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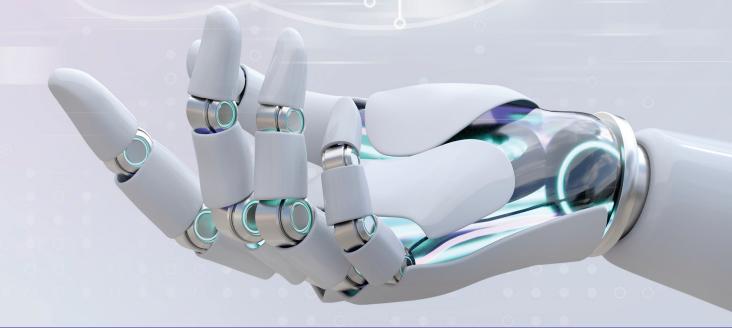
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ACHIEVING
EXCELLENCE
IN INDUSTRIAL
FLOORS

Does AI
close the
demand
forecasting
gap?











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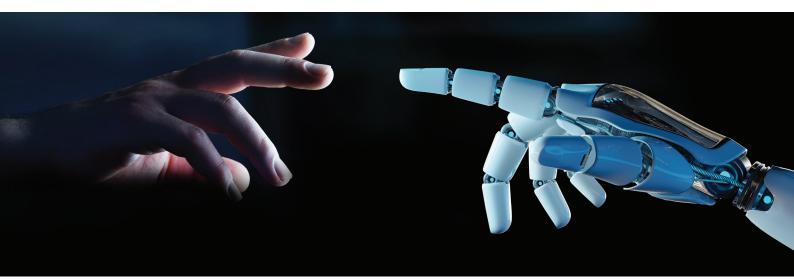
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# Does Al close the demand forecasting gap?

By Business Modelling Associates – visit www.businessmodelling.co.za

Many analysts and industry experts are saying that we are heading into the Fourth Industrial Revolution. One of the biggest drivers of this purported revolution is the availability of unprecedented volumes of data and the development of computer processing power that can leverage big data for the first time in history.



ut what does this mean for the supply chain practitioner?
One of the areas where artificial intelligence (AI) can have the biggest impact is the discipline of demand forecasting. For decades, organisations have been attempting to close the gap between what happens in the market and how to gear the supply chain to be prepared for unexpected fluctuations, shifts and changes.

For this article, a team of supply chain professionals has evaluated a set of traditional and cutting-edge forecasting methods to determine if AI can close the demand forecasting gap.

#### Focus on forecasting

Why do we forecast? Businesses rely on forecasts for decision-making and planning. A benefit that is often not considered

is that forecasting forces the business to keep track of assumptions made and makes it easy to identify and adjust incorrect assumptions, improving performance and profitability. Nonetheless, many supply chain practitioners will lament that "Forecasting is always wrong", and although this is true, forecasting plays a critical role in supply chain planning and operations.

Businesses that get forecasting right achieve the following:

- Increased customer satisfaction.
- Reduced inventory cost.
- · Improved production planning.

Traditional forecasting relies on statistical methods, using historical data and static, predetermined business rules to predict business behaviour for the future. According to Prevedère

(2015), quarterly forecasts are off by 13 percent on average. This translates to considerable lost revenue. Any improvement in forecast accuracy thus translates directly to improvement in the bottom line.

Additionally, according to studies by Gartner, 38 percent of organisations identify forecast accuracy and demand variability as a key obstacle to achieving supply chain goals and objectives, and 70 percent are experiencing moderate to high demand variation compared to the previous year.

Further challenges with traditional forecasting methods are as follows:

- Unable to extract key patterns and drivers.
- · Lack of forecast accuracy in the mid to long term.
- Highly dependent on human judgement.
- Limited to analysing historical demand, unable to account for external factors.
- · Unable to model and test 'what if' scenarios.

#### Demystifying AI

For many, the mention of AI conjures up visions of robot armies and self-driving cars. Even though robotics and autonomous vehicles are exciting applications of AI, there are numerous relevant applications of AI algorithms that are decidedly relevant to supply chain practitioners.

#### A short history of AI

Al is viewed as a very modern field; however, it has been in existence since the middle of the 20<sup>th</sup> century. Al techniques and methods have been developed since the 1940s. The famous Turing test, to determine if machines could think, was developed by the mathematician Alan Turing in 1950 and the first academic conference on the subject was held in 1956 (Smith *et al*, 2016).

Although the theories and algorithms underpinning Al have existed for decades, the processing power of computers (GPUs) and availability of data (big data) have only recently caught up with the calculation and data-intensive requirements of Al algorithms.

#### AI, ML and DL: terminology decoded

What is broadly known as AI consists of several sub-disciplines that are commonly referred to interchangeably. But artificial intelligence (AI), machine learning (ML) and deep learning (DL) are not the same thing. All are part of the same scientific field, but with definite differences that need to be considered.

**Al:** The machine can think for itself. Mimicking human intelligence using logic.

**ML:** Computers can learn by themselves. Machine enabled to improve at tasks with experience.

**DL:** The next evolution of ML. Algorithms programmed to train the machine to perform tasks.

#### AI is already in your supply chain

Al might feel like something that has not yet been adopted in the supply chain or your industry, but the fact is that Al is already transforming supply chains all around us (Barlow, 2018). Some examples include:

**Rolls Royce:** Partnered with Google to develop autonomous ships to safely deliver cargo (*Forbes*, 2018).

**UPS:** Uses an Al-powered tool ORION to create efficient routes for its fleet, reducing delivery distance by an estimated 100 million miles (*Forbes*, 2018).

**IBM Watson:** In 2018, IBM launched Watson Supply Chain Insights: "Watson Supply Chain Insights includes advanced AI capabilities specifically designed to give supply chain professionals greater visibility and insights. Companies can combine and correlate the vast swathes of data they possess with Supply Chain Insights and Watson and see the impact of external events such as weather and traffic." (IBM, 2018).

In the Fourth Industrial Revolution, organisations are gathering more data than ever before, but data needs to be translated into information before it can add significant value. Traditional forecasting techniques such as statistics simply do not have the ability to leverage the wealth of data we have access to in today's business world.

#### Stats and ML: A comparison

Some might argue that ML is nothing but glorified statistics and some might argue that it is a mere subset of statistics. The truth is that ML stands on the shoulders of giants: mathematics and statistics. ML cannot function without the application of statistics; however, machine learning is also not equal to statistics.

Statistics is defined as follows by Lumen Learning: "The science of statistics deals with the collection, analysis, interpretation and presentation of data." (2019). Thus, by its very definition, statistics is a static representation and interpretation of data. Statistical methods require data to be fed into hard-coded algorithms containing strict predetermined rules, which generate sets of results that can be interpreted by analysts, adjusted and resubmitted to the algorithm for improved results.

Conversely, ML algorithms are programmed with statistical principles, allowing the machine to choose between multiple options to improve upon its performance without human intervention.

#### Pros, cons and requirements of ML

Machine learning algorithms:

- Can handle vast amounts of data in a short time, for example, causal datasets can be considered by the Al without considerable effort.
- Require large datasets for learning to produce best results.
- Algorithm optimisation for ML can be complex and timeconsuming.

#### Case study

Traditionally, forecasting is done by looking back at history and manually adding a growth factor to the data. Some organisations also employ sophisticated statistical methods. With the hype around ML and the purported ease of causal modelling, the team at Business Modelling Associates put together a comprehensive comparison to pit statistical methods against ML methods. Using a set of real-world client data, we compared the following:

- · Commercial statistical tool.
- · Commercial ML tool.
- In-house statistical methods (MS Excel).
- In-house AI methods (Python).

#### **Background**

To test the capability and robustness of the methods, the use-case chosen for this study is a company with a unique set of parameters: A monthly order pattern with limited SKUs and the typical South African peak periods around Christmas and Easter.

#### Input data and set-up

Historical data from 2014 to 2018 was made available for the study. Due to significant pattern changes from 2014 to 2015, 2014 data was excluded from the study for the inhouse statistical and in-house ML models. The ML models were set up as follows:

- Training data: 2014/2015-2017.
- Test data: 2018.

What this means is that the ML model learns from the

training dataset and generates forecasts for 2018. Forecast values are then compared to the actuals for 2018 to determine the accuracy of the forecasts.

#### **Comparison metrics**

Three evaluation metrics were selected for the model comparison:

- 1. Weighted average percentage error (WAPE).
- 2. Penalty value.
- 3. Development time.

Each metric is compared to the forecast currently used by the client to generate a matrix by which the new forecasting methods can be compared and a simple score is applied to each metric.

#### **Scoring legend**

Placement	Allocated Points & Colour Code
Winner	3
Second Place	2
Third Place	1

#### 1. WAPE

One of the most popular measurements of forecast accuracy is the mean absolute percentage error or MAPE. This method measures the size of the error (between actuals and forecast) in percentage terms (ForecastPro, 2019). The challenge with MAPE is that equal weighting is given to all measurements, so a small error on a large measurement would count as equal to a large error on a small measurement. Thus, WAPE was chosen as a comparison metric as it assigns a weight to each measure.

#### 2. Penalty value

For each technique, a penalty value is assigned based on quantified business consequences.

#### 3. Development time

For each method, the time spent to develop the model is also considered.

#### Results

For each tool, multiple models were developed. This comparison will detail only the best performer for each tool.



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#### **WAPE** (lower is better)

Model/Method	WAPE	Score
Existing Forecast	28%	
Commercial Statistical Tool	25%	1
Commercial ML Tool	23%	2
In-House Statistical Methods	27%	
In-House ML Methods	21%	3

#### Penalty (lower is better)

Model/Method	Penalty	Penalty %	Score
Existing Forecast	64		
Commercial Statistical Tool	65	3%	1
Commercial ML Tool	58	-9%	2
In-House Statistical Methods	68	7%	
In-House ML Methods	39	-38%	3

#### **Development time\***

Model/Method	Practitioner Experience	Time (Hrs)	Score
Existing Forecast			
Commercial Statistical Tool	Experienced	?	
Commercial ML Tool	Novice	8	2
In-House Statistical Methods	Experienced	4	3
In-House ML Methods	Experienced	160	

\* A third place was not awarded for the 'time' metric as the duration to develop a model in the commercial statistical tool is unknown (it was done by the service provider) and the time taken to develop the in-house ML model is considerably more than the other models.

#### **Total scores (higher is better)**

Model/Method	Score
Commercial Statistical Tool	2
Commercial ML Tool	6
In-House Statistical Methods	3
In-House ML Methods	6

From the above analysis, it becomes clear that the ML methods have a definite advantage over the statistical methods. Considering the WAPE and penalty metrics, the

in-house ML method exhibits the best WAPE score at 21 percent and the commercial ML tool comes in second at 23 percent. This translates into a 38 percent drop in the penalty score for the in-house ML method and a 9 percent drop for the commercial ML tool. Both statistical methods exhibited inferior performance on the penalty metric to the baseline model.

The next metric brings a very interesting perspective to the analysis. For our best-performing model, the time investment is 160 hours. This translates into a highly skilled employee being occupied for a full month. If the penalty score could be translated into a monetary value, the investment might be justified, but for most organisations, translating something like lost sales into a concrete monetary value is challenging. The time investment also does not consider the time it takes for the practitioner to become skilled and most companies do not have AI practitioners on staff.

In the final comparison table, the ML models obtained equal scores of 6 each, followed by the in-house statistical model at 3. The greatest differentiator between the ML models is the time it took to develop the in-house model versus the commercial model. For the commercial model, a complete novice with no ML experience was able to learn the ML tool and build a very compelling model in a single working day's worth of hours.

Given that the final score is a draw, the selected method would depend on the priorities of the client. If the penalty outweighs the importance of time, a highly customised solution would be recommended; however, if a more balanced solution is desired, the commercial tool would be recommended

#### Conclusion

Some view AI as a passing fad and some as a cure-all silver bullet. From this analysis, it seems that the truth lies somewhere in-between. Great strides are being made in the field of ML, but there is a lot of work that still needs to be done. Companies need to be educated on what is available in the industry and that the advantage of ML is becoming more attainable every day. It is, however, undeniable that AI has started to close the demand forecasting gap. •





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## **Nail your WMS selection process**

By Michael Badwi, Chief Business Officer and Founder of Supply Chain Junction



Trying to decide on the right warehouse management system (WMS)? Here are three steps from someone who did, having learned the hard way!

ood decisions, bad decisions and crazy decisions...
people make odd decisions every day. For example, a
decision to go searching for a car based on the colour of
the seats. Ok, it's a crazy example. The point is, if there's a wrong
way to do something, someone will have found it and done it.

"We're all ok. We've a proven method guaranteeing good decisions in our business."

Successful modern companies make good decisions. Always. There's a proven method to guide them. Gather the data, analyse it, test the alternatives. Voila! A good decision. Right? Wrong!

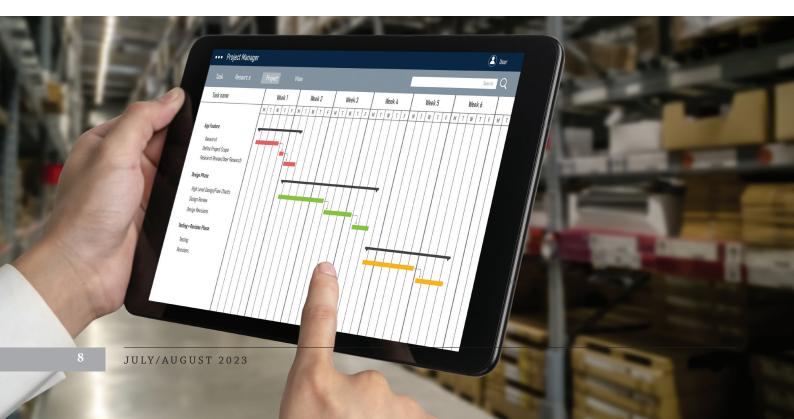
They still make the wrong decision, sometimes in spectacular fashion. For example, Decca Records rejected The Beatles (because "guitar bands were on the way out"). Coca-Cola decided to change its legendary recipe (and had to change back fast). Kodak decided digital wasn't for it (and missed out on leveraging its heritage).

Whether it's overconfidence ("We're masters of the universe!"), groupthink ("Dissent has no place in this company!") or reliance on poor information ("Our in-house market research team confirms that..."), good people, in good companies, with good intentions, can make bad decisions.

I see this in the WMS selection process. When companies view a WMS through the wrong lens, their distorted view gives an incomplete picture of how they'll benefit. If this is realised in time, they can reset the lenses. The WMS selection process can restart with the correct focus.

#### "We went off looking in the wrong direction from the start."

In a recent chat with a customer, they spoke about their company's flawed initial process. Fortunately for them, they were able to correct their focus. They made an informed WMS selection. It was their precursor to a successful WMS implementation.



What were their learnings?

- 1. You need to do your WMS homework first.
- a) Needs: What do I need in a WMS?
- In other words, where's my pain?
- Where do I see it improving my current processes?
- What are the views of all my stakeholders? From operators up to the GM?
- b) What's my business case?
- Input: What benefits can I expect? (Efficiency, accuracy, cost reductions).
- Input: What are my expected/indicative/acceptable costs?
- Output: A clear document showing the costs, benefits and return on investment (ROI).
- c) What are my selection criteria going to be?
- Critical features and functionality?
- It must be able to cope with the company's plans to grow organically and through acquisition.
- It must have proven integration with my existing systems.
- 2. Map and document existing warehouse processes.

  This is a necessary evil, taking your staff off task and consuming their valuable time. It's an investment of their time (and your money) to know where you are. It's mapping and documenting your warehouse processes. From where you are
- Point A and where you need to be Point B.
- a) Identify and map current processes.
- Where do we cause our customers pain?
- Where is our pain?
- Where are we relying on spreadsheets?
- b) Identify what processes need to improve.
- Processes that need streamlining?
- Processes (or lack of) that drive data inaccuracy?
- Where can we create (or increase our) efficiency?
- c) Identify where we see a WMS delivering or facilitating process improvements.
- In inventory management?
- In visibility via reporting to improve control?
- In real-time visibility to drive accuracy in order fulfilment?
- d) Output: A gap analysis of the current against the desired future state. This will give you a checklist. You can then begin a WMS selection process with the confidence of knowing your Point A and Point B.

- 3. Make sure you focus on what matters.
- a) Be aware of the tendency to spend time (and money) on looking at the unnecessary. A WMS will solve warehouse issues, not the issues of the various stakeholders of other areas.
- b) Focus laser-like on what matters.
- Is the WMS you're looking at a good fit for your organisation?
- Will it integrate with your other systems?
- Will it grow with you?
- Are you on guard against over-customising (aka over-complicating)?

#### "It's a sizeable piece of work. I've a fair idea of where things are. I think I'll skip it."

- a) You know the status quo isn't serving you well.
- You've identified a need for a WMS system.
- The business will only give you one shot at this.
- b) Who has the time, money or goodwill to waste by going off track during the WMS selection process?
- If things do go off track, the business will come to wonder about the merits of the project.
- A "fair idea of where things are" leaves you without a clear foundation of what you need from a WMS.
- c) Do you want to manage a situation where the view of the benefits a WMS can deliver (ROI) start to suffer?

#### You can make a call

An experienced WMS supplier can help guide you in this initial internal process. They want to set you up for success. Setting you up for success sets them up for success – after all, their livelihood depends on it.

### Nail your preparation and nail your eventual selection

Achieving a successful WMS selection and implementation is a big feather in anyone's cap. It doesn't harm your personal LinkedIn profile either. That big feather is the reward earned for making good decisions. Good decisions follow in a WMS selection process when you have a clear focus on:

- 1. Where you are starting from Point A.
- 2. Where you want to be Point B.

What you need to get there is the right WMS – and in that way, you'll never decide to buy a new car based on the colour of the seats! •

## Save money with a TMS

By Carsten Schubert, Co-Founder and Operations Director, Transnova, www.transnova.co.za

As the fuel price increases, a transportation management system (TMS) can save you money in so many ways.



n South Africa, the number of companies that utilise a transportation management system (TMS) to manage their transportation is low compared to our European and US counterparts. However, this is rapidly changing with the arrival of software as a service (SAAS)-based TMS systems that are cost-effective and quicker to implement.

Here, we offer you a viewpoint from the US where Steve Banker, Co-author of *Logistics Viewpoints* and a contributor to Forbes.com and the LeanLogistics blog, discusses the areas where TMS offers the greatest financial impact.

Perhaps no other supply chain application offers so many ways to drive value as a TMS. A few years ago, the ARC Advisory Group surveyed and talked to over 50 companies that had implemented a TMS to understand the return on investment (ROI). Over 40 percent of respondents reported freight savings of between 5 and 10 percent, and 23 percent reported freight cost reductions of over 10 percent.

Perhaps the most important chart in this report showed the key areas where a TMS can reduce a shipper's transport spend and the potential cost reductions driven by those different savings buckets. But, there are so many ways a TMS can drive logistics savings; trying to drive savings in all areas in an initial implementation would greatly increase the chances of having a failed implementation.

So, a key question becomes: On which areas should a company focus initially? This depends partly on a company's strategy, but it also makes sense to focus on areas where the savings potential is greater, while the chances of failure are lower. The following table shows our analysis of the risks and rewards associated with driving transport savings in the different areas.

A quick note: In a few of the categories, we have the risk described as 'Easy to Difficult'. In these categories, it is easy to drive a certain level of transport savings with basic functionality, but difficult to implement the most

Savings Bucket	No Savings	Savings < 2%	Savings 2-4%	Savings 5-7%	Savings 8-10%	Savings > 10%	Risk Profile
Increased Usage of Preferred Carriers	32.7%		Most Common		Largest Possible		Easy to Moderately Difficult
Better Procurement Negotations	42.3%		Most Common		Largest Possible		Moderately Difficult to Difficult
Lower Cost Mode Selections	30.8%		Most Common			Largest Possible	Easy
More Fully Loaded Equipment	44.2%		Most Common		Largest Possible		Easy to Difficult
Better Routing	30.8%		Most Common			Largest Possible	Easy to Difficult
Reduction in Carrier Overcharges	38.5%	Most Common	Largest Possible				Moderate to Difficult



advanced functionality. For example, routing is one of the two areas in which the largest numbers of respondents get their savings. Outbound, multi-stop truckload (TL) routing is the most common form of routing and its prevalence suggests that most TMS suppliers do not have problems supplying savings in this area. However, jointly routing inbound and outbound shipments to reduce empty miles, or jointly routing carriers and private fleets, can be very complex.

In these different savings categories, a TMS achieves savings based on visibility, process enforcement, analytics and optimisation. Visibility is a key driver of transport savings. This is made possible through a multi-tenant, network-style TMS that captures anonymous data on all the moves, made by all clients, on all lanes. Customer data is aggregated in a manner that protects the privacy of individual shippers while allowing for the creation of

lane benchmarking rates. Customers are therefore able to access current lane benchmarks as well as historical trends – a vital tool for optimising the transport network and negotiating the most competitive rates.

In South Africa, customers can now access this same capability. As an example, a company whose initial focus was to use the TMS for tendering, routing and optimisation could harvest the information from its TMS to drive better transportation procurement.

Working with a TMS full-service provider, the company could leverage managed procurement services and benchmarking data. This can then be used to compare the rates being offered by the carriers to the industry benchmarks in the network. When it comes to visibility like this as a driver of transport savings, it is hard to beat the new breed of network-based SaaS TMS solutions.

# Decarbonising strategies for the African transport and logistics sector

A recent webinar, hosted by DMG Events, organiser of Transport Evolution Africa, convened industry experts and stakeholders to discuss the urgent need for decarbonising strategies in the African transport and logistics sector.

he webinar shed light on the existing challenges and potential solutions to mitigate carbon emissions in the industry. A key takeaway from the webinar was the apparent disconnect between transporters and transport buyers. The industry seemed more focused on reporting rather than taking concrete actions to reduce emissions, creating a mismatch in signals between transporters and users. Another challenge is the slow pace of policy reforms and changes in regulations to help bolster the adoption of decarbonisation strategies.

Ziad Hamoui, President of the Borderless Alliance organisation based in Ghana, raised concerns about the lack of alignment on national, regional and continental standards for decarbonisation. He emphasised the need for collaboration between countries to align their standards and policies, particularly in two critical areas: infrastructure development and vehicle standards. Hamoui highlighted the importance of considering costs and available finance to facilitate a smooth transition towards greener transport options.

Abiola Osho, Vice President of Investments at African Finance Corporation, addressed the perspective of high-emitting industries and countries on decarbonisation strategies. He highlighted significant challenges related to productivity and infrastructure, stressing the need for realistic targets that align with available financing. Osho called for holistic interventions driven by leadership, including clear policy and regulations, effective execution and transparent communication, and emphasised that meeting these targets would require an estimated \$2.5-trillion, which might take up to 200 years to realise.

Eric Parry, Senior Manager Sustainable Solutions at Volvo, who is also a member of the new energy committee for the National Association of Automobile Manufacturers of South Africa (NAAMSA), acknowledged the positive initiatives already in place, such as the Presidential Climate Commission (PCC) as well as the Green Transport Strategy. However, he noted the lack of concrete policies enabling the industry to transition effectively. Parry echoed the sentiment of a signalling mismatch between buyers' green aspirations and transporters' fleet operations, emphasising the necessity for further measures to facilitate the adoption of greener options.

Abdool Kamdar, Manager Decarbonisation and Net Zero at KDG Logistics, raised concerns about the perceived higher costs associated with greener alternatives. However, he pointed out that significant progress could be achieved by decarbonising the existing fleet. With the implementation of various technologies, it is possible to reduce CO<sub>2</sub> emissions by approximately 20 percent within three to six months, yielding positive cash flow and improving profits by 20-30 percent. Abdool stressed the importance of transporters carefully evaluating and selecting the most suitable technology for their specific context while keeping transport costs low to foster economic growth. Notably, South Africa is deploying electric vehicle (EV) trucks at a scale comparable to many developed countries.

Government support was identified as crucial in driving the transition towards decarbonisation. The webinar participants urged policymakers to reduce duties and introduce incentives to promote greater adoption of EVs. They also emphasised the need for localising the production chain of renewable energy and battery technologies.

The webinar concluded with a call for continued collaboration, dialogue and concerted efforts from stakeholders across the transport and logistics sector in Africa to accelerate the development and implementation of effective decarbonising strategies.

Decarbonisation strategies and sustainability/ESG will be one of the key topics at this year's Transport Evolution Africa conference from 20-22 September at the Durban ICC. •



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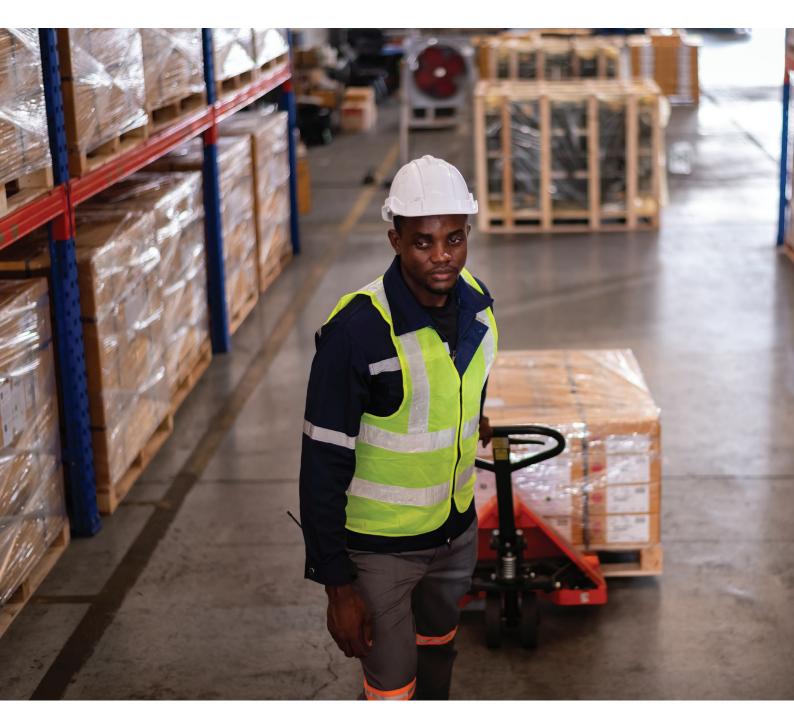




# 6 picking methodologies: What best supports your operations?

Article contributed by Fortna, www.fortna.com

A review of the most popular picking methodologies, their pros and cons and the best application for each.



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rder picking is one of the most labour-intensive processes in the warehouse. In fact, labour accounts for nearly 65 percent of the operating budget in distribution centres (DCs) that use a primarily manual approach to picking. While many different methodologies for order fulfilment exist, it remains one of the most critical activities affecting productivity, accuracy rates and throughput.

#### 1. Single-order picking

The most commonly used picking method in DCs is also the most time-consuming and least productive: single-order picking. This is the practice of fulfilling one order at a time; a worker takes the order and walks through the warehouse, picking SKUs until the order is completed. They then take the order to a pack and ship station and move on to the next order. This method is popular because it is the least complex and requires minimal to no automation.

#### 2. Zone picking

Using this method of picking, a warehouse is split into multiple zones. Orders come into a zone and are picked by the worker stationed within that zone. When all products in that zone are picked, they move on to the next zone for additional picks or, if completed, to a pack and ship station. This method is best for relieving congestion in pick lanes and can improve productivity as an operation can group promotional, seasonal and high-velocity products in one zone as well as items that are likely to be ordered together.

Slotting software and a warehouse management system (WMS) can be leveraged for this solution, as can robotics, like autonomous mobile robots (AMRs), which can also be used to transport orders from zone to zone.

#### 3. Pick and pass

Using zone-picking principles, inventory is slotted into multiple zones. Orders are picked and placed in a tote or shipping container, then the tote is passed on to the next zone via a conveyor that runs through the zones. The tote will then travel to the next zone for additional items to complete the order or, if the order is fulfilled, it will travel to the shipping area.

#### 4. Batch picking

If an operation fulfils orders with minimal SKUs, batch picking can be a beneficial methodology to adopt. Batch

picking involves workers picking multiple orders at the same time, with the orders grouped by SKU type. This method can greatly decrease the steps a worker takes and allows them to fulfil multiple orders on the same pass through the warehouse. A mobile picking cart is normally utilised.

#### 5. Pick-to-box

While not a new picking methodology, pick-to-box has been gaining popularity due to labour challenges. In this picking method, the picking process begins with selecting the box for the order at the beginning of the pick. The WMS analyses the product's size and dimensions and determines the appropriate box for the order. The worker prints a shipping label and adheres it to the box, and the worker can pick several orders in one pass through the warehouse by using a picking cart. After all the orders are fulfilled, the worker seals the boxes manually or runs them through an automatic sealing machine.

This method can effectively replace pack and ship stations, improve productivity and order accuracy, and lower shipping material costs. A WMS with pick-to-box capability is needed as well as mobile carts, handheld or wearable scanning devices, and label printers.

#### 6. Wave picking

For fulfilling orders that have a high number of SKUs, a wave picking method may be the right strategy. Wave picking uses a zone concept with orders released in waves to satisfy customer expectations and meet tight shipping windows. Workers will pick all the SKUs in one zone for the current wave before moving to the next zone. This method allows an operation to ensure that orders will be available for shipping at the correct times, although it will require the appropriate amount of labour to be effective. Like zone picking, WMS and slotting software can be useful.

Which method is the best? That depends. Factors such as warehouse size, product characteristics, turn times, picks per order and customer and shipping expectations play a part in determining the best picking methodologies for your operation. Analysing internal and external data, forecasting demand and understanding labour needs can drive the selection of one method over another and help transform your order fulfilment operations. •

## Ctrack channels its 'Power to Predict'

Ctrack, a leading player in the telematics business, is transforming its business with the slogan 'The Power to Predict' at the nucleus of this new strategy as it looks to meet its customers' high demands in a changing and challenging environment.

track has a long history of market leadership in telematics, fleet management and technology development that facilitated industry disruptions throughout its 38-year history. Highlights include developing the technology behind the first multi-box tracking unit in 1997, Discovery Insure's usage-based insurance in 2011 and the launch of Crystal in 2022. "With the emergence of big data, Ctrack realised that we needed to offer our clients solutions that allow them to utilise this data to their advantage in the most efficient way possible," says Hein Jordt, Chief Executive Officer of Ctrack.

Ctrack's brand transformation reflects its commitment to providing cutting-edge data and telematics solutions that stretch beyond traditional fleet management capabilities. Ctrack recognises the immense potential that lies within harnessing data to drive actionable intelligence and optimise business operations. "This is more than a cosmetic change, it signifies Ctrack's dedication to innovation and commitment to staying at the forefront of technological advancements. The revamped brand reflects our belief in the transformative potential of data insights and predictive power," adds Jordt.

The power to predict goes hand in hand with the core pillars that have always been the motivating factor for Ctrack's ongoing research and development efforts as it aims to assist customers in reducing risk and minimising safety hazards, optimising fleet productivity and efficiency, improving asset management and tracking, managing and improving driver behaviour and automating and streamlining compliance. These pillars along with a sense of urgency have allowed Ctrack to develop flourishing long-term business relationships.

The power to predict is possible thanks to Ctrack's well-developed hardware and software solutions that give users the

ability to know what is happening with their vehicles, drivers and cargo at any time of the day via a single platform. That software solution is Crystal, an all-encompassing, cloud-based platform. Crystal is a single platform where Al telematics meets data intelligence and offers all the functionality that consumers have come to know and love in one location. The result is a business tool that offers so much more than simple reporting.

Live data allows fleet managers to keep their finger on the pulse of daily operations and if there is anything out of the ordinary, they will have the foresight to act before they are forced to react. Whether you are a small business owner with a single delivery vehicle or are managing a fleet of hundreds of trucks across the continent, you are guaranteed to move better when you have the power to predict. "We are passionate about empowering our clients using cutting-edge technologies to transform quality data into actionable insight and foresight that allows our customers to predict the future with certainty, optimise efficiencies and make informed decisions based on good quality data," adds Jordt.

Crystal is fully customisable, so there's no limit to what you can have sight of and keep tabs on. A multitude of data is collected, interpreted and packaged, allowing customers to make informed decisions and continuously refine their operations. With data and insights at its fingertips, Ctrack can predict scenarios and put measures into place to negotiate these situations as safely and efficiently as possible. "Owners have less time to manage fleets, but Crystal allows them to do so much more and gain a deeper understanding of data as well as clear predictions with a limited number of clicks," says Jordt.

Crystal allows for job management, assigning tasks and planning routes in the most efficient manner. Alerts ensure



that the right people are informed ahead of time, every time. At any point in the day, fleet managers can rely on a snapshot summary that gives them an instant view of crucial, relevant data in real-time. High-quality data is packaged in the simplest format possible, facilitating the reporting and insights that allow for swift, well-informed decision-making.

Crystal allows for the effortless scheduling of what needs to go where and when it needs to be there and ensures that it happens. The power to predict is beneficial to your clients too. Communication down the supply chain has been optimised with the addition of powerful modules such as 'Electronic Proof of Delivery', which ensures that all parties are automatically kept up to date with objective and transparent evidence that operational milestones are achieved, with the foresight to make changes ahead of time, if need be.

Users are now able to add camera and video technology to the Crystal suite, offering a live feed into the inside of the vehicle and of the person operating it, granting unprecedented insight into what is happening at that exact moment. Crystal video gives fleet managers eyes everywhere, accessible from any smart device at any given time, from one platform.

In addition, the Ctrack Bureau service facilitates the use of AI technology that works along with the camera systems to automate the process of identifying transgressions, significantly reducing the legwork required by fleet managers in managing driver behaviour more efficiently, with deeper insights that allow for better decisions in a tough trading environment.

Crystal's scalability extends even further with SMART integrations, seamlessly connecting with third-party

applications that cater to your specific industry needs. This includes activating bespoke SMILE scripts, monitoring trailers, implementing breathalysers or keeping an eye on temperature in the cold chain. Ctrack's unique differentiators can be applied to any industry.

The flexibility of 'Crystal Analytics' means that users have all the functionality they want or only what they need. Users have the ability to add and customise modules according to their specific needs. Crystal will gather all the information required to equip you with the insights to make better business decisions. Crystal presents this information in a way that is easy to access, simple to understand and practical to apply.

"One single platform allows for the management of fleets as well as a wide variety of insights into how to improve. Crystal can predict what will happen based on previously captured historical data, ensuring optimal use of vehicles and limiting downtime by proactively taking action such as ordering parts or making workshop bookings," adds Jordt.

The Crystal mobile app, available in both Google and Apple stores, completes the loop as it is designed to provide valuable information about daily operations in the simplest way possible and facilitate the optimal running of fleets and vehicles for both drivers and fleet managers.

"The power to predict' vision relies on historical and predictive data to digitally transform our business to ensure that we are future-proof. With our wide variety of hardware solutions working in conjunction with Crystal, and our constant investment in research and development, we look forward to offering our customers world-class products for many more years to come," concludes Jordt. •

# Shifting focus from tracking productivity to delivering value to clients

By Mike Freislich, leading Coach and Trainer from We Do Change

Rather than tracking people and their productive time, businesses should understand the collective effectiveness of people and thus prioritise delivering enhanced value to customers.



usinesses today are too preoccupied with measuring workplace productivity by managing people's time and evaluating their performance. However, this fixation often detracts from understanding customer needs and delivering quality outcomes. Rather than tracking people and their productive time, I encourage businesses to understand the collective effectiveness of people and thus prioritise delivering enhanced value to customers.

In today's competitive marketplace, this strategic approach fosters sustained business growth and customer satisfaction. Redirecting organisational focus toward valued outcomes is crucial for three main reasons:

- 1. Firstly, providing value to customers is paramount in satisfying their needs, fostering customer loyalty and driving repeat purchases. When customers perceive value in a product or service, they are more likely to become returning customers and recommend the business to others, and this can lead to an increase in sales and positive word-of-mouth marketing.
- 2. Secondly, differentiation and establishing a market edge within a crowded marketplace is crucial for businesses to stand out from their competitors. By offering more value to customers, businesses gain a competitive advantage, attracting a larger market share and increased profitability. Customers tend to choose businesses that offer better value, making it a key factor in influencing their purchasing decisions.

3. Thirdly, focusing on delivering value to customers indirectly benefits employees. Engaging employees in understanding the value of their work to customers leads to higher motivation levels, reduced staff turnover rates, increased productivity, better product quality and a stronger commitment to the business.

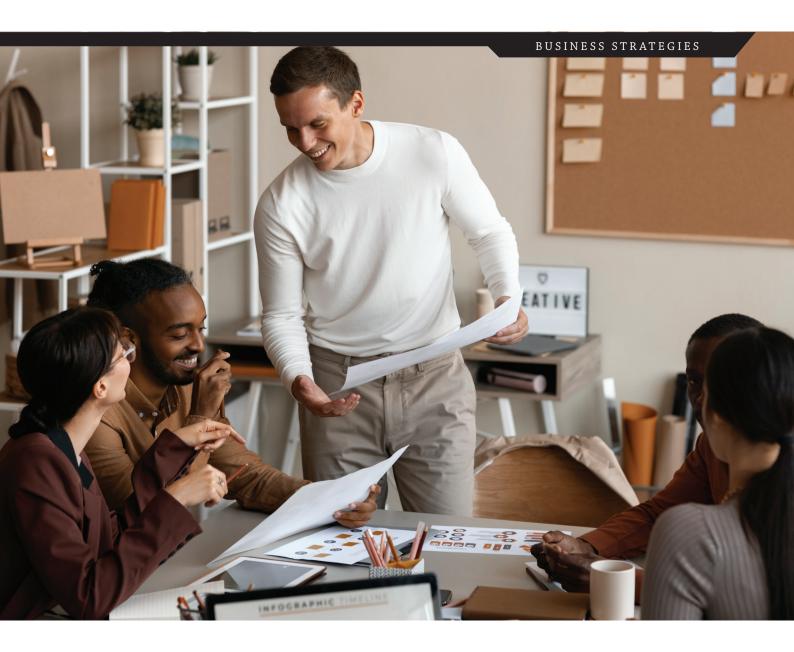
Research has shown that businesses make common mistakes when managing people and their perceived productivity levels. One such mistake is overemphasising the quantity of output over quality, which often results in rushed work and compromised solutions. Prioritising quantity over quality can lead to dissatisfied customers and tarnishes a business's long-term reputation.

Micromanagement is another pitfall that stifles creativity and innovation, particularly in knowledge work. When employees feel constantly watched and scrutinised, their motivation dwindles and they are less likely to take risks or generate new ideas. Empowering employees with ownership and autonomy is crucial for fostering a collaborative culture that drives innovation.

### Six simple ways to shift your organisational focus

#### 1. Question the validity of work

We must be selective over what work is finished next. Questioning the validity of work at all levels (programme, project, epic, feature, task) with a preference for the larger work requests can help to expose suboptimal decisions around value.



#### 2. Define clear measurable outcomes

Outcomes define the 'what, why and how much', but not so much the 'how'. Good outcomes are inspirational, objectively measurable and horizon-bound. The work of strategy is to set and communicate meaningful direction. Having clear, measurable direction in place in the form of long-term, mid-term and short-term horizon outcomes provides context for the work being undertaken as well as allows for early and regular detection of progress towards the goal.

#### 3. Align work with strategy

Explicitly link the work being done to higher-order measurable outcomes, ensuring that it contributes directly to achieving strategic goals.

#### 4. Avoid overloading work

Understand delivery capacity and resist the temptation to

start more work than can be finished. This improves focus, reduces context switching and enhances the quality of delivery.

#### 5. Sequence work with value in mind

Prioritise work items based on their value and urgency, using methods like cost of delay to make informed trade-off decisions and ensure the best outcomes.

#### 6. Visualise work in progress

This allows for better understanding and coordination, while deliberate measurement and improvement strategies ensure continuous progress and customer satisfaction.

By adopting these practices, businesses can transform their organisational culture, enhance employee morale, deliver high-quality solutions and ultimately achieve bottom-line success. •

# Achieving excellence in industrial floors: Lessons learned, dos and don'ts

By Gary Benatar, Chairman of Relog, www.relog.co.za



We delve into the requirements for a flawless industrial floor and share insights into achieving the best results.

hrough years of experience in developing top-tier logistics and supply chain facilities, it's become evident that what seems like a simple flat concrete surface can often let us down. In our previous article on industrial floors, we tackled one of the most pressing issues – floor joints –and explored solutions like the HCJ Co-Sinus Connect joints, which effectively eliminate historical problems associated with them. However, achieving a perfect industrial floor involves more than just addressing joint concerns.

#### The requirements for a perfect floor

A perfect industrial floor must meet several critical criteria:

- Load-bearing capacity: It should be capable of supporting both static loads (from racks and equipment within distribution centres or warehouses) and dynamic loads (created by moving machinery) without risk of failure
- **Level tolerances:** The floor should adhere to the level tolerances required for the specific operation it serves.
- **Longevity:** These qualities must be maintained throughout the floor's operational life, ensuring it stands the test of time.

### Precision and compliance in industrial construction

In the realm of industrial construction and design, precision and adherence to established standards are paramount. Whether you're constructing a warehouse, manufacturing facility or distribution centre, the quality

of the floor is integral to the safety, efficiency and functionality of the workspace.

#### Understanding floor tolerances and levels

To achieve an impeccable industrial floor, it's essential to understand floor tolerances and levels:

- 1. **Flatness:** Flatness relates to the evenness of a floor surface in a horizontal plane. In simpler terms, it gauges how smooth or uneven a floor appears. Irregularities in flatness can result in equipment mobility challenges, inefficient material handling and safety hazards.
- 2. **Levelness:** Levelness pertains to the overall slope or tilt of the floor. A level floor ensures that liquids, materials and machinery do not unintentionally move due to gravity.

#### Industry standards and codes

In the United Kingdom, the Concrete Society's Technical Report 34 – Concrete Industrial Ground Floors (TR34) stands as a widely recognised and comprehensive document for industrial concrete floors. It offers guidelines and recommendations covering various aspects:

- Floor classes: TR34 categorises floors based on expected usage, from lightly loaded to heavily loaded areas, each with specific tolerance requirements.
- Tolerance categories: TR34 defines specific tolerance categories for flatness (FM1, FM2, FM3) and levelness (FL1, FL2, FL3).
- Measurement methods: The document outlines precise methods for measuring flatness and levelness,



including the use of straight edges and laser screeds.

- **Remedial work:** TR34 provides guidance on addressing floor surface issues if they don't meet specified tolerances.
- **Maintenance:** It also offers recommendations for ongoing floor maintenance to ensure longevity and performance.

In the United States, the American Concrete Institute (ACI) provides guidelines and standards through documents like ACI 302.1R-15, Guide for Concrete Floor and Slab Construction.

#### Importance of compliance

Adhering to industry standards and codes such as TR34 or ACI 302.1R-15 is vital for several reasons:

- **Safety:** Level and flat floors reduce the risk of accidents, enhancing workplace safety.
- **Operational efficiency:** Specified tolerances promote smooth material handling, efficient space utilisation and machinery operation.
- **Longevity:** Well-constructed and maintained floors have a longer service life, reducing the need for costly repairs or replacements.
- **Cost savings:** Meeting tolerances and standards from the outset minimises the need for expensive remedial work.

Industrial floor tolerances and levels are critical elements in industrial facility construction. Compliance with industry standards ensures that the floors meet specific performance criteria, leading to enhanced safety, operational efficiency, longevity and cost savings. Prioritising precision and compliance in floor construction lays a solid foundation for success in any industrial project.

The process commences with a deep understanding of the intended usage, marking the role of logistics consultants at the forefront of this crucial definition phase. This expertise encompasses a comprehensive grasp of planned operations, utilisation requirements and facility design nuances. It's imperative to recognise that architects or structural engineers alone cannot provide this level of insight. This input shapes critical elements such as load considerations, both dynamic and static, as well as precision requirements regarding tolerances, flatness and levelness.

The specification process further entails stipulating the most suitable surface characteristics for the intended purpose, encompassing durability, dust prevention and, in certain instances, even colour considerations. An emerging international trend leans towards lighter floor hues to enhance workspace



An example of joint preparation with plastic sheeting, ready for pouring.

illumination, fostering a more favourable environment for workers and boosting overall productivity. Additionally, there might be a need to impose restrictions on joint placements to ensure they do not impede the layout of racking systems.

Specialised applications, where immobility is imperative, such as under automated operations, necessitate specific specifications. This extends to unique scenarios like installations within refrigerated environments, freezers or specialised handling areas.

The subsequent phase centres on the technical design of the floor, a task entrusted to structural and civil engineers. However, the success of this stage hinges on experience, particularly an understanding of the intricacies and potential challenges that accompany these specific types of flooring projects. In practice, we collaborate closely with the engineers to guarantee the accurate application of standards such as TR34 or other pertinent codes.

Ultimately, the realisation of an exemplary floor largely rests upon the expertise of the contractor. It's a stance I consistently maintain, advocating for the engagement of a specialist floor contractor well-versed in the intricacies of industrial flooring. While floor specifications and designs adhere to scientific principles, the actual construction process is an art form. Seasoned contractors bring invaluable experience, insights and a nuanced understanding of the right supervision and techniques, all of which collectively contribute to the achievement of a superior floor.

In the initial stages of introducing large panel floor construction techniques, we often relied on overseas specialists to oversee these projects. However, as time has progressed, the local floor specialists have honed their expertise, acquiring state-of-the-art machinery that significantly enhances the quality of the final product. This transition has yielded more dependable and superior floors, reflective of the maturation of the local industry in this specialised field.

#### Common problems encountered

Apart from joint issues, industrial floors can suffer from various problems, including:

• Curling: The distortion of concrete slab edges or

- corners, leading to uneven surfaces, cracking and operational disruptions.
- **Cracking:** The formation of cracks in the concrete, which can weaken the floor and pose safety risks.
- Rocking: Unwanted tilting or movement of concrete slabs, often related to curling, affecting floor stability.
- **Delamination:** Layers of the concrete surface separating or detaching from each other, compromising structural integrity.
- **Non-conforming specifications:** Deviations from specified load-bearing capacities, levelness and flatness criteria.

#### Addressing curling

Curling in concrete floors is a common challenge influenced by factors such as concrete mix design, curing methods, environmental conditions and the presence of control joints or reinforcement.

Mitigation strategies include proper curing, controlled environment curing (especially in enclosed spaces) and the use of reinforcement materials to minimise differential drying and shrinking.

#### Dealing with delamination

Delamination is a structural issue where layers of the concrete surface detach. It can be caused by various factors, including poor adhesion, moisture intrusion and surface contaminants. Addressing delamination often involves surface preparation, proper curing and the use of appropriate repair materials like non-shrink epoxy.

#### Achieving the perfect floor

To achieve an impeccable industrial floor, consider the following steps:

- Detailed specification: Define usage, loads, tolerances, surface requirements and even joint positions. Special applications like refrigerated or automated areas should also be specified.
- **Technical design:** Collaborate with structural and civil engineers with experience in industrial floors to design a floor that meets specifications.
- **Experienced contractors:** Engage specialised floor contractors with a track record in industrial floors, as floor construction is both science and art.
- Concrete supplier selection: Choose a reliable concrete supplier capable of consistently delivering

the specified concrete mix on time.

- **Concrete mix control:** Collaborate with the supplier and engineer to ensure the mix accurately matches the specification.
- Proper groundwork: Prepare the subbase meticulously, ensuring it can withstand loads and is stable.
- **Timing and process control:** Precise timing of each construction step is crucial, from the placement of the concrete to the application of surface hardeners.
- **Curing:** Implement a controlled curing process to prevent differential drying, which can lead to curling.

#### Construction

Subsequently, meticulous attention is turned to preparing the subbase. Typically, a layer of G4-type stone is meticulously laid and manipulated to create a uniformly level working foundation. Following this, we introduce a layer of plastic sheeting to facilitate the concrete's controlled curing process while preventing untimely shrinkage. Finally, we proceed with pouring the concrete to the specified thickness.

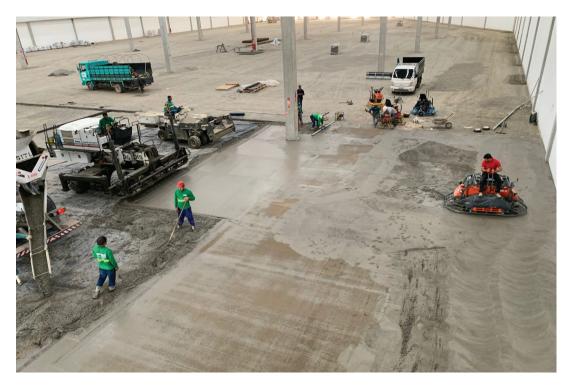
Before the concrete can be poured, it's imperative that the building is sealed off. The nearest access point should be at a minimum distance of 100m from the concrete pouring site. This meticulous precaution

plays a pivotal role in managing the curing process and serves as a potent preventive measure against the development of undesirable curling.

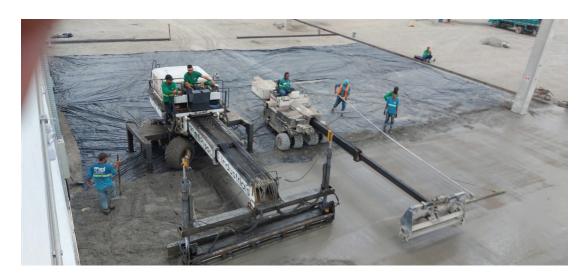
The subsequent step entails the set-up of joints, anchoring them firmly to the subbase to prevent any displacement under the force of the incoming concrete. Precision is paramount in this task; the joints must exhibit perfect levelness and be perpendicular to the floor surface. Any deviation from this precision could adversely impact joint performance, functionality and the overall ease of navigation across the floor. The joint levels serve as the reference points guiding the floor's levelling process, playing a critical role in achieving the requisite flatness and levelness standards.

As the concrete is vibrated and meticulously worked into the space, ensuring the elimination of air gaps and the attainment of a homogenous mix becomes the priority. It's essential to exercise caution to prevent excessive vibrations, preventing larger stones from settling at the bottom and leaving only fine ones at the top, which would compromise the floor's strength.

The timing of each phase is of paramount significance, a facet well understood by experienced contractors. As the concrete is poured and vibrated, the



A ride-on power floating machine with hardener, shake-on machine, laser screeder and concrete being delivered.



Laser screeding and shake-on happening together.

curing process commences. To achieve the necessary level tolerance, laser screed machines become indispensable, especially for larger panel configurations. This technology supersedes the traditional straight-edge method, ensuring precision in achieving level surfaces. Following this, the surface hardener is introduced. In the past, this was a manual process involving individuals manually spreading the hardener and then power floating it. However, contemporary methods involve automatic machines equipped with booms designed to dispense precise quantities of the hardener.

Subsequently, the floor undergoes the power floating process, executed with ride-on machines that can be connected to laser technology for utmost accuracy. Timing here is critical, as the floor must have hardened sufficiently to prevent the power float from sinking while remaining workable enough to polish the surface. This meticulous timing ensures that the surface hardener penetrates the top layers, creating a gradient of hardness that effectively thwarts delamination.

The concluding step involves allowing the concrete to undergo proper curing. This necessitates rigorous control of the drying process to ensure that the top surface does not dry at a faster rate than the rest of the concrete, which could lead to uneven shrinkage and undesirable curling. Concrete requires a dedicated curing period to both cure and shrink.

Typically, the majority of shrinkage transpires during the initial few months, with a continued, albeit

slower, rate of shrinkage over the subsequent 12-18 months. By the sixth month, approximately 90 percent of the shrinkage should be complete, with 70-80 percent achieved by the third month. For this reason, we strongly advise against loading the floor for the first three months as premature loading can impede the natural movement and shrinkage of the concrete, potentially leading to cracking.

#### Handling problems

Any issues that arise should be promptly addressed. Joints may require grinding and filling, while curling can often be corrected by grinding raised edges. Delamination may necessitate opening and filling with non-shrink epoxy. The key is to take action swiftly to prevent further damage.

#### Avoiding pitfalls

Beware of trying to reduce floor thickness through additives. The primary concern should be achieving the desired floor quality, even if it requires additional investment in concrete. In conclusion, building the perfect industrial floor involves meticulous planning, adherence to standards and collaboration with experienced professionals at every stage. With the right team and attention to detail, you can create a floor that meets the highest standards of safety, efficiency and longevity.

Don't prioritise short-term savings at the expense of long-term benefits. Investing in your floor will not only provide peace of mind, but also yield significant returns in the future.

## The value of soft digital skills

By Chantal Kading, Managing Director at The People Shop

Well-rounded, highly developed soft skills are invaluable to business success in this digital era, but what are they and why are they important?



Thile soft skills can at times be more difficult to develop than hard skills, they are arguably equally important for success in business. Hard skills concern an employee's ability to do a specific task and include specialised technical abilities. Soft skills are more about the way they are done — how employees adapt, collaborate, solve problems and make decisions, and include cognitive skills.

In most jobs, technical skills alone are not enough to be truly effective. A lack of soft skills can limit your potential or even be the downfall of a business. Earlier this year, LinkedIn released a list of the five most in-demand soft skills for 2020 comparatively, with technology, sales and digital hard skills such as blockchain on the rise. We give individual focus to these skills and assess how to improve them.

#### 1. Creativity and innovation

Creativity means to creatively approach problems and tasks across the business – bringing new ideas to the table and thinking outside the box. Alex Gray from the World Economic Forum (WEF) explains that as a result of new technologies and products, employees are going to have to become more creative in order to benefit from these changes. Creativity can be improved by taking time to let your thoughts wander. Also, make it a habit to sit down and work when you're sleepy. Research has shown that when you are sleepy, your brain is unfocused and therefore less inhibited, and innovation flows.

#### 2. Persuasion and influence

It is important to continuously advance your career by developing your ability to effectively communicate ideas and persuade your colleagues and stakeholders that it's in their best interest to follow your lead and ideas. The WEF stated that having persuasion and social skills will be more

important than ever in the future. Although we live in a world of technology, people are still far better at social interaction than robots are, currently. The key to gaining influence and improving your persuasion skills is to understand what motivates your audience. Once you establish this, it will be easier to find a common ground, benefiting all. Another way is to state the facts and emphasise the benefits for all participating parties.

#### 3. Collaboration and social impact

Companies are putting more emphasis on strong interpersonal skills and employees who play well with others. Collaboration is crucial in any work environment. The WEF report explained that human interaction in the workplace involves team production, with workers playing off of each other's strengths and adapting flexibly to changing circumstances. Collaboration involves strong communication skills, an awareness of other people's strengths and weaknesses, and being able to work with a range of different personalities. It is therefore important to learn how your strengths can complement those of your colleagues' to reach a common goal, for example, by completing assessments for insight into yourself, your leaders and your team members.

#### 4. Adaptability and cognitive flexibility

Adaptability is changing or creating modifications in oneself to suit new environments. In workplace culture, it means to be open to new ideas or changes and the ability to work independently or in teams. People who are adaptable have more chance of having better job satisfaction; they are co-creators of their lives. In the long term, links form between adaptability and job performance. One way of developing adaptability is to practise emotional intelligence (EI). According to research on flexibility and adaptability, people with a higher EI adapt swiftly to new changes. Other ways are to take a broader variety of perspectives

into consideration and view the bigger picture. You could also embrace different situations and view challenges as opportunities – mindset change is a game-changer.

#### 5. Emotional intelligence (EI)

Emotional intelligence is the ability to perceive, evaluate and respond to your own emotions and the emotions of others. Co-author of *Emotional Intelligence 2.0* Travis Bradberry explains that emotional intelligence "is the other kind of smart". It's that

intangible 'something' that helps us tune into the kaleidoscope of human emotions and measures how adept we are at adjusting our behaviour depending on the mood of a colleague, partner, family member or our own internal feelings. El can be gained and improved at any point in life. We, at The People Shop, have seen how it can have a tangible improvement in employee engagement, resilience and stress management and its effect on business productivity, success and business revenue and bottom line. •

## Switching ERP? Here's what to consider

By Paul Bouchier, Sales Director at iOCO, an EOH company

Organisations running an older enterprise resource planning (ERP) system are often pleasantly surprised when they see demos of the modern, easy-to-use, flexible and powerful ERP systems being sold today. This often propels the 'we need a new ERP' conversation.



eading ERP vendors have invested in programmes to make moving to their new cloud-based ERP products easier than it has been in the past – and they tout this during the sales process. But easier does not mean easy. Switching ERP is not like changing your cell phone provider. It is still expensive and disruptive. Whether or not to switch, and how to switch, need to be considered carefully.

When switching to a new ERP, it is important to define the business's five- to10-year objectives, evaluate the ERP vendor's roadmap and its investment in technology, evaluate the latest product from the existing vendor versus products from competitors and prepare the organisation for the move to software as a service (SaaS) ERP.

Remember that the grass is not always greener. Switching one ERP vendor for another will not automatically provide the benefits you seek.

#### Five- to 10-year business objectives

To fully realise the benefits of an ERP solution, your company's ERP strategy must align with your business objectives. Define and document your business strategy before beginning an ERP replacement process. Common

drivers for ERP replacement include that the existing system will not scale to support business growth, that the features and capabilities needed aren't present in the existing product and are not included in the vendor's near-term roadmap, and that the industry has experienced disruption. Old business models and systems are no longer adequate and you need to undertake a digital transformation to stay competitive.

#### ERP functionality and technology roadmap

In the past, ERP suites from most major vendors were delivered as huge one-size-fits-all deployments. Some vendors still take this approach. However, with the advent of SaaS, more ERP vendors are delivering suites tailored to specific vertical industries to minimise the need for customisations. Consider the following points when switching ERP:

Functionality and fit for your vertical industry. Since customisations to vendor-delivered code are no longer permitted, organisations need to determine how much of a fit the SaaS ERP suite is out of the box. Some vendors provide SaaS ERP tailored to vertical industries such as manufacturing, food and beverage, public sector, etc.

Others rely on implementation partners to provide industry-specific configurations and extensions for vertical industry requirements. Each approach has pros and cons. Confirm the approach your selected vendor is proposing and check with references to see how well that approach has been executed for them

Investment in EAP and technology. Functional capabilities are still important, but just as important today and in the future is the underlying enterprise application platform (EAP) and technology. There is significant overlap between this topic and support for composability. This point is related to how well the ERP vendor leverages its underlying technology to deploy things such as process analysis and automation as part of the normal upgrade cycle. What this means is the applications themselves get smarter and recommend automating repetitive processes as part of the ERP suite's normal release schedule. Significant gains in productivity are delivered as a matter of course.

Support for composability. Composable ERP is the future. This demands a fundamentally reliable SaaS ERP suite built on a state-of-the-art EAP, permitting vendors to develop and deploy new capabilities rapidly. It'll offer an ecosystem of services to deliver experiences and capabilities fully integrated into the back-end ERP. This includes sophisticated API management for complex integrations, embedded AI/ ML, low-code/no-code development and integration for deployment by power users, process intelligence and hyper-automation.

It is absolutely imperative that any ERP suite selected in 2023 and beyond has a leading EAP. Organisations need to

consider these underlying platforms with the same level of importance as functional capabilities.

### New products from the same vendor or a new vendor?

Switching would imply moving to a new vendor and ERP suite. However, leading ERP vendors have invested so heavily in modernising their ERP suites that the newer products often have significant differences from their legacy ERPs. Even if you remain with the same vendor, the approach to take if moving to a newer SaaS ERP should be that of re-implementation – not upgrading.

Change management is usually easier if you stay with the same vendor. However, transformation can sometimes be easier when switching vendors. The adoption of new business models is sometimes easier when you leverage the fact that you are changing vendors – so processes have to change.

#### Readiness for implementing SaaS ERP

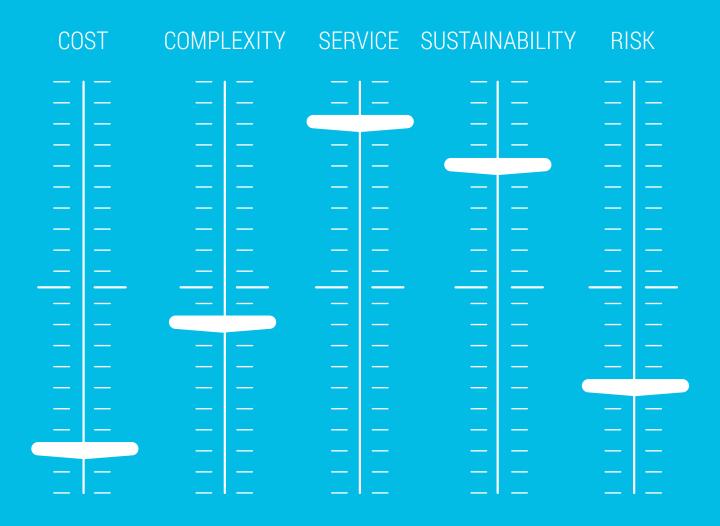
Modern ERP is delivered as SaaS on multi-tenant cloud infrastructure, which enables leveraging advanced technology and the rapid deployment of new features and capabilities. Once you have decided to replace your ERP system, there are organisational changes required to make sure you are successful.

New features and functions are deployed multiple times per year. New roles will be required to evaluate vendor-delivered functional enhancements and technical capabilities such as process automation. Consuming new features and capabilities requires more frequent but lightweight change management and testing – especially of extensions and integrations. •



# There, that's better.

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To find out how we can help you find the right balance in your supply chain, please visit www.transnova.co.za to request a free consultation.



# 5 tips for optimising full truckload shipments

By Shermandra Singh, Speaker, Author and Transport and Warehouse Software Sales at Dovetail Business Solutions

Full truckload (FTL) freight transportation is a popular way of transportation in which your cargo or freight is the only item on the vehicle. This is in contrast to less-than-truckload (LTL) shipping, in which your cargo shares space with other shipments. Discover ways you can optimise FTL shipments to enhance efficiency.



he term 'full truckload' (FTL) is also known as 'truckload' (TL). In the case of FTL freight transport, a single shipper will have exclusive use of an entire truck throughout the shipping procedure. This means that the truck will only transport the goods of one shipper for the duration of its route.

#### Advantages of FTL shipping

With FTL transportation, the entire trailer is booked for a single dedicated shipment, regardless of whether there is additional space. As a result, FTL transportation provides various advantages:

• Quick shipping. FTL shipment is often a faster delivery alternative than less-than-truckload (LTL) shipping. This

is because the shipment can leave for its destination as soon as it is loaded onto the truck, rather than waiting for additional goods to be loaded. Since FTL shipments are only delivered to a single location, there is no need to stop along the way to acquire additional goods or transfer the load to a delivery truck. This saves a substantial amount of time

• Risk reduction. If you are delivering fragile things such as valuable machinery or medication, you should consider using FTL shipping because it ensures that your items will have fewer points of contact, lowering the possibility that they will be damaged in transit. Also, your cargo will have the entire truck to itself, which means you won't have to worry about your things being damaged by the cargo of



another carrier, nor will you have to worry about your cargo damaging the cargo of another shipper.

• Offers several shipping alternatives. FTL shipping is an excellent choice for carrying large, delicate, high-risk, non-stackable or hazardous goods. Carrying multiple high-risk shiploads on the same truck at the same time is often frowned upon. It may be risky to carry products that are bulky, fragile or cannot be stacked in a LTL shipment. When compared to the cost of damage in an LTL shipment, the slightly higher cost of shipping via FTL is significantly more affordable.

#### Best practices to improve FTL efficiency

Recognise your specific needs. Having clear expectations can assist you in selecting the best services to match your needs. This must be a top focus while choosing the right carrier and service. If expectations are not satisfied, the lower-priced choice is not necessarily the better option. Consider the following variables when selecting a shipping carrier:

- · Safety.
- · Reliability.
- · Customer care.
- · Geographic coverage provided.
- · Service kind.
- Transit intervals.
- · Additional services available.

Do not make a hasty decision. Take the time to consider each choice and service in light of your requirements.

Have a trustworthy carrier for FTL shipments. First and foremost, your FTL shipment's speed, safety and efficiency are only as good as the FTL carrier you choose. As a result, having an established relationship with a dependable carrier is one of the most crucial best practices for optimising operational performance. It will save you time and money while also optimising truckload freight performance. Your preferred carrier should have access to a diverse network of high-performing carriers to satisfy your needs for FTL and LTL shipments.

**Learn how shippers determine shipping rates.** When transporting FTL goods, it's critical to understand how FTL rates are computed. Rates are determined by supply and demand in most sectors. And, in the world of FTL transportation, supply and demand are even more critical.

Mileage is incredibly crucial and plays a significant

role in determining FTL rate quotes, but it is not an easy estimate. Nevertheless, greater journeys normally result in higher rates due to the increased driver time and fuel consumption. However, not all lanes are the same price. Fuel surcharges based on the fuel market prices can have a direct impact on the FTL rate. As a result, transporters and logistics providers adjust their pricing regularly to reflect changes in fuel prices.

Any route that a carrier covers on the schedule is considered a trucking lane. And the trucking lane can change depending on the amount of freight travelling in and out of a location. Cities having a higher ratio of trucks to available freight may be less expensive than cities with a higher freight volume than drivers.

Every FTL shipment is unique and the level of appeal varies depending on the carrier. Loads with easier appointment scheduling, the convenience of access and the availability of backhauls are usually more attractive, which may result in reduced FTL prices.

Increase carriers' lead time. A longer lead time increases your chances of securing the finest carrier option in terms of delivery dates, service and shipping rates. Longer lead times can result in more timely delivery and help you save money. It can also help create greater levels of accuracy and ensure that your goods are delivered on schedule. For example, if your present shipments have a lead time of five to six days, you may have enough time to precisely organise shipments. It will be a more cost-effective solution if the lead time between the order and the deal is extended.

Optimise freight performance by using a transportation management system (TMS). Whether the shipment is FTL or LTL, adopting a TMS can result in significant savings and efficiencies. As a result, employing an innovative, computerised system remains one of the finest practices. A TMS is a piece of software that allows you to easily analyse past and current shipments for FTL and LTL shipments. TMS actively records data to help you and your team forecast and schedule shipments while also identifying gaps. This software can help your team arrange shipments more effectively while also monitoring freight performance.

Finally, leveraging technology to manage shipping and carriers is the key to running an efficient operation. •

# Why SA businesses should leverage trustworthy data for better procurement choices

By Sameer Kumandan, Managing Director at SearchWorks

Mitigating the risk of procurement fraud and other irregularities is possible by equipping organisations with the tools necessary to improve transparency, decision-making and cost-effectiveness in procurement.



he procurement department serves as a pivotal entity within an organisation, entrusted with the monumental task of procuring goods, services and works from external suppliers. Its significance lies in ensuring that the company gets the best possible value for money by making informed decisions that positively influence operations and profitability while navigating a world of commercial complexities and avoiding the pitfalls of fraud and other irregularities with the potential to damage the bottom line and the reputation of the business. In 2021, the South African Institute of Chartered Accountants (SAICA) found that 70 percent of South African companies had experienced procurement fraud or irregularities in the past year, while the Association for Savings and Investments South Africa (ASISA) reported that R10-billion was lost to procurement fraud and irregularities in the private sector in 2020.

With these eye-opening statistics in mind, and in response to increasingly tough economic conditions, procurement integrity is more important than ever. Here, the strategic use of credible, dependable tools becomes paramount. By streamlining procurement processes, reducing risk and boosting efficiency, procurement can make confident decisions based on solid data.

#### Procurement: What's the big deal?

The procurement department is typically tasked with sourcing, identifying and qualifying suppliers. This includes market research, supplier capability evaluation and contract negotiation. Once concluded, procurement is also responsible for placing orders with suppliers, tracking orders and ensuring that deliveries are made on time and in full. Thereafter, procurement is tasked with processing payments to suppliers and managing accounts payable. In addition, procurement also carries the unenviable burden of risk management and compliance. It is their task to mitigate and manage the risks associated with procurement such as the potential for fraud, supply chain disruptions, quality issues and price volatility. Compliance is

equally important and all procurement activities must comply with the company's policies and procedures, as well as applicable industry laws and regulations.

#### Instilling transparency and accountability

To assist in their role as gatekeepers in ensuring that their businesses only engage with legitimate partners and safeguard against fraudulent practices, procurement departments need the ability to thoroughly vet vendors, perform company background checks and assist in crucial decision-making that ensures that organisations can grow with complete confidence.

### Measurable advantages of risk management in procurement

With the right platform, procurement teams can greatly enhance their influence over products, steering organisational competitiveness, efficiency and profitability. Benefits include:

- Greater transparency: Establishing systems that stymie fraudulent actions, bolstering accountability and compliance.
- Elevated due diligence: Protecting against interactions with unsavoury entities, all while refining the sourcing, negotiation and record-keeping processes.
- Better decision-making: Offering businesses the critical data needed to evaluate suppliers effectively and reduce potential risks.
- Cost reduction: Proactively identifying and curtailing procurement risks, thereby averting significant losses.

#### The power of search

Modern procurement strategies rely on myriad verification methods, from credit checks to ID verifications. Consolidating data is vital for fostering efficiency and precision in procurement practices. As businesses evolve in an ever-complex world, embracing innovative solutions ensures that procurement departments navigate their many responsibilities with greater confidence – and ensures businesses operate more ethically and efficiently. •































# How logistics adapts to the changing business landscape

By Natasha Parmanand, MD of FedEx Express Sub-Saharan Africa Operations

The global e-commerce revolution has transformed the business landscape and logistics providers are navigating these waves of change. Here we explore how the logistics industry is adapting to the evolving business landscape and supporting businesses in meeting customer expectations.



he origin of the e-commerce industry can be traced back to orders being placed from television shows and a landline phone to sell just about everything. The Internet has transformed modern-day e-commerce in the way we acquire and interact for goods and services. We have become accustomed to purchasing anything we want online, including industrial, aerospace, automotive and health care shipping solutions.

Growth and transformation in e-commerce

In South Africa, the e-commerce market is estimated to be worth US\$7.2-million and is predicted to grow by 17.9 percent by the end of 2023. Even traditionally hesitant online shoppers have adopted e-commerce. COVID-19 also accelerated the

increase in no-contact purchasing and online shopping sites have become easier to navigate.

With low barriers to entry, e-commerce and the Internet mean businesses anywhere in the world are now able to trade across borders. Even companies with small production numbers can easily create a presence online. With an increase in social media channels and platforms that can help businesses directly target their desired audience, small and medium-sized enterprises (SMEs) are able to compete with retail giants on a global stage. Outside the traditional retail model, costs for e-commerce traders can be kept down and lower prices can be passed on to consumers.





### Challenges to logistics adapting to the business landscape

South Africa is only the 42<sup>nd</sup> largest online shopping market, despite being ranked 33<sup>rd</sup> by per capita GDP. This difference can be attributed to several factors including inadequate road infrastructure and sometimes insufficient address data. Logistics companies that remain technologically innovative are looking to overcome such challenges by utilising GPS systems and robust delivery fleets.

Beyond this, there is also unequal access to reliable Internet connectivity, limited digital literacy and low technology adoption rates in certain communities, which hinder the growth of e-commerce and logistics.

Shipments are also expected to be quick and efficient. This makes it even more important for e-commerce businesses to be supported by a reliable logistics company that can expertly manage the delivery of the product and do it in a sustainable manner.

#### **Opportunities**

Logistics is an enabler of e-commerce. Data by logistics consulting firm Knight Frank shows that the cost of transportation represents 50-75 percent of the retail price of goods. With an estimated five billion Internet users and a 2022 e-commerce sales sector valued at US\$5.7-trillion, this represents a massive proportion of the total value of the e-commerce industry.

Logistics and e-commerce have developed a symbiotic relationship and created excellent user experiences – from the click of a mouse at online checkouts to the fulfilment of the order at the customer's chosen delivery location.

The evolution of e-commerce gives SMEs a unique opportunity not just to boost sales, but also to position themselves for long-term success – although it is important to realise that competition is stiff. As consumer expectations continue to evolve, SMEs reliant on logistics service providers must be able to offer cost-effective services that combine convenience with speed. To this end, many players are employing innovative technology to deliver more tailored shopping and shipping experiences that increase the chances of a sale.

One potential pitfall is the significant gap between SMEs' assessment of how they're meeting customer expectations and how consumers view the experience. Our analysis shows that the biggest expectation gaps occur around having an efficient returns service and access to customer support.

The delivery service can have a critical impact on a small business's reputation. For this reason, it's increasingly important for businesses to work with a logistics partner that can take their business to the next level.

As the logistics landscape continues to grow, with increasing trust in the online retail sector, businesses of every size need to consider an equitable partnership with an expert logistics company.



SPAR YES4YOUTH programme learners.

## SPAR Group ups the jobs ante with expansion of supplier development

IT ONLY takes one look at the latest unemployment statistics to know that creating sustainable jobs must become the number one priority for South Africa today. "Despite the headwinds, it is critical that corporates find new ways to build and grow sustainable jobs," says Max Oliva, CEO of SPAR Southern Africa.

Oliva says developing and growing broad supply chains is where the best impact on job creation and the real economy will be felt. The SPAR Supplier Development Programme is aimed at actively helping introduce more micro and small food suppliers into the large and growing food supply chain, which is often more focused on securing share for bigger players.

"Our programme has been specifically designed to ensure that micro and small suppliers have all the tools, knowledge and access to industry specialists they need to help them grow their businesses and achieve their full potential in the most effective and affordable way," says Oliva. SPAR's initiatives are constantly evolving to ensure broader sustainable impact in areas like agriculture and manufacturing, which is where South Africa can accelerate its search for jobs.

"By embracing micro and small suppliers within the agriculture and manufacturing sectors, we are not only living The SPAR Group values of entrepreneurship, family values and passion, but also adapting to economic change. Having recently experienced a global pandemic and the impact this has had on food retail, customer demands have changed and we need to remain agile enough to adapt accordingly. This, in turn, will

support the growth of local businesses and create employment," adds Oliva.

#### Rural Hub model

In 2016, The SPAR Group embarked on the journey to develop and invest in small-scale farmer entrepreneurs. This led to the establishment of the group's first Rural Hub in Ofcolaco in the Mopani District of Limpopo.

"Our Rural Hub model is intentionally focused on rural community development and supports small-scale farmers by providing guaranteed markets for their products and by providing relevant technical and food safety training as well as facilitating access to funding," explains Oliva.

However, growing community businesses and creating opportunities require funding to match the commitment. "We have enabled the Rural Hub farmers to produce commercial quality and quantities of high-value crops grown under the protection of net houses, and have, to date, financed all operational costs and funded the capital assets," says Oliva.

The SPAR Rural Hub today supports 12 small-scale farmers in Limpopo and has created 103 jobs at farm level and 62 secondary jobs at packhouse and technical services level. Notably, a total of 63 percent of the product grown by the participating Rural Hub farmers is supplied to SPAR under the Freshline and Country Value labels and delivered to SPAR South Rand, North Rand and KwaZulu-Natal distribution centres. High-

value crops through the SPAR Freshline brand are ultimately more profitable for the farmer.

"Our model is different to other programmes in that we address systemic issues such as food security. Our purpose is to inspire people to do and be more. This is core to our way of doing business and strongly feeds into our vision of being the first-choice brand in the communities we serve," says Oliva. "This model continues to contribute positively to economic transformation, improving food security and the health and well-being of people within rural communities, and we are very proud of our achievements. We want to take this to the next level now."

#### Education and leadership

Education and leadership are the key pillars for ongoing job growth and skills development and in this regard, the SPAR Academy of Learning and its JumpStart programme are playing a unique role in leadership development in the South African landscape.

Both programmes draw on thought leadership academically, conceptually and practically in a way that makes them highly relevant. JumpStart, for instance, lays the foundations to address unemployment through a sustainable conduit, giving young people the opportunity to experience the world of work and the world of retail.

The SPAR Group has also partnered with FutureMe since 2016, working with high school learners to inspire them to follow a career in retail. Topics such as values, personal branding, business ethics, customer service, problem-solving and entrepreneurship are all addressed in the programme. Graduates from FutureMe's Go-Getter Challenge who want to

pursue a career in stores are also encouraged to join SPAR's JumpStart programme where they can get hands-on experience in a retail store environment.

Meanwhile, the SPAR distribution centres and central office teams continue to provide opportunities for graduates to gain work experience through internships, with 772 people participating to date. To further ramp up opportunities in the modern digital age, in 2022, SPAR Southern Africa embarked on a second round of the SPAR YES4Youth learnership programme, with an initial cohort of 441 learners.

"We are delighted to report that as of the end of March 2023, with the conclusion of the 2022 programme, we managed to permanently employ 46 learners, which, at 10.43 percent, is higher than the YES requirement of an absorption rate of 2.5 percent," says Oliva.

"We commenced with our 2023 YES4Youth intake at the beginning of April 2023. Our learners have been provided with smartphones to complete their modules through the YES4Youth app and are paid a monthly stipend as they get real workplace experience through training in retail stores, at our distribution centres and at SPAR's central office."

"Corporate South Africa needs to work harder to plug the rising unemployment gap in our country. In doing our part, we're accelerating our commitment to education so that we are part of the solution in finding and growing jobs to help turn the alarming jobs situation around," he concludes.

Micro and small-scale food producers are encouraged to sign up for the SPAR Supplier Development Programme at https://sparsupplierdevelopment.co.za/. •



SPAR YES4YOUTH programme learners.

### Manhattan WMS tops the charts once again

IN THE 2023 Gartner Magic Quadrant for Warehouse Management Systems (WMS), for the 15<sup>th</sup> consecutive time, Manhattan WMS is positioned highest in 'Ability to Execute' and t on 'Completeness of Vision'.

With continuous access to new capabilities, the ability to automatically scale to match warehouse demands, the intelligence to learn and adapt, and engineered to be extended, quickly and easily, Manhattan Associates is redefining supply chain and logistics operations.

According to Gartner, customers increasingly favour suites that can support end-to-end supply chain and logistics process orchestration. Gartner refers to these areas as supply chain (SC) convergence and supply chain execution convergence (related to the convergence of operational activities).

With the industry's deepest and broadest set of supply chain execution (SCE) solutions – warehouse, slotting, labour management and transportation management – Manhattan delivers a true future system convergence across every element of distribution and transportation. •

### Serco offers new design interlink trailers

SERCO'S NEW style dry freight interlink trailers boast a higher than the norm loading volume of 141m³, which directly contributes towards lowering transport costs. The vehicles have reportedly impressed the market and Serco already has an order of 16 from Vicky's Transport (VTS).

The Superlink trailer configuration has a through loading capability to ensure efficient loading and offloading, while the lightweight design chassis offers a payload of 36 tons. The trailers have underslung belly boxes that can be loaded through side access doors as well as from inside the trailer with a lifting floor system.

Accessing the belly boxes from inside the trailer during loading improves loading efficiency and security. The belly boxes have been integrated into the trailer chassis to increase the loading space available and, in addition, the floor is capable of withstanding forklift loading.

VTS has taken delivery of 10 of the vehicles, which will be used for the distribution of dry cargo, with another six units in build with Serco for delivery during the second half of the year. VTS needed the extra vehicles after winning a new contract and awarded the business to Serco with whom it has a long-standing relationship.



## The SAPICS Spring Conference is back in Joburg

THE SAPICS Spring Conference is back in person for the first time since the pandemic. It will take place in Johannesburg on 20 September 2023 and is being held in collaboration with the South African Association of Freight Forwarders (SAAFF) at the Indaba Hotel in Fourways. Supply chain professionals who were unable to attend the 2023 SAPICS Conference in Cape Town in June will have the chance to catch up on some of the highlights at the one-day SAPICS Spring Conference.

SAPICS President MJ Schoemaker notes that the conference offers supply chain professionals an important platform to become active, involved participants in the SAPICS supply chain community and to learn, network, interact and collaborate with their peers, business partners and industry stakeholders and role players.

The speaker line-up includes Paul Raphaely, Marketing Director at NOMU South Africa, who wowed the audience at the annual SAPICS Conference in Cape Town with his inspiring tale about evolution, supply chain adaptability and agility. It featured "global mayonnaise giants, demanding consumers and a little newcomer condiment (NOMU's new MAYU)".

Other exciting speakers and topics at the SAPICS Spring Conference programme are David Crewe-Brown, General Manager at Vitalliance and a SAPICS Director, who will update delegates on the importance of getting the pharmaceutical supply chain ready for big changes. "There are tectonic shifts happening in the pharmaceutical health care supply chain that will impact our environment, people and ways of working. Pandemic responsiveness, global data visibility, localisation of production on the African continent, artificial intelligence, pooled procurement and serialisation are critical issues," says Crewe-Brown.

The dynamic Dr Faith Mashele, who has recently been celebrated as one of the leading women in supply chain management in Africa, will share her thoughts on fostering a forward-looking mindset for supply chain excellence. She stresses that having a forward-thinking



Paul Raphaely, Marketing Director at NOMU South Africa.

mindset is no longer a luxury, but a necessity. Her masterclass will underscore why this mindset is crucial for all supply chains across industry.

Another popular presentation from the annual conference in Cape Town was by Greg Cress, who is the Principal Director: Sustainable Energy & eMobility at Accenture. He will also take to the SAPICS Spring Conference stage to explore the critical role of sustainable e-mobility in South Africa's transition towards a greener, more sustainable future. Cress will share insights on the challenges and opportunities in the quest for sustainable e-mobility and the role that each industry sector, including the supply chain and logistics sector, can play in driving the transition forward.

Karen Pretorius, Founder of KPI Cubed and a SAPICS Director, will discuss sustainability in a disruptive environment from a business perspective and look at scenarios for balancing (or potentially compromising) the triple bottom line of ethics, environment and economy.

For more information, including the up-to-date speaker line-up, or to register for the event, visit www.sapics.org.za/sapics-spring-conference-2023. •

## Acrow implements innovative racking system for cold storage facility

ACROW, A leading provider of storage and material handling solutions, is set to revolutionise the operations at a Lusaka Cold Storage Facility in Zambia. The installation utilises a cutting-edge mobile racking system and aims to optimise storage capacity and enhance efficiency for this prominent cold room facility.

The project entails the construction of a mobile racking system with 3,000 pallet positions, complemented by an additional 2,000 pallet positions of standard pallet racking with the end goal being to move these to a mobile racking system as well. The implementation of such a mobile racking system signifies a significant advancement for Lusaka Cold Storage. The 10m-high mobile racking system is meticulously designed to maximise the available space by utilising vertical storage capacity efficiently.

Each bay of the mobile racking system has been designed and manufactured so that it is capable of supporting up to three tons of weight per level, providing a secure and sturdy platform for palletised goods. The mobile racking system itself is rated at an impressive 18 tons per bay, ensuring the safe and efficient storage of heavy loads. This robust design guarantees the longevity and resilience required for the demanding cold storage environment and reflects Acrow's care in durability as well as reliability.

One of the key advantages of the mobile racking system is its ability to enhance operational efficiency. The system is designed to allow for easy access to each pallet position, enabling swift and convenient retrieval of stored items. By eliminating the need for aisles between every row of racks, the mobile system significantly reduces the amount of space required for manoeuvring, optimising the cold room's overall capacity.

Acrow understands the unique requirements of the cold storage industry. The implementation of the mobile racking system in Lusaka not only demonstrates Acrow's ability to provide customised solutions that address the specific challenges of preserving temperature-sensitive products, but also its ability to meet its client's specific requirements no matter the location. With careful planning and expertise, Acrow has tailored the storage system to meet the stringent standards of the cold storage industry while optimising the facility's storage density.

The partnership between Acrow and the Lusaka Cold Storage facility marks a significant milestone in the evolution of cold room storage capabilities. By implementing an innovative mobile racking system alongside traditional pallet racking, Acrow has revolutionised the storage capacity and accessibility for the facility.

Sandra Moya, CEO of Acrow Storage Solutions, weighed in on the installation: "We have always been confident in our capabilities and expanding knowledge when it comes to the cold storage industry and this project simply allows us to showcase our solutions to the greater African market." •





## Supercharging regional connectivity: Catalysing transport and logistics growth in Africa

THE 11<sup>th</sup> annual Transport Evolution Africa Forum & Expo, Africa's only port, rail and road meeting place, returns to Durban in 2023. This is the only annual expo and forum for local, regional and international public and private stakeholders to meet, who plan, build, invest in and supply to the development and maintenance of Africa's ports, rail and road infrastructure.

The conference offers 100 speakers in three days of high-level discussions across a multi-track programme addressing ports, rail and road infrastructure.

The African transport industry is undergoing a massive evolution. An entire range of developments will fundamentally change the playing fields, from institutional structural transformation to innovation





driven by digitisation and climate change. The Transport Evolution Africa Forum & Expo is well placed to showcase the latest projects and products and to provide the industry with knowledge, experience and networking opportunities with a view on current and future outlooks.

With over 100 exhibitors, thousands of visitors, over 400 VIPs and conference delegates, Transport Evolution Africa is the meeting place for suppliers and buyers from the entire transport and logistics value chain – facilitating business transactions, driving investment and helping to grow the sector in Africa.

### Boxer ready to welcome another DC to its supply chain

CONSTRUCTION OF Boxer's sixth distribution centre (DC), Boxer DC Carnival, based in Gauteng is well underway and scheduled to open towards the last quarter of 2023. The DC is being developed by the Moolman Group, no stranger to Boxer's DC family, this being the second project the group has been tasked to complete for the discounter. Once completed, the DC will measure an impressive 29,211m² in size.

This comes as Boxer officially opened its 450<sup>th</sup> store in the bustling town of Inanda. The 450<sup>th</sup> opening is especially important to Boxer as it took place in the very same province where it all began for the company 46 years ago – KwaZulu-Natal. •



### Transnet finalises partner selection for upgrade of key Durban port facility

TRANSNET HAS selected an international terminal operator, International Container Terminal Services Inc. (ICTSI), as the preferred bidder for the 25-year joint venture with Transnet Port Terminals (TPT) to develop and upgrade its flagship Durban Container Terminal (DCT) Pier 2.

DCT Pier 2 is Transnet's biggest container terminal, handling 72 percent of the Port of Durban's throughput and 46 percent of South Africa's port traffic. "Private sector participation in Pier 2 is a key catalyst for repositioning the Port of Durban as a container hub port. We are delighted to have a global player of ICTSI's standing on board to drive this process," says Transnet Group CE Portia Derby.

The partnership with ICTSI will help reposition the terminal for best practice performance, ensuring growth in volume throughput, and will support the terminal in providing operational and commercial support to access global shipping line call routes. ICTSI is a leading independent global developer and operator of origin and destination container terminals. It is

headquartered in Manila, Philippines and operates 34 terminal operations in 20 countries across six continents, including four in Africa. It is ranked the eighth-largest container terminal operator in the world and has 11,000 employees.

This will not only improve the logistics associated with servicing South African ports, but will play a significant part in stimulating exports and imports. This is a growth strategy for Transnet where Pier 2's current capacity of 2 million TEUs is planned to increase to 2.8 million TEUs. This is aligned with plans by Transnet National Ports Authority (TNPA) to increase the current container capacity in the Port of Durban from 3.3 million TEUs to an eventual envisaged capacity of 11.4 million TEUs.

A new company will be formed to manage the operations at DCT Pier 2, in which Transnet will have majority ownership of 50 percent plus one share. The term of the transaction is 25 years, with an option to extend to a maximum of 30 years in the event that the berth deepening of the North Quay at Pier 2 is delayed. •



# **Directory of supporting industry associations**

#### **CILTSA**

Chartered Institute of Logistics and Transport SA 011-789-7327 | www.ciltsa.org.za

#### **CIPS**

Chartered Institute of Purchasing and Supply Southern Africa 012-345-6177 | www.cips.org/southernafrica

#### **CSCMP**

Council of Supply Chain Management Professionals SA Round Table 011-678-1820 | www.cscmp.org

#### **RFA**

Road Freight Association 011-974-4399 | www.rfa.co.za

#### **SAAFF**

SA Association of Freight Forwarders 011-455-1726 | www.saaff.org.za

#### **SAEPA**

SA Express Parcel Association info@saepa.org.za | www.saepa.org.za

#### **SAIIE**

Southern African Institute of Industrial Engineering 011-607-9557 | www.saiie.co.za

#### **SAPICS**

SAPICS – The Professional Body for Supply Chain Management 011-023-6707 | www.sapics.org.za



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