Lebanon comes from Ukraine. Somalia and Benin depend on Russia and Ukraine for all their imported wheat.

“ South Africa imports mainly wheat and sunflower oil from Russia and Ukraine. Between 2016-2020, South Africa imported an average of 1.8 million tons of wheat per calendar year, which is around half of the country's annual wheat consumption needs. ”

Standing the country in good stead is a bumper wheat crop year in 2021/2022 with a crop yield the largest in 20 years at around 2.3 million tonnes, due to improved farming practices and favourable weather conditions.



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Including pulses, and vegan & vegetarian foods

In the article, chief economist of the Agriculture Business Chamber of SA (Agbiz) Wandile Sihlobo says South Africa should not experience wheat shortages due to the war in Ukraine, although prices are expected to rise due to increasing prices of related products such as fertilizer, fuel and agrichemicals. South Africa required import volumes of 1.48 million tonnes in the 2021/2022 period to fulfil its domestic requirements (down from 1.52 million tonnes in 2020/2021) and millers, food producers and other stakeholders had bought just over 705 tonnes into the country by March 2022.

Whether the grain will make its way out of the Ukrainian ports in the near future remains to be seen. If it doesn't, South Africa may well experience a shortage, as other wheat producing countries like India are holding onto their crops for local consumption amid rising fears of a global food crisis. In addition, rising prices of inputs will impact on the price of wheat, which will filter through to the end consumer.

Wheat in the South African market

Grain imports for both human consumption and animal feed play an important role in South African retail, affecting costs and supply across the board. The inelastic demand of essential food items means that consumers will first drop other items considered non-essential from their shopping list. Non-essential food items that utilise wheat, such as baked goods and confectionery, may see a drop



Image courtesy of Towfiqu Barbhuiya, Pexels

in sales if retailers are driven to pass price increases on to consumers. The most damning effect will be felt amongst those South Africans who were already struggling to put food on the table, as rising costs make this an ever-more impossible feat.

In an article for the Business Times, Nick Wilson, quoting Agbiz's Sihlobo Wilson, wrote, "Sihlobo said since the start of the war on February 24 [2022], South African yellow and white maize spot prices have increased by roughly 3%, trading at about R4 201 and R4 034 per tonne respectively."

And in a recent online feature, IOL writer Given Majola stated, "South African consumers can expect further price hikes in bread and flour products, following India's ban on the export of wheat causing further constraints on supplies of the vital food crop." Majola went on to quote Neil Wilson, chief market analyst at Market.com, who says,

"After the late-February and early-March volatility there has been some calm restored to global commodity markets over the last month or so, albeit prices have remained elevated. India's export ban betrays the underlying stress that resides in the commodity space."



Shoprite has been subsidising certain essential foods since 2016.

Food security is an inescapable term in the current socio-economic climate.

The challenge here will be for retailers to walk the fine line between passing these increases on to their consumers and protecting them from the economic impact where possible. Shoprite has been working to manage some of their costs by fitting over 900 refrigerated vehicles with solar panels and remains committed to subsidising certain

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Including pulses, and vegan & vegetarian foods

essential foods (such as their R5 bread loaf, which has been going since 2016), while Woolworths has stated that they aim to avoid initiating food price increases wherever possible. But avoiding price increases completely is unsustainable.

A major concern for local suppliers and manufacturers is the ability of local farmers and producers to weather the storm, and the very real possibility that small-scale producers will simply not be able to continue operating under such sustained economic pressures. It is times like this when retailers need to look at supporting local and smaller-scale producers and suppliers wherever possible, as the reliability of international imports come under great pressure.

The rice and maize landscape

Around 95% of South Africa's rice is imported from Thailand and India. However, as rice is being looked at as a viable alternative for wheat, rice prices are increasing and exporter countries are under pressure to retain more of their rice crops for local consumption.

Russia and Ukraine account for about 29% and 19% of global wheat and maize exports, respectively., meaning the impact of the blockaded grains will also be felt in the maize market.

On 6 May 2022, wheat prices hit a 14-year high and maize prices reached the highest ever recorded. South Africa is a net exporter of maize, which may boost maize exports from the country if wheat prices continue to increase.



Image courtesy of Pixabay, Pexels

Pulses

Pulses include chickpeas, lentils, beans, lupins and dry peas – and are considered superfoods (very high in nutritional content). Canned options make it easier for consumers to use these products, but the dry options are incredibly cost-effective and provide a nutritious, low-calorie viable meat replacement. Baked beans are the most recognisable for most consumers, but retailers can use in-store displays to promote all pulses as excellent food sources. The market for chickpeas is being driven by an increased demand in food preparation activities in the Middle Eastern, Mediterranean, and North Indian cuisines, among others. Chickpeas offer diverse application potential as they can be used in making dips, curries, and various snacks. Pulses are high protein, high in fibre, contain iron, magnesium, zinc, potassium and B vitamins.

“ Around 95% of South Africa's rice is imported from Thailand and India, but they are under pressure to retain more of their crops for local consumption. ”



Image courtesy of Suzy Hazelwood, Pexels

Grain trends 2022

It may seem less important at this point in time, but despite all the challenges, consumers will still want to fulfil their own personal food, nutrition and dietary needs and wants. Of course, if there's a shortage of wheat, for example, consumer demand will be pushed into other grains. As it stands though, more and more consumers are looking for gluten-free grain options that meet their health and diet requirements, so they are turning to rice and maize, as well as other gluten-free grains. Wheat remains a powerful force in the market though, with flour innovations bringing additional choices to consumers, although ready-mix flour products and cake flour have seen fairly significant price increases this year.

Retailers and food producers/suppliers have recognised the move towards gluten-free eating

Including pulses, and vegan & vegetarian foods

and have expanded their convenience ranges accordingly. From fortified instant maize porridge to frozen toddler meals and gourmet-inspired grain-based ready to eat dishes, convenience meals are answering the consumer demand for options that meet their dietary requirements while also making their lives easier.

Note: Grain foods are mostly made from wheat, oats, rice, rye, barley, millet, quinoa and corn.

Ancient grains and whole grains

Rice, maize and wheat continue to be important staple commodities in South Africa, however ...

“ ... there is also a growing popularity of ancient grains such as quinoa, bulgur wheat, polenta, spelt, millet, barley, sorghum, and amaranth, amongst others.

These grains have been ‘rediscovered’ by many consumers as part of the healthy eating movement. They retain many of their natural health benefits and can be used in many of the same ways as maize or wheat. ”

They can also be used to add protein when bulking up traditionally meaty meals – an important benefit in a country that is experiencing rising prices in most animal-based protein categories.

In an article for www.mindbodygreen.com, Abby Moore writes, “Ancient grains are a group of grains and seed-like grains, called pseudocereals. The crops



Image courtesy of Towfiq Barbhuiya, Pexels

have been staples in countries around the globe for thousands of years and are still minimally processed.

Compared to modern grains, ancient grains tend to have greater health benefits. This is likely because they still contain their nutrient-rich kernel.” Many of these grains are high in protein and fibre, some are naturally gluten-free, and they are, in general, incredibly versatile, which makes them an increasingly popular alternative choice.

Veggievors founder and owner Lisa Labinjoh is a passionate proponent of investing in locally grown and processed grains and pulses. For Lisa, ancient grains may be a trendy buzzword, but their potential impact on the local food market cannot be understated. She believes that food security begins at home.

Many of these grains are or can be grown on the African continent, negating the need for imports. They can also be grown more sustainably, as they are better suited to the environment, making them an eco-friendly option as well. And although ancient grains seem like a trendy fad for higher income consumers, the truth is that many traditional recipes found throughout the continent were originally prepared using these local grains.

There is an opportunity here for major retailers and wholesalers to support local farmers and small-scale producers by introducing healthier and more sustainable locally grown products. In terms of marketing these, nutritional content, health benefits, cooking instructions, and a mix of traditional and contemporary recipes using these grains can all go a long way to giving consumers more choices.

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Beans



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Vegetarian and vegan trends 2022

In March, ProVeg SA released the country's first plant-based fast-food franchise ranking. ProVeg South Africa country director Donovan Will says, "Worldwide, there has been a notable positive shift in consumer perception toward plant-based eating. This has caused exciting responses from all types of food producers and service providers who are scrambling to innovate, produce and serve plant-based foods to cater to the growing plant-based market. Driven mainly by flexitarians, these changes are not overlooked by the fast-food industry that is readily embracing the transformations in their consumer demands."

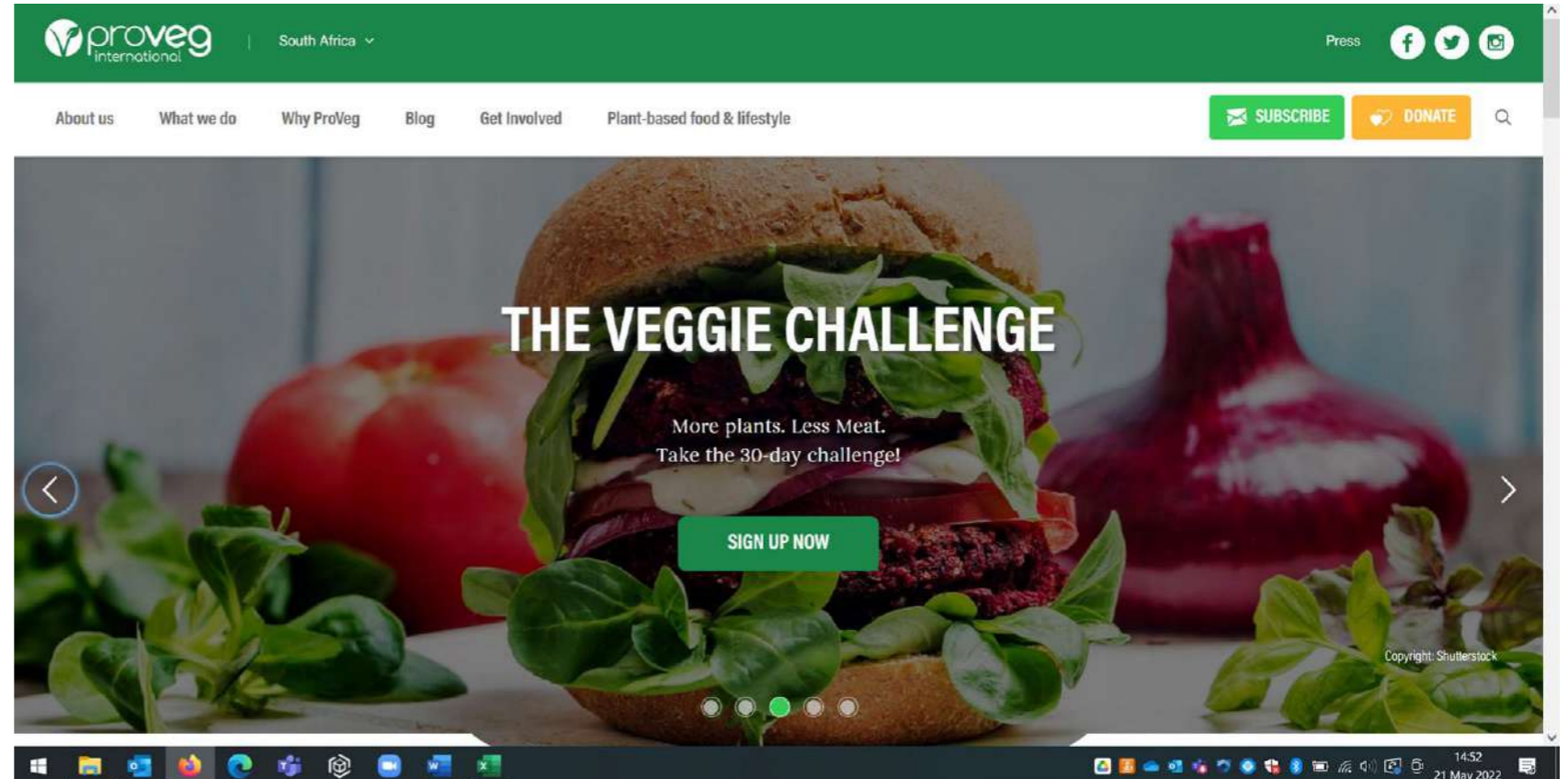
In their release announcing the ranking, ProVeg went on to say that "According to a report published by Verified Market Research, the Vegan Fast-Foods Market size was valued at USD17 Billion (R268b) in 2020 and is projected to reach USD 40.25 Billion (R630b) by 2028, growing at a Compound Annual Growth Rate (CAGR) of 11.40% from 2021 to 2028.

"The rising awareness about the environmental and health benefits of following a plant-based diet is considered a crucial driving factor fuelling the demand for more sustainable products by consumers of fast-food products.



Image courtesy of Alesia Kozik, Pexels

The rise of vegetarian, vegan, and flexitarian diets has gone beyond a fad. Consumers are turning to these diets for ethical and environmental reasons, to support sustainability, to improve their health, and to decrease their reliance on costly meat products. This in turn has impacted the demand for a variety of foods, including grains such as rice, maize, and wheat, as well as various legumes and lentils, soy products, and plant-based protein sources.



Visual courtesy of Proveg

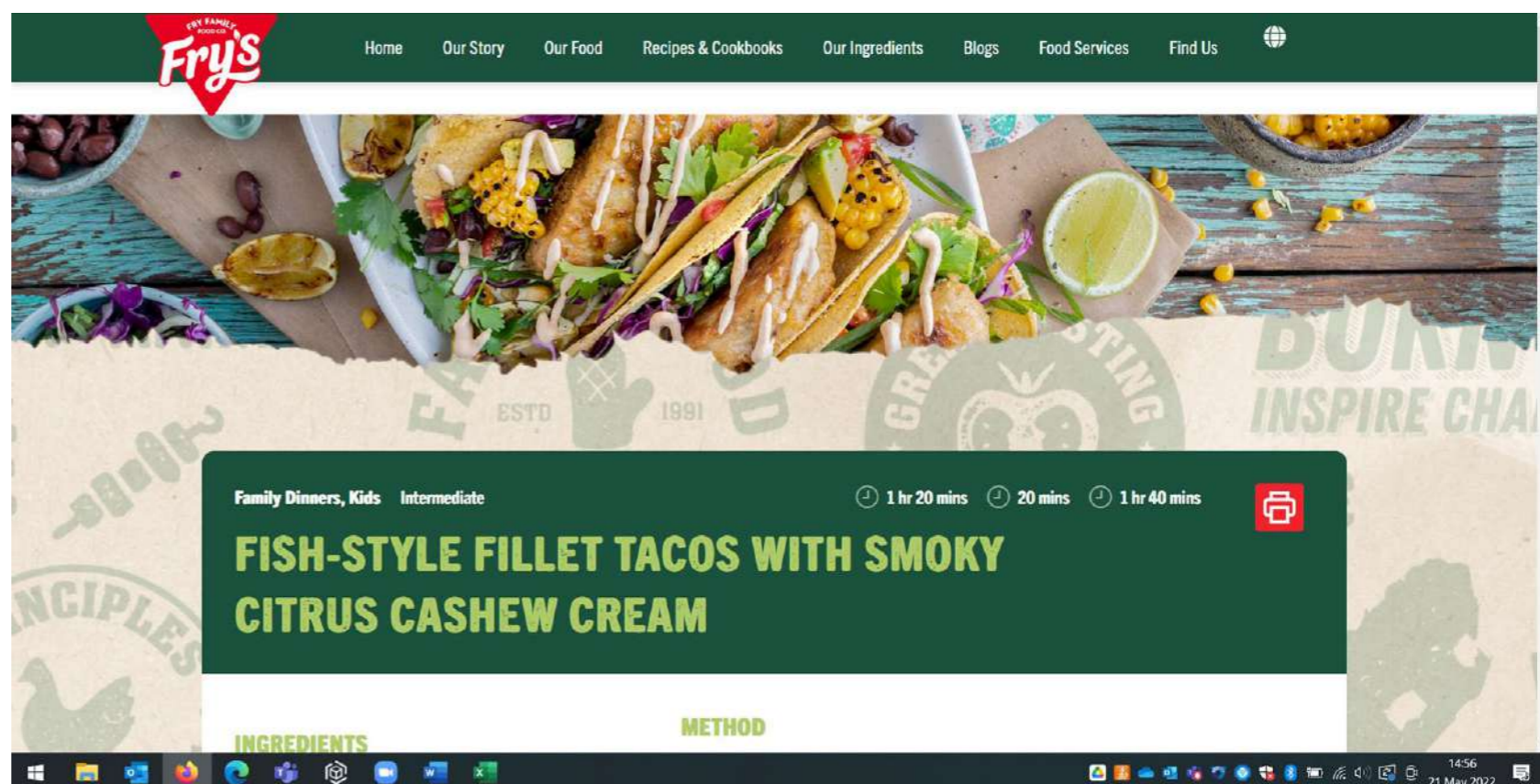
Including pulses, and vegan & vegetarian foods

“In addition, the growing consciousness about the inhumane treatment of animals by the food industry has inspired consumers to reduce their consumption of animals and to try meat analogue proteins, such as plant-based products. This shift in consumer demands and the industry’s need to continually innovate are accountable for the market growth.”

This shift is occurring within the retail market as well. The number of private label vegan and vegetarian offerings is rising, and products like Fry’s Family Food plant-based vegan and vegetarian are seeing definite growth. It has been harder for smaller producers like Herbivore, Veggiewors, and even Outcast Foods, who have had to fight to stay afloat in these tough economic times. Veggiewors’ Lisa Labinjoh has noted the price increases for many of her ingredients, such as lentils, and feels these increases are pushing certain plant-based options further out of the reach of those who need them most. In response, she has started seriously investigating African-grown grains and pulses to replace some of the increasingly expensive imported ingredients she uses – both as a way to support food security and to ensure her clients can continue to afford their healthier diet choices.

Flexitarian for the planet

The science is in, and experts agree that eating less meat is good for the planet. Farming animals for meat is an incredibly carbon-heavy undertaking that requires massive amounts of grain to be



Visual courtesy of Fry Family Foods

grown solely for the purpose of feeding these animals. It is also a water-heavy industry, and mass-farming practices have necessitated the routine use of antibiotics and growth hormones. Some consumers make the most sustainable choices they can, choosing free-range organic meat wherever possible, but for many South Africans this is just not an economically feasible option.

Flexitarianism offers an alternative to the more extreme veganism and vegetarianism. Flexitarian consumers have chosen to eat meat less often and replace their meat-based products with plant-based alternatives when possible. They choose to do this for many reasons, including sustainability and a desire to eat a healthier diet.

Healthy heart, happy life

Healthy eating is an important topic in South Africa, with Pharma Dynamics stating that “South Africa has the highest overweight and obesity rate in sub-Saharan Africa, with up to 70% of women and a third of men classified as overweight or obese. Being overweight or obese puts extra strain on your heart muscle. It can also increase your risk for diabetes, which is a risk factor for heart disease. If you have diabetes, you’re two to four times more likely to develop heart disease than someone without the condition.” Diabetes, heart disease, and obesity are a significant health issue in SA.

The Heart and Stroke Foundation of South Africa encourages a diet rich in vegetables, fruits,

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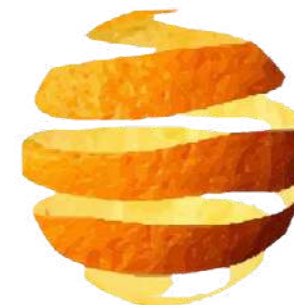


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Including pulses, and vegan & vegetarian foods

and wholegrains, and the Mayo Clinic agrees that a well-balanced vegetarian diet can help control the symptoms of diabetes. In short, vegetarian and flexitarian diets are not a trend or a fad, they are a sustainable and healthier way of eating that is good for people and the planet.

Trends to watch

Looks like meat, tastes like meat. Flexitarians prefer these plant-based options as they can substitute meat-based options without sacrificing too much in terms of taste, making the transition to a reduced meat diet that much easier. Taste and texture are key here. Keeping these alternatives affordable makes them an attractive option for consumers.

Functional food. Consumers expect a lot from their food. It must taste good, keep them healthy, and be good for the planet. Veggie-wor is a range of plant-based burgers, 'balls,' and sausages that aren't meant to look or taste like meat. They're supposed to taste great, be better for the environment, and be a healthy alternative for consumers who want to live a healthier lifestyle.

Convenience. Quick, easy, and healthy. Consumers looking to save time also want to make sure they and their families are eating as healthily as possible. Heat and serve rice, millet, barley and spelt options give consumers convenient choices, while instant porridges (oats, maize and other grains) have become a staple part of the convenience offering.



Image courtesy of Taryn Elliott, Pexels

“ Portion control, awareness of what we eat, engaging fully with the moment means that a greater range of snacks can be enjoyed, mindfully. But it also paves the way for healthy snack innovation in terms of taste, texture, and exciting flavour combinations. ”

Pulse power. Lentils, chickpeas and legumes of all shapes and sizes are increasingly popular as protein-packed meat alternatives. They're also great for snacking, and as post-lockdown consumers become more adept at recreating their favourite exotic dishes in the kitchen, so the demand for pulses for homemade dahls and hummus grows.

Ancient grains. Make them into bread, pop them like corn, throw them into your stews or salads – ancient grains are versatile and sustainable.

Mindful snacking. Portion control, being aware of what they are eating, and engaging fully with the moment means that a greater range of snacks can be enjoyed, mindfully. But it also paves the way for healthy snack innovation in terms of taste, texture, and exciting flavour combinations. This is the place for grains, rice, corn, soy, oats, and ancient grains to continue making their mark on the snacks and treats category. **SR**

Linda Wilkins has written across a wide range of digital and print media for both B2B and B2C markets for retail and tech, lifestyle, copywriting, websites and marketing collateral, as well as for annual reports for listed companies. She holds a BA degree in Communication, a BA Honours degree in Psychology, as well as a partially completed BA Honours degree in Corporate Communication. She has over 15 years' experience in the FMCG retail sector, more than 14 years' experience as a communications specialist in various sectors and is a versatile and professional writer and journalist. Contact Wilkins Ross Communications at linda@wilkinsross.co.za or connect on LinkedIn www.linkedin.com/in/linda-wilkins

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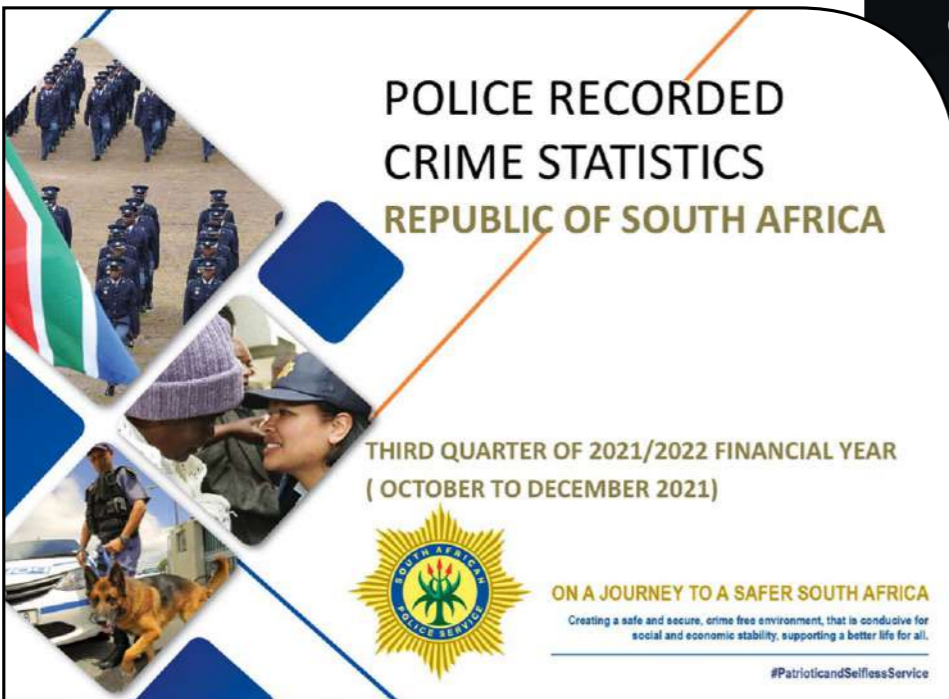


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Security & cash handling best practice

Any business that handles cash is well aware of the inherent risks. Minimising these risks and maximising cash handling safety is a mix of organisational best practice, and effective policies and procedures, reducing the amount of cash on site, situational awareness, and using technology to its best advantage.



[Link to SAPS crime statistics reports](#) ▶▶▶

An overview of crime statistics reported by the SAPS (South African Police Service) in February 2022 for the period October to December 2021 shows that robbery at non-residential premises increased by 1.7% compared to the same period in the previous year. Other statistics of note for retailers were cash-in-transit robberies, which



“ Both hardware and software should provide a safe, effective and client-driven end-to-end cash management solution ”

Visual courtesy of Deposita

showed a -7.7% decrease. Burglary at non-residential premises decreased by 7.3% overall, although the Northern Cape and North West showed increases. Shoplifting decreased by 15.1%. Commercial crime increased by 15.9% and truck hijackings increased by 2% year-on-year. Shoplifting decreased by 15.1% overall, although

the Durban North and Phoenix police stations in KwaZulu-Natal, Burgersfort station in Limpopo and Sandton station in Gauteng reported increased cases. There were significant decreases in case numbers reported by the Pietermaritzburg stations in KZN (-42), Polokwane in Limpopo (-37) and Bellville in the Western Cape (-41).

Cash theft on the rise

Leon Ehlers, Operations Director at cash management and payment technology firm Deposita, says statistics released by the Institute of Security Studies show that the instance of petty cash theft – where a criminal steals cash directly from a till or pay point – has increased over the last year. Ehlers, who spent 18 years in the South African Defence Force before joining Deposita nearly 15 years ago – giving him a unique insight into the risks associated with cash handling and cash management – says both hardware and software should provide a safe, effective and client-driven end-to-end cash management solution. “Research and development should be ongoing, to ensure optimum product





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safety and protection while driving efficiencies for the store. Tailored solutions that meet a retailer's specific needs and risks will guarantee operational efficiencies and reduce the risk for their staff, customers, and onsite cash."



“ This will ensure fast and error-free cash management, while reducing overhead and back-office costs. ”

Visual courtesy of
Cash Connect

Eliminating manual reconciliations and banking, and counting

and double-count supervision, frees up staff time for more meaningful work. Depending on how much cash it processes each month, a retailer can save up to 40% in cash costs by deploying a fully automated, end-to-end cash management service with a robust cash vault.”

From cash verification and banknote validation technology to cash recyclers and smart safes, the technology and hardware involved in cash handling is aimed at security, efficiency, accuracy, and accountability. By removing the potential for human error and reducing the amount of physical labour that goes into cash handling, you can streamline processes and remove opportunities for theft or error.

Templemore-Walters believes that an automated cash management system is a practical and effective solution to the risks inherent in handling

cash on site. He says, “Automated cash management effectively puts a bank in the retailer's premises. It should feature a robust retail cash vault, built to minimum SABS Category 4 standards, to keep cash safe. From the moment the cash goes into the intelligent, automated business vault, whilst in transit to the bank, and until it appears in the bank account, the service provider should cover the cash risk. The cash should be guaranteed, side-stepping traditional insurance assessment delays and critical cash flow effects on turnover.”

Is a cash-free society really possible?

Like other developing countries, South Africa is a dichotomy. A cashless society does exist and there are myriad ways for consumers to make cash-free payments instore and online. However, socio-economic barriers and a large sector of society that is technology-poor mean cash payments remain an integral part of the retail business.

For tech-savvy consumers who have access to technology, the ease of shopping online and the convenience of not having to carry cash are as important as the safety aspect of cashless commerce. For these consumers, the answer is online banking, card or device payments, and the use of technology such as SnapScan or Zapper. Whilst these options are attractive, they come with their own set of risks and challenges.

In an article for Fin24, Clayton Hayward, CEO of Ukhesh Technologies, a fintech company, says, “Digital innovation has enabled several payment

Automated cash management

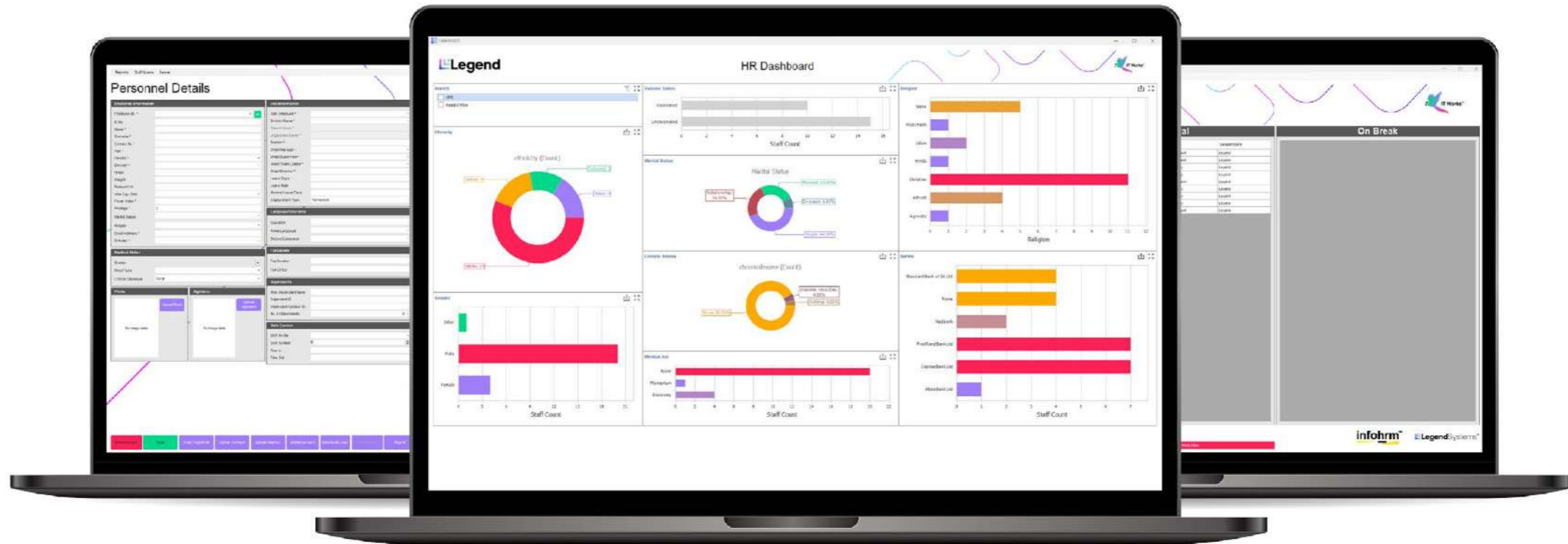
Mark Templemore-Walters, operations director at retail cash management solutions and cash vault provider Cash Connect, says ...

“ Automated cash management isn't just about accessing a secure cash vault these days – it's also about leveraging a complete set of fintech solutions that can help your retail business innovate and grow. ”

Implementing the right automated cash management solution for your needs can also help save on costs. “A truly automated cash management and payment solution should eliminate all staff touch points associated with manual reconciliations and banking,” says Templemore-Walters.

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options locally, such as contactless, virtual cards, QR codes and tap-and-go.” He adds, “Apple Pay and SamsungPay have also launched, while super apps are becoming more common, and we are also seeing chat services, such as the new TelkomPay in WhatsApp, reaching consumers for the first time.” But with the advent of new technology, so the potential for crime increases as criminals adapt their approach. Deloitte UK identified several potential risks for contactless payments, including “device and e-wallet vulnerabilities, malware within tags, eavesdropping data or man in the middle attacks [where attackers interrupt a data transfer].”

In the same article John McLoughlin, CEO of J2, a technology business focusing on security services and solutions, says he believes one of the great benefits of contactless payments is its security measures. He says, “It’s safe as long as we are in control of our cards, devices and watches and if we have the basic safety measures in place to keep them safe. It’s important to select unique passwords to [protect our devices]. [Users are highly encouraged] to implement multifactor authentication and use the biometric capabilities available.”

Cyber security

The reality is that a cash-free society is still at risk of cyberattacks and online criminals. Customers, banks, and retailers are targets for this type of crime, and protecting against it is vital. In a recent LinkedIn post on cybercrime by cash handling company Volumatic, it was noted that “Businesses



“ As the online demand continues to increase, the retail industry are now becoming more and more vulnerable to cyber-related theft and fraud as attacks become more frequent and ever-more sophisticated. ”

have borne the brunt of this particular online crime for many years, but as the online demand continues to increase, the retail industry are now becoming more and more vulnerable to cyber-related theft and fraud as attacks become more frequent and ever-more sophisticated.”

The article goes on to say that “According to the Cyber Security Breaches Survey, published in March 2021 by the Department of Digital, Culture, Media and Sport (DCMS), 39% of all UK businesses (approximately 2.3m) reported a cyber breach or attack during 2020/21 – a worrying statistic that all businesses need to be mindful of.” Although these statistics are from the UK market, South

African retailers should take note and prepare themselves for the inevitable onslaught.

The recent cyberattacks on TransUnion South Africa, which affected at least three million consumers and 600 000 businesses, and on pharmacy group Dis-Chem, where the data of 3.6 million South Africans was compromised after a cyberattack on its third-party service provider (ITWeb, 11 May 2022, writer: Admire Moyo) should serve as an urgent reminder to all retailers to ensure stringent data security, with access controls and software security protocols in place and constantly updated and upgraded to the highest level.

Image courtesy of Tima Miroshnichenko, Pexels

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Risk management

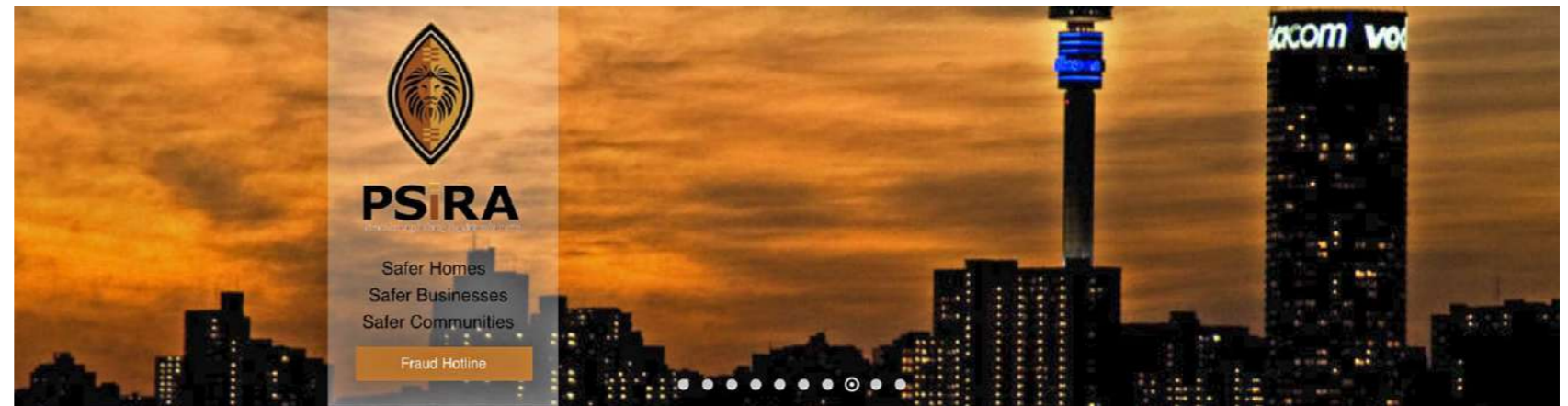
Deposita's Ehlers says ...

“All stakeholders involved in the cash cycle, from the cashier to the financial institutions, including cash-in-transit personnel, need to be aware of risk management. It benefits the whole cash cycle if you can detect a weakness early and prevent subsequent long-term losses.”

Determining your business' specific risks can go a long way to ensuring the safety of everyone involved, which is why you need to engage with reliable suppliers for both your cash handling and onsite security needs.”

Once risks have been identified and processes implemented, education is key, and the onus is on retailers to ensure their employees know what cyber crime is and how it could affect them and your customers.

Educating employees on important topics such as what constitutes suspicious behaviour and identifying dangerous activities (including clicking on unknown links or sharing sensitive information) – and teaching them how to react appropriately in these situations – can help protect your employees and your business against less-sophisticated forms of cybercrime. However, your suppliers and your own IT department must be able to protect your business from more sophisticated or targeted criminals.



Due to the very nature of card payments, retailers have access to a large amount of sensitive data from their customers, and this needs to be protected – security safeguards are, in fact, included in the POPI Act for this very reason.

Knowing what questions to ask of your security teams, working in partnership with your retail group's security professionals and providing feedback about your store's own unique security concerns will help to create a firewall between criminals and your business and customers. It is also imperative to understand the technology and software that are implemented, the risks involved and how to best reduce these risks.



Image courtesy of the BBC

Physical safety and security

As the looting and riots of 2021 showed, South African retailers are at the mercy of marauding crowds. To ensure better protection and safety should an event like this happen again, shopping centres and malls are having to revisit their safety and security measures, from security guards and guarding services to surveillance cameras and access control.

Last year's mass looting did prove that there are very few security measures that can be wholly effective against a sustained attack. However it did show retailers that there is much room for improvement in some of the most basic security measures, including how store personnel respond to certain situations and what emergency procedures need to be put into place. Ehlers says that a detailed analysis of trends and previous attempts to forcefully gain access to their devices have resulted numerous design improvements to being implemented by the company.

Retailers also have their in-store security measures to consider, to protect against security risks and crimes such as theft, shoplifting,

common robbery, armed robbery, fraud, arson, assault, and burglary.

Security personnel need to be well-trained in recognising, preventing, and responding to criminal activities. Employing security staff with the correct PSiRA (Private Security Industry Regulatory Authority) clearance, registration and training is essential (www.psira.co.za). Communication devices between security and store staff should be checked regularly, and there should always be a clear and effective line of communication with effective processes that have been designed for your specific store. Emergency drills, refreshers, and spot checks are vital for the continued safety of your store, your employees, and your customers.

A customised cash handling solution

“Retailers that recognise the needs and habits of their customers will be able to base their cash handling decisions on solid data such as how much cash is physically received by your store each week. This requires efficient data collection and data analysis to gain insight into which customers buy what products and through which channels, from online purchases to typically cash transactions.”

Information is crucial to understanding what cash handling practices will work in which store. Location, the customer's use of cash or card

payments, the security system in place – these are just some of the factors involved.

A security audit – which your service provider or head office security team can implement – will highlight at-risk areas in your store.

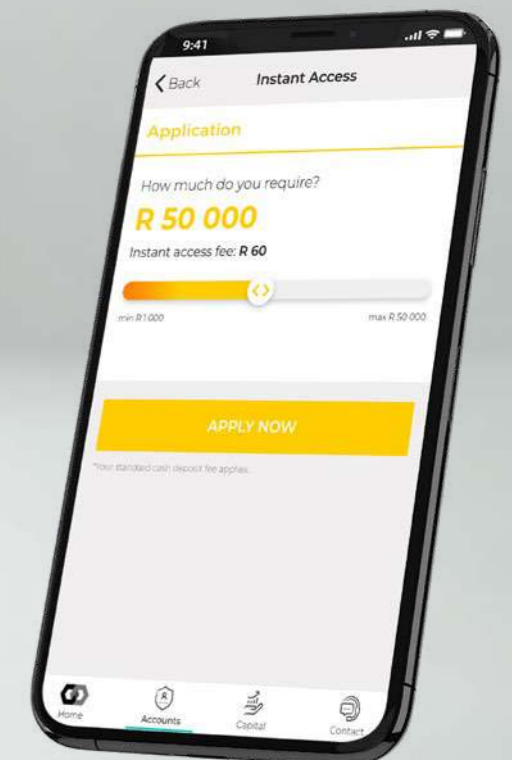
Retail stores should be protected in line with the level of risk of the area where the retail store is situated: low risk; medium risk or high risk, and security awareness and threat assessments should be conducted regularly. Stores can also encourage consumers to report any suspicious actions, persons, objects or vehicles to the security manager.

Safety and security of consumers at retail stores in the Gauteng province: an assessment of security measures, Mahabane, Misaveni Abel, UNISA, May 2017. <https://uir.unisa.ac.za/handle/10500/24500>



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Four benefits of automated cash management



South Africa's economy remains cash driven to a large extent. With approximately R168 billion circulating on the country's streets at any given time, according to the South African Reserve Bank, cash remains the preferred method of payment and transacting.

The ongoing use and popularity of cash are compelling reasons for retailers to invest in an automated cash management solution. Automated solutions enable retailers to access sophisticated fintech solutions that empower them to grow their businesses, while simultaneously accommodating the payment choices of all their customers.

Automated cash handling with Cash Connect, as SA's leading provider of cash management and payment solutions, can benefit your retail business in at least four ways:

1. Save more than 40% in time and money

Automated cash management is fast and accurate. It can save retailers over 40% in precious time, by eliminating all the staff touch points associated with manual reconciliations and banking, counting, shrinkage and double-count supervision. In addition, automation puts money back into the business. A retail store that trades 30 days a month, employs a daily cash-in-transit service from Monday to Saturday and banks a monthly total of R2 million in cash, easily spends R30 000 a month on cash management costs. A fully automated, end-to-end cash management service with a secure cash vault will cost around R15 000 a month – a saving of nearly 50%.



Above: Click to view the N3K & N10K cash vaults

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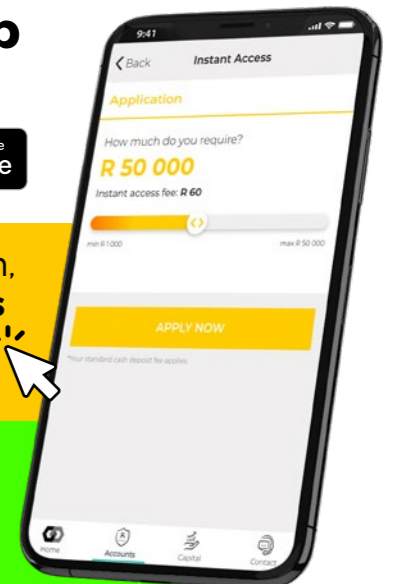
The business funding division, Capital Connect, enables retailers to 'Click & Borrow' up to R2.5 million business funding in just 24 hours. Quick access to hassle-free finance is crucial in the retail environment, making it possible for retailers to leverage opportunities, such as buying stock in bulk at discounted rates, renovating their store, or investing in shopper-tainment that can immediately increase profit margins.

4. Up the safety of your trading environment with a robust, automated cash vault

An important element of an automated cash management solution is a robust cash vault that is built to SABS category 4 standards, which increases the security of your premises and the safety of staff and customers. An automated cash vault is like having a bank in the store. As soon as you deposit cash into the cash vault, there is an immediate risk transfer, and your funds are guaranteed with a same-day (or real time) settlement into your bank account.

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Cash handling best practice

CashTech Currency Products (www.cashtechcurrency.com) listed these top ten principles of cash handling:

Organisation. When it comes to cash handling, organisation means being aware of the location of your cash and being able to track it as it moves through your business. This can help prevent losses from occurring and avoid common cash handling problems.

Oversight. Automated cash management solutions and technology such as CCTV helps you monitor your cash at all times. Automated devices can also help you process your cash and generate accurate reports.

Policies and procedures. Once you have identified and implemented the safest and most effective cash handling procedures, you need to enforce these. This means providing regular refreshers and training, identifying issues, and making sure you obtain and take note of constructive feedback from your employees who are tasked with implementing the procedures.

Less cash, less risk. Keeping large amounts of cash on site is a risk. Set a limit and put procedures in place for ensuring you don't exceed that limit. Schedule daily or weekly deposits if necessary. A cash recycling solution can help you maintain your set limit.

Engage with your frontline workers. It is imperative that your employees who handle cash receive the correct training and to ensure they understand and adhere to procedures put in place



Start your cash management journey by choosing among a variety of state-of-the-art smart safe or cash recycler hardware. Choose the right brand and model type that works best for your business – including enhanced security options, such as biometric (fingerprint reader), magstripe, and barcode scanners.

for proper cash management and loss prevention. All employees should also clearly be informed of the consequences of being involved in criminal activities against your business.

Set a schedule. This is about organisation – balancing your cash registers regularly and making regular bank deposits can help streamline your cash handling processes. But this needs to be offset by safety concerns around having a set schedule that can be intercepted and used against you. Do not share cash handling schedules with any staff other than those who must be involved in the process and ensure access to this information is strictly controlled.

Have enough staff. Monitoring your security and keeping staff and customers safe should be a team effort by trusted employees. Overworked or overtired employees cannot see or be everywhere at once and important details may escape their notice.

Engage a professional. A reliable cash handling and cash management service provider will help you identify risks and consult with you on the best way to mitigate these risks. If you have questions about cash handling processes, technology, or hardware, ask a professional or engage with your retail group's security specialists

Invest in technology. Investing in the best technology and hardware that you can afford to protect your cash is a good business decision. The benefits of this type of cash management technology is that it can also streamline your processes, increase efficiency, reduce the possibility of human error, and decreases the amount of manual cash handling on which your employees need to spend.

Keep improving. Constantly evaluating and reassessing your cash management systems is the best way to keep improving it. **SR**



Ann Baker-Keulemans, a highly experienced business and consumer journalist, is published in numerous print and online platforms, writing on topics related to business, lifestyle, and health, with extensive knowledge on the SA retail and wholesale landscape. She holds a Bachelor of Arts degree in English Literature (British and Commonwealth) and Media Studies and is a member of the Golden Key Honour Society. ann@wilkinsross.co.za

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Manufacturers... Digitise and sell direct



By Greg Gatherer
Account Manager
Liferay Africa

The past couple of years brought massive changes to almost every sphere of industry, including manufacturing. In the face of a global pandemic and its attendant lockdowns, digital transformation was accelerated and only became more important amidst disruptions to global supply chains. And while the vast majority of digital transformation initiatives in manufacturing targeted internal processes, they've thrown up other opportunities too. Perhaps most notably, digital transformation has fundamentally changed how manufacturers can sell to their customers.

Research from Statista suggests that the global business to business (B2B) e-commerce market is valued at around US\$15-trillion. While manufacturing e-commerce has been big business for some time now, many manufacturers have had to rely on wholesalers to sell their products online.

But it doesn't have to be that way. Right now, there's a massive opportunity for manufacturers to go direct to market. In doing so, they stand to not only improve their own bottom lines, but also create better customer experiences and even create much-needed jobs.

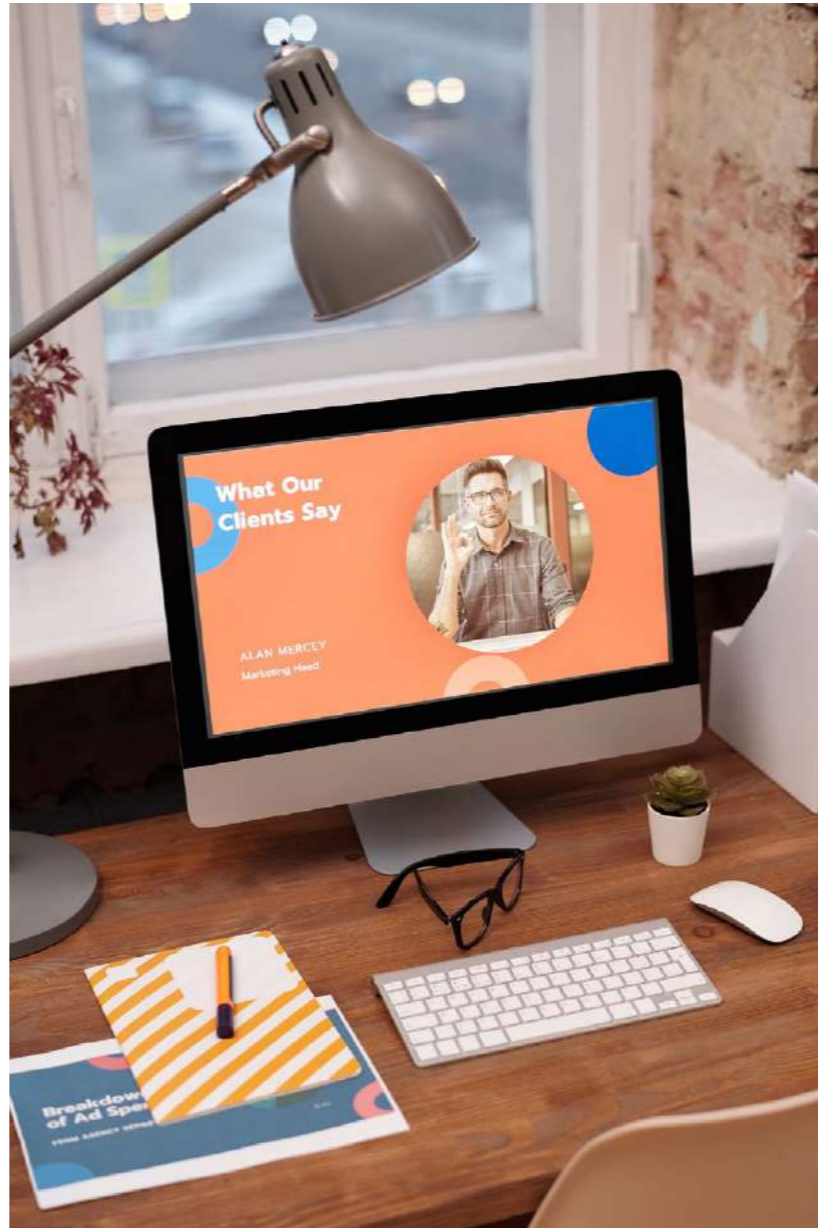


Image courtesy of Mikael Blomkvist, Pexels

The trouble with wholesale

While the online wholesale model undoubtedly provides an important means for manufacturers to dip their toes into the e-commerce arena, it does come with some notable drawbacks. Aside from the obvious one of the wholesalers taking a cut of

each sale, it also means that manufacturers aren't in charge of their own digital customer experiences. They're also left relying on the wholesaler's data when it comes to understanding things like sales volumes and demand.

That said, it's understandable that many manufacturers took this route initially. Established manufacturers especially have a lot of core legacy systems that were difficult to blend with a self-operated e-commerce platform. Additionally, traditional means of direct sales were challenging for manufacturers to digitise. This is especially true for B2B customers, who face considerations that business to consumer (B2C) simply don't have to deal with. These include purchasing on behalf of an account rather than as an individual, higher volume orders, regular replenishments that could be automated, contract pricing, as well as quotes and negotiated pricing.

As a result, manufacturers aren't able to implement simple e-commerce overlays and provide their customers with the experiences they demand.

Enabling technology

Fortunately, a growing number of enabling technologies mean that it's become a great deal simpler for manufacturers to sell directly to their customers. Alongside the ability to create virtual digital warehouses, they can create digital stores and mechanisms for attracting customers to their



stores. This means that purchases can be made directly from the manufacturer's conveyor belt, with no wholesaler-shaped middleman necessary.

Of particular importance in this regard is a digital experience platform (DXP). With a DXP, manufacturers can integrate their commerce experiences with various software systems and touch multiple areas throughout the company. A DXP should also be able to integrate with a digital commerce solution to give customers and distributors a centralised location for information, shopping, and self-services.

By embracing this approach, manufacturers don't just give themselves the ability to create great customer experiences but also to automate sales processes and, ultimately, produce more for less.

An evolving approach

Beyond this shift to direct e-commerce sales, manufacturers should be looking to the next phase in their evolution. Here, they can look at real-world examples of how other sectors are changing their approach to e-commerce.

Egyptian company MaxAB, for example, is changing the relationship between wholesalers and retailers by allowing them to buy goods and request delivery logistics and delivery from one app. It also includes new supply chains and embedded financing options. Critically, it doesn't just service large retailers, but small independently-owned ones too. This approach means that those retailers can focus more on growing their own businesses and are more likely to be predisposed to MaxAB in the future.



Image courtesy of Mart Production, Pexels

“Manufacturers need to realise that their efforts to digitise and sell direct aren't just about making things simpler for themselves and their customers. It's an approach which understands that customer experience goes beyond creating the best possible buying environment. It's about playing an active role in helping customers build and grow their own businesses.”

Imagine if a local cement manufacturer took a similar approach to small builders in South Africa. What kind of growth could it unlock for itself and its customers? How many additional jobs could it create in a country desperately in need of them?

A holistic approach to customer experience

Ultimately then, manufacturers need to realise that their efforts to digitise and sell direct aren't just about making things simpler for themselves

and their customers. Rather, it's an approach which understands that customer experience goes beyond creating the best possible buying environment. For manufacturers especially, it's about playing an active role in helping customers build and grow their own businesses.

With this holistic approach, built on the right tools and technologies, manufacturers not only give themselves the ability to stand out from their competitors but also to build long-term loyalty from an ever-expanding pool of customers. **SR**

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Vegan yogurt market will gain traction amid surging demand for plant-based foods

Sales in the global vegan yogurt market are slated to increase at a robust 8.9% CAGR (Compound annual growth rate), reaching a market valuation of US\$ 5.1 Bn in 2032.

Increasing incidence of lactose intolerance among consumers is resulting in lesser consumption of milk-based products.

As a result, plant-based diet has grown in popularity among the consumers, with many people trying to replace dairy products with plant-based alternatives, including yogurt.

This has led to high demand for vegan yogurts which contain live probiotics and cultures and provide the same digestive advantages as dairy-based yogurts.

Hemp milk yogurt and flax yogurt, for example, are high in fatty acids, natural omega-3, and fibre. Many other vegan yogurt variants are enriched with minerals and vitamins to improve their nutrient level. These products are as rich, creamy, and smooth as regular yoghurt, and they don't require any flavour or texture adaptation.

Vegan yogurt manufacturers have been experimenting and developing different bases and distinctive flavours to promote these yogurts as mainstream products. Furthermore, milk obtained from grains, seeds, and nuts such as coconut, hazelnuts, macadamia, almond, pistachios, pili, and cashew are used to make vegan yoghurt.



Image courtesy of Cottonbro, Pexels

Flax, soy, and hemp seeds, as well as cereals like oats, are also used to make vegan yoghurt.

“Wide availability of vegan yogurt at online channels, along with growing popularity of veganism in emerging economies will continue driving the vegan yogurt market over the forecast period,” says the research analyst.

Key takeaways:

- By flavour, demand in the chocolate segment is expected to remain high over the forecast period.
- Based on the product type, sales in the almond milk vegan yogurt segment are forecast to gain traction over the assessment period.
- In terms of sales channel, the offline segment is expected to account for a dominant share of the market through 2032.
- The North America vegan yogurt market is expected to grow at a 8.5% CAGR through 2032.
- East Asia vegan yogurt market is expected to emerge as a lucrative pocket with sales growing at a high rate.

Competitive landscape

Leading players operating in the global vegan yogurt market are aiming to expand their presence in developing countries to gain a competitive edge. They are also investing in research and development to improve their product portfolios by adding innovative flavours.

For instance Danone, a leading French yogurt company, acquired WhiteWave Foods, a Colorado-based company, for its range of plant-based food and beverages manufacturing brands such as Alpro, So Delicious, Silk, and Vega. **SR**





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The global edible fungus market size is expected to reach US\$ 1 356.6 Mn by the end of 2030. The market is forecast to rise at 8.5% CAGR (Compound annual growth rate) between 2020 and 2030.

According to the report, the market would gain from adoption of modern and advanced farming techniques by farmers. Edible fungi have many of the nutritional characteristics commonly found in meat, beans or grains.

With an increasing number of consumers looking for meat alternatives, the demand for edible fungus is expected to rise. The report offers an exhaustive overview of the factors enabling growth in the market. It also studies in detail restraints to growth.

The report offers in-depth insights into the edible fungus market. Some of the important facts regarding the market are:

- The edible fungus market value stood at US\$ 600 Mn in 2020.
- Shiitake mushroom demand is expected to increase in the coming years.
- Results from clinical and preclinical studies on edible fungus consumption indicate that their consumption can promote good immunity, weight control and health enhancement. Positive outcome of these studies will encourage consumption of edible fungus
- Consumption of fungi in Asian countries such as Japan, India and others is rising at a significant rate due to increasing production imports of mushrooms.

Edible fungus future market expected to surge



“ Edible fungi have many of the nutritional characteristics commonly found in meat, beans or grains. With an increasing number of consumers looking for meat alternatives, the demand for edible fungus is expected to rise. ”

“Between 2020 and 2030 the market is likely to witness high demand for *Auricularia Auricula-judae* (English name jelly ear). However, the demand for shiitake mushroom is likely to increase as well with consumers seeking exotic dishes for pleasure consumption,” said the research analyst.

Change in eating pattern due to Covid-19 outbreak will impact growth

In recent months, exports of goods and items from China have been affected due to the outbreak of coronavirus. The rate at which the virus engulfed the world compelled governments to enforce

extended lockdown. The ongoing restrictions have thrown global supply chains into chaos.

Given the labour strength of the production activities, the biggest obstacle in the edible fungus market is decelerated demand. Therefore, the companies are implementing various measures to ensure the safety of employees and to minimize contact between them.

Sales to wholesalers operating with HoReCa are adversely affected, which is offset to an extent by increase in retail sales. As a result, demand for packaged mushrooms is rising, which has a positive effect on the edible fungus market.

Horeca (also HoReCa, HORECA) is the Dutch, German, Italian, Romanian and French languages term for the food service and hotel industries. The term is a syllabic abbreviation of the words Hotel/Restaurant/Café. The term is mostly used in the Benelux countries and in Switzerland.
 – Wikipedia



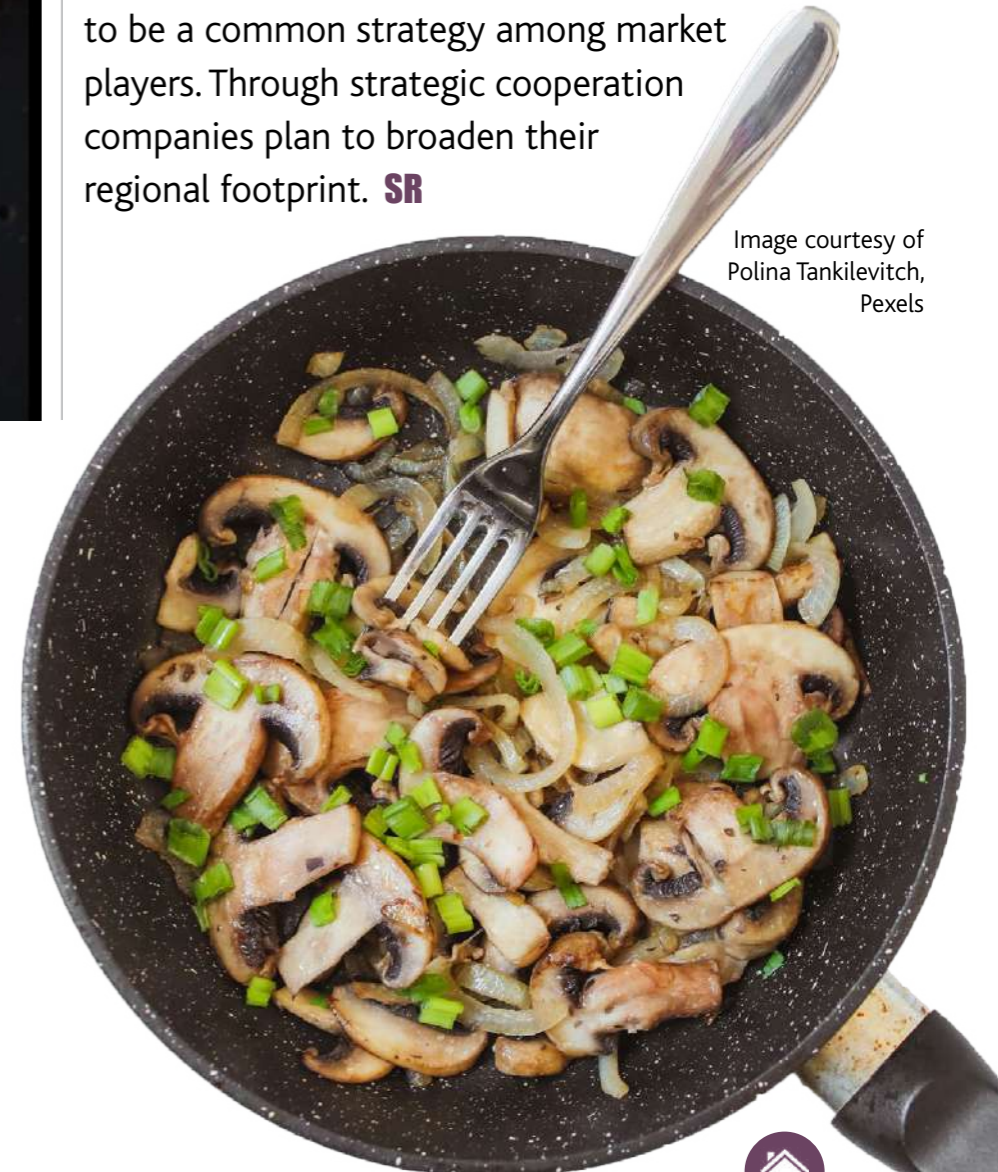
Who is winning?

Some of the major edible fungus brands are Agro Dutch Industries Ltd., BioFungi GmbH, California Mushroom Farms Inc., Monaghan Mushrooms, Highline Mushrooms, Scelta Mushrooms BV, Nasza Chata, Banken Champignons B.V.

The growing demand for edible fungus led to increased investment by key players and government to step up the cultivation of edible fungus is a significant growth driver of the global market share of edible fungus.

Additionally, mergers and acquisitions continue to be a common strategy among market players. Through strategic cooperation companies plan to broaden their regional footprint. **SR**

Image courtesy of Polina Tankilevitch, Pexels



GLOBAL EDIBLE FUNGUS MARKET ANALYSIS 2022–2032

Source: Future Market Insights

Note: Market shares not depicted as per actual scale – only for illustration purposes

