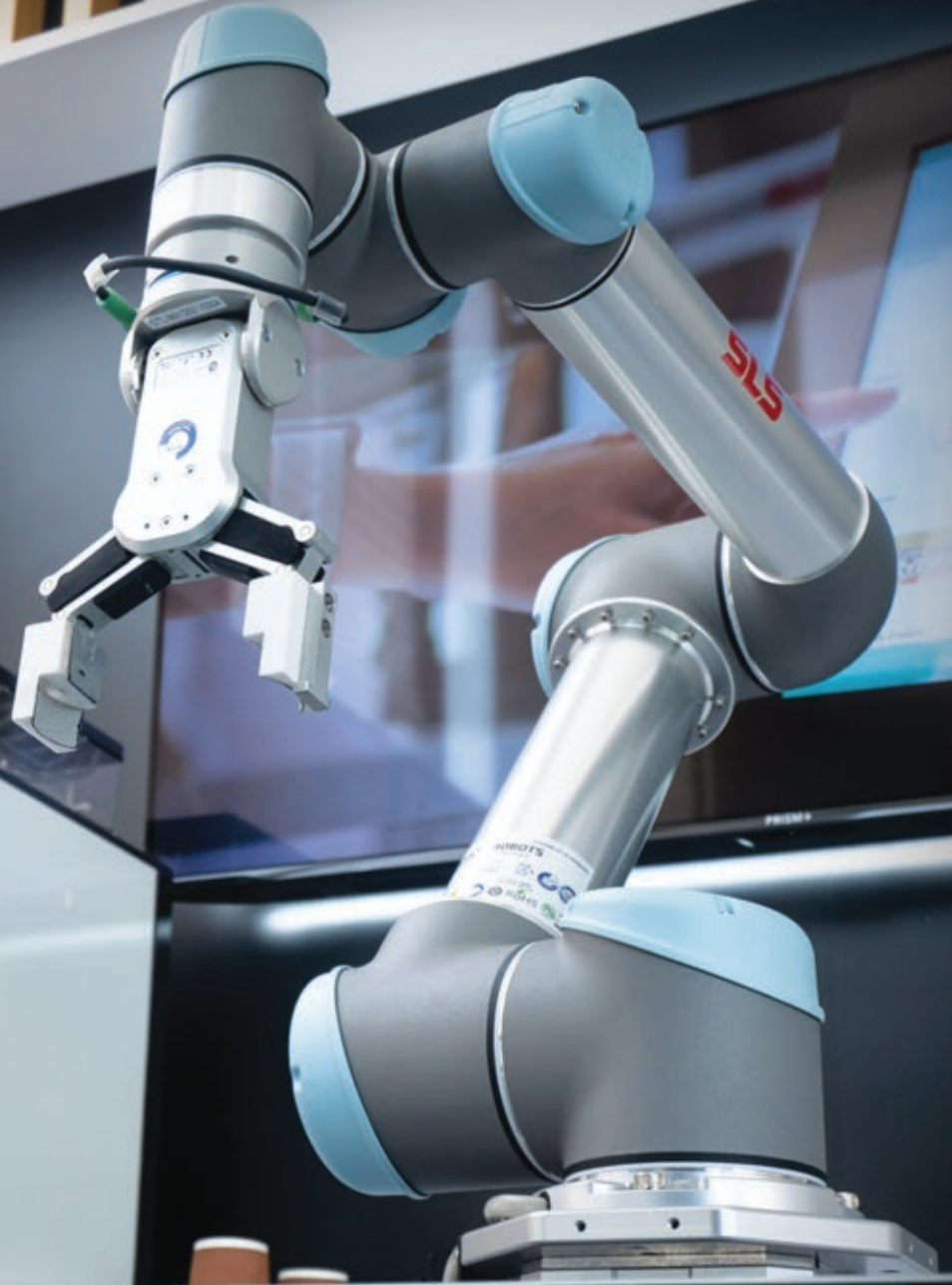


SLS

VANTAGE

*Creating ad
for your success*

2022 Issue 04



INSIDE THIS ISSUE:

**COBOTS AT WORK IN SLS' COBOT CAFÉ
EMBRACING DIGITALISATION
CASE STUDIES ... AND MORE**



EDITOR'S NOTE

Welcome!

Dear readers,

A very warm welcome to the fourth issue of Vantage magazine.

This issue, we shine the spotlight on cobots and the role they play in a new era of human-robot collaboration. In one of our cover story features, we introduce the idea behind our very own SLS Cobot Café as a showcase for demonstrating how cobots can assist humans in suitable workplace environments.

SLS has implemented several digitalisation initiatives to improve efficiency and deliver better customer value and we bring you up to speed on this. We also share how our people have forged great strength throughout the trials of the COVID-19 pandemic and lived up to our very own SLS corporate values. Another article focuses on how innovation can be cultivated through design thinking principles.

In this edition of the magazine, we also wanted to draw attention to our close working relationships with our brand partners. We are delighted to feature interviews with Mr James Gaskell from Enerpac, Mr Olaf de Bakker from Ewellix and Mr Robert Giuntoli from Martin. We are also pleased to highlight SKF's sustainability initiatives, as well as Timken's role in keeping vaccines safe and viable, in two other features.

Case studies offer an insight into how our products and services can help our customers solve their challenges. We are grateful to our customers for their inputs in this edition's case studies.

A note of thanks to Dementia Singapore for lending us their time to educate us on the signs of dementia as part of our corporate social responsibility initiatives.

Lastly, I would like to thank my fellow colleagues for their insights, submissions and contributions to this magazine.

We hope you will find the variety of articles in this issue interesting. Happy reading!

Sincerely,
Adeline Pang
Brand Executive, SLS



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CEO'S

MESSAGE

Dear business partners and associates,

Without a doubt, over the past two years, the COVID-19 pandemic has left a deep impact on people and businesses across the globe, changing the way we live and work.

At SLS, we had to act swiftly and decisively as we navigated uncharted territory. From border closures to ever-evolving social distancing rules, we had to adapt our business continuity policies to deal with unpredictable and fluid situations.

Despite the uncertain landscape, we embraced new ways of working, connecting and learning. In particular, we took the opportunity to accelerate the implementation of several digitalisation initiatives which had been in development for some time.

These included the launch of our e-commerce store (SLS e-shop), an automated transport management system for our delivery fleets and web-based learning modules for our employees. We also set up a Cobot Café in our headquarters to demonstrate how cobots can be deployed in a work setting to help humans manage their work.

It is often said that heroes are born during challenging times. It has been humbling to witness how the silent heroes within our company have come together to support each other and to keep our business operations running smoothly especially at the height of the pandemic.

I would like to take this opportunity to convey my deepest appreciation to my colleagues who have demonstrated their dedication and resilience during these times.

At the same time, I am very grateful for the continued support of our brand partners. I look forward to shaping our future together as we align our goals and business objectives.

I am also thankful for the continued faith and trust placed in us by our customers. We remain dedicated to adding value to our customers so they can minimise operational downtime and boost uptime.

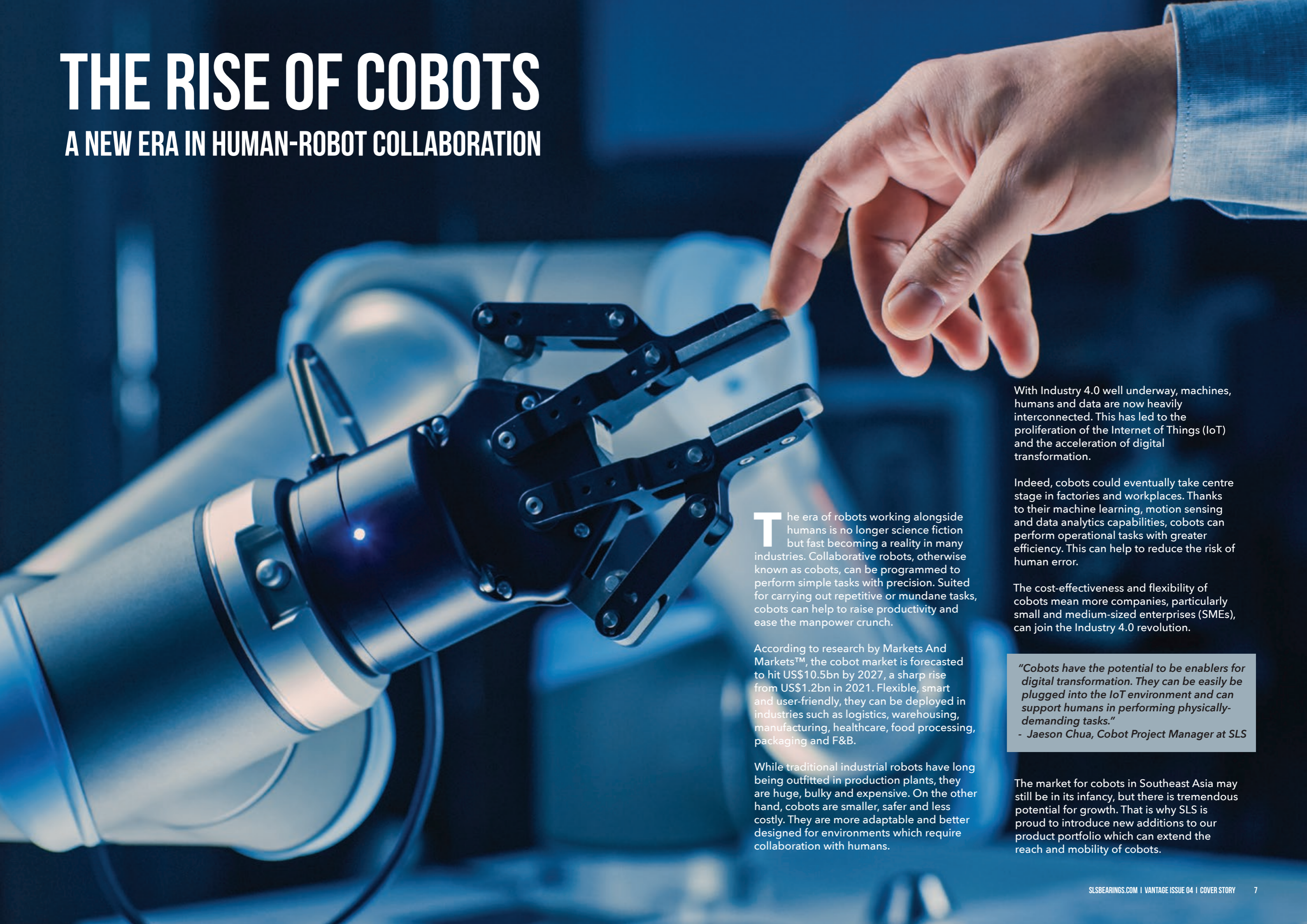
To thrive in a new, post-pandemic reality, we must remain nimble and agile. I look forward to new opportunities ahead as we work towards achieving our goals together.

Sincerely,

Roy Tan
CEO, SLS

THE RISE OF COBOTS

A NEW ERA IN HUMAN-ROBOT COLLABORATION



The era of robots working alongside humans is no longer science fiction but fast becoming a reality in many industries. Collaborative robots, otherwise known as cobots, can be programmed to perform simple tasks with precision. Suited for carrying out repetitive or mundane tasks, cobots can help to raise productivity and ease the manpower crunch.

According to research by Markets And Markets™, the cobot market is forecasted to hit US\$10.5bn by 2027, a sharp rise from US\$1.2bn in 2021. Flexible, smart and user-friendly, they can be deployed in industries such as logistics, warehousing, manufacturing, healthcare, food processing, packaging and F&B.

While traditional industrial robots have long being outfitted in production plants, they are huge, bulky and expensive. On the other hand, cobots are smaller, safer and less costly. They are more adaptable and better designed for environments which require collaboration with humans.

With Industry 4.0 well underway, machines, humans and data are now heavily interconnected. This has led to the proliferation of the Internet of Things (IoT) and the acceleration of digital transformation.

Indeed, cobots could eventually take centre stage in factories and workplaces. Thanks to their machine learning, motion sensing and data analytics capabilities, cobots can perform operational tasks with greater efficiency. This can help to reduce the risk of human error.

The cost-effectiveness and flexibility of cobots mean more companies, particularly small and medium-sized enterprises (SMEs), can join the Industry 4.0 revolution.

"Cobots have the potential to be enablers for digital transformation. They can be easily be plugged into the IoT environment and can support humans in performing physically-demanding tasks."
- Jaeson Chua, Cobot Project Manager at SLS

The market for cobots in Southeast Asia may still be in its infancy, but there is tremendous potential for growth. That is why SLS is proud to introduce new additions to our product portfolio which can extend the reach and mobility of cobots.

INTRODUCING **PLUG-AND-PLAY SOLUTIONS** TO EXTEND THE MOBILITY OF COBOTS

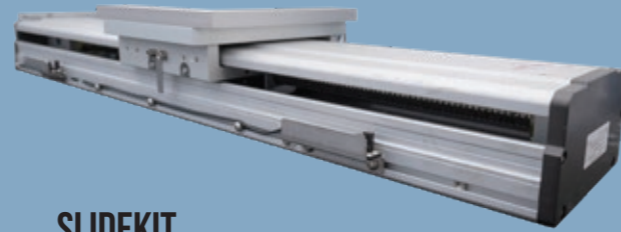
The Ewellix LIFTKIT and SLIDEKIT are a series of linear motion modules that can extend a cobot's range of motions by increasing its vertical and horizontal reach respectively. They introduce greater versatility into the mobility of cobots at a very competitive cost. Easy to install, these plug-and-play solutions are available for use with cobots manufactured by Universal Robots (UR).

"The addition of the LIFTKIT and SLIDEKIT by Ewellix is very complementary to our product portfolio. With many of our customers in the industrial space looking to accelerate their digital transformation, this is a perfect fit for us."
- Joey Tan, Product Manager, SLS

As more companies utilise cobots to support and augment the work of humans, do not be surprised to see yourself sharing your workspace with a cobot. They could soon become a fixture in our lives!

A QUICK LOOK AT THE LIFTKIT AND SLIDEKIT BY EWELLIX

Both the LIFTKIT and SLIDEKIT are plug-and-play systems which enhance a cobot's capabilities. By extending a cobot's operating range of motions and offering a high level of positioning precision, the LIFTKIT and SLIDEKIT can improve productivity and reduce costs. Ready to install, they come with software plug-ins that enable programming. Here's a brief overview of both products.



SLIDEKIT

The SLIDEKIT functions as a linear axis for cobots. It can help the cobot cover **horizontal** distances with fast and precise movements, extending its operating area.

The SLIDEKIT is best used in repetitive or time-consuming applications that need to cover long, horizontal distances such as finishing, welding and parts inspection.



LIFTKIT

The LIFTKIT increases the reach of the cobot by moving it along a **vertical** axis. A ready-to-mount additional linear axis to the cobot, it can raise or lower the base of the cobot.

By extending the vertical working range of the robot, the LIFTKIT can be used for operations which require vertical lifting such as pick-and-place or palletising applications where additional height is required.

GETTING STARTED WITH COBOTS: 3 QUESTIONS TO ASK

Cobots can prove to be a game changer, especially for SMEs, as they are smart, agile, affordable and can be programmed to assist with simple tasks. Companies can easily ramp up production when they have a workforce supported by cobots. If you're considering installing cobots in your factory or workspace, here are 3 key questions you should ask.

1 **Are there any menial or repetitive task which can be done by cobots?**

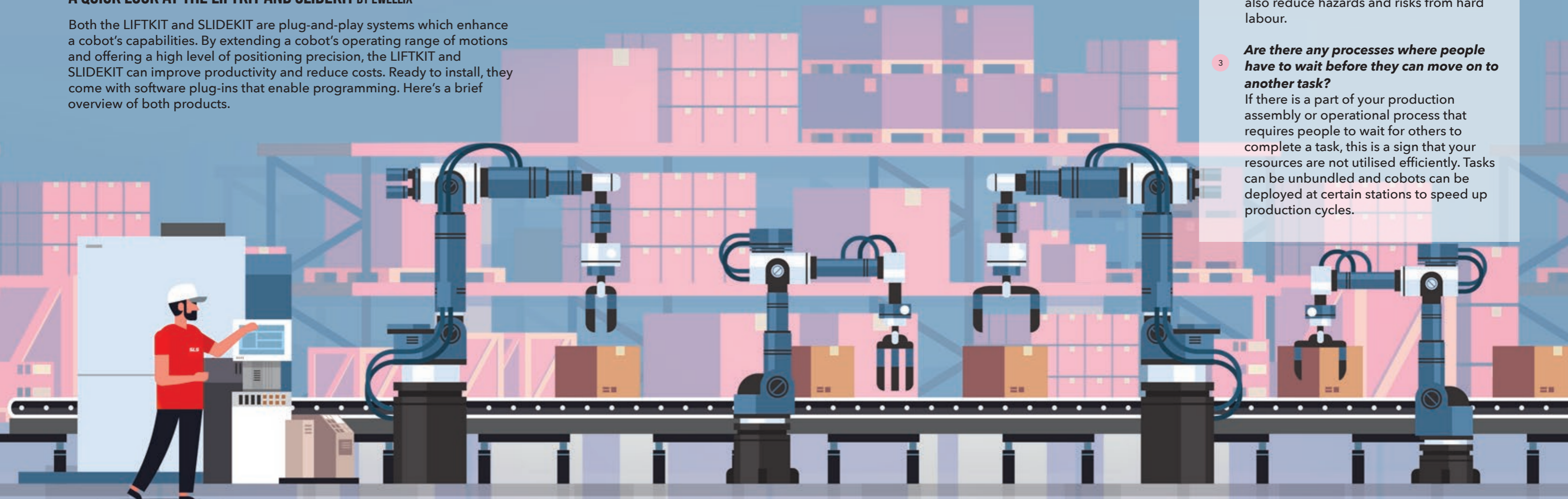
By getting cobots to do routine, low complexity tasks, you can improve efficiency and output quality. This frees up resources and allows you to unlock your employees' full potential as they can then focus on areas which adds real value to your business such as devoting time to growth initiatives.

2 **Are there any tasks that are clearly too simple for people?**

Simple tasks such as loading or unloading boxes, transferring parts from one line to another, or inserting screws can be done by a cobot at a much faster time. This can help companies solve manpower shortages and also reduce hazards and risks from hard labour.

3 **Are there any processes where people have to wait before they can move on to another task?**

If there is a part of your production assembly or operational process that requires people to wait for others to complete a task, this is a sign that your resources are not utilised efficiently. Tasks can be unbundled and cobots can be deployed at certain stations to speed up production cycles.



FANCY BEING SERVED BY A COBOT?

INTRODUCING THE SLS COBOT CAFÉ

As you walk through the doors of SLS' headquarters in Tuas, one of the first things you'll notice is a minimalistic mini café. Tucked in a cosy corner, this is where you can get your caffeine fix or enjoy a cool ice cream treat.

The difference between this café and one that you can typically find in your neighbourhood? Well, here at the SLS Cobot Café, you'll be served not by a human barista but by a friendly, automated cobot!

Nothing beats seeing what an innovation or emerging technology can do with your own eyes. That is why we conceptualised the SLS Cobot Café at our headquarters in Singapore to demonstrate how tasks can be delegated to cobots in a suitable workplace setting. Through this, our customers can observe first-hand how cobots can assist humans in their day-to-day operations.

Launched in April 2021, the Cobot Café is a fully automated café where you can pay for your order digitally and have your coffee or ice cream served by a cobot.

At the café, a UR cobot is mounted on Ewellix's LIFTKIT and SLIDEKIT which extends its range of motions. The cobot can pivot, slide across, move up or down, as well as grip and release items. The SLIDEKIT enables the cobot to move towards the coffee machine and the ice-cream freezer display while the LIFTKIT can help to position the cobot accurately to activate the coffee machine menu and to pick up the ice cream.

Mimicking a human arm, the cobot taps the coffee machine once you've placed your order. Once your drink is ready, it'll grip the coffee cup and serve it to you. The cobot can also slide open the ice-cream freezer display, reach into it and pick up the mini tub of ice cream you have ordered. Voila, you can

enjoy your favourite brew or tuck into your favourite ice cream flavour in no time!

So, fancy being served by robots? Well, you can experience this by visiting the SLS Cobot Café at our headquarters!

What's more, proceeds from the Cobot Café will be donated to Dementia Singapore which assists individuals with dementia and their families through caregiving and other support services. So the next time you order a cuppa from our Cobot Café, remember - it's for a good cause too! We hope to see you there soon!

ABOUT THE SLS COBOT CAFÉ

AIM

To create a space demonstrating the safety, efficiency and functionality of cobots in a shared working environment with humans

ON THE MENU

Drinks: Espresso, Americano, Mocha, Cappuccino, Caffé Latte, Milk Chocolate

Desserts: Häagen-Dazs and Meiji ice creams in assorted flavours

THE DÉCOR

Minimalist and clean vibe

LIFTKIT AND SLIDEKIT SPECIFICATIONS

1 LIFTKIT with a 500mm stroke length
1 SLIDEKIT with a 500mm stroke length



Your order will be communicated to the cobots, which will then automatically prepare your coffee, pick up your tub of ice cream order and serve them to you.

HOW IT WORKS

1

Scroll through the digital touch-screen tablet menu at the ordering kiosk.

2

Select the F&B items you want and place your order through the digital menu.

3

To pay, open your mobile banking app, scan the displayed QR code and pay via PAYNOW.

PICK UP AREA

5

Pick up your drinks and dessert at the pick-up counter. Enjoy!



Watch the Cobot in action!

Jaeson Chua
Senior Sales Manager

Adeline Pang
Brand Executive

Tua Chee Keong
Assistant Warehouse Manager

THE SLS COBOT CAFÉ PROJECT TEAM

CONCEPTUALISING THE COBOT CAFE PUTTING COLLABORATION IN MOTION

Getting any project kickstarted requires a commitment of time and resources. Although there may be challenges along the way, team members need to stay on the same page so the end-goal can be achieved. Here, we speak to the team which brought the idea of the SLS Cobot Café to fruition.

5 IMPORTANT LESSONS IN PROJECT MANAGEMENT

It is important capture the lessons learnt from any project. Employees can build on these experiences, successes and challenges and use these lessons to implement best practices on future projects.

Here are the 5 important lessons the Cobot Café team learnt.

- 1 Communication is vital to the success of any project.
- 2 Be willing to see other points of view or engage in healthy debate to come to a fruitful solution.
- 3 Be flexible and be willing to reevaluate goals should unexpected challenges occur.
- 4 Team synergy is important. You work better together when you make the effort to get to know your team.
- 5 Play on each other's strengths to do a good job.

How did the idea of a Cobot Café come about to showcase how cobots worked?

Jaeson: SLS is a distributor of Ewellix products. The LIFTKIT and SLIDEKIT, which work with UR cobots, are innovative products which can help our customers in the industrial space to improve efficiency and productivity. For instance, they can be used in pick-and-place and palletising of goods in warehouses and factories. However, cobots can also be used in other sectors such as retail, hospitality, F&B. After some brainstorming, we felt that that a mini Cobot Café would be a suitable concept to showcase the application of the cobot in a commercial setting. It could also fit into the space allocated for the showcase.

How long did it take for the project to come into fruition, from conceptualisation to the launch of the café?

Adeline: On the whole, it took us over a year to complete the project. We kickstarted the project in February 2020. It took us 2 months to brainstorm, conceptualise and do the prototyping for the café. We worked closely with TDS Technology, a local company specialising in robotic automation, to come up with the programming platform for the pick-and-place function of the UR cobot. We also collaborated with Beep, a digital payment solutions provider, on the mobile payment gateway system. The circuit breaker in Singapore in April-May 2020 delayed the fabrication process as well as delivery of the SLIDEKIT, LIFTKIT and UR Cobot. But once we had all the hardware and software components in place, we worked very hard to finish the assembly and testing. We officially launched the Cobot Café in April 2021.



THE OPTIBELT SOLUTION. AS UNIQUE AS YOUR DRIVE.

Did you take on any specific roles within the team?

Jaeson: I took charge of the mechanical design details. A big part of the project involved designing a sliding cabinet structure and creating a layout that could fulfil several functions while providing easy access for humans. The structure had to conceal a potable water storage container, enable hassle-free replenishment of ice cream and also provide a flexible space for maintenance work on the cobot, when required. We had to do a lot of configuration and testing to get this done.

Adeline: I managed the overall design concept of the café. We went for a minimalistic look and feel, with a very simple and clean vibe. We wanted the focus to be the cobot, so we did not have a lot of unnecessary frills which could detract attention. We opted for a white palette with soothing lighting. I also worked closely with the digital mobile payment vendor to ensure a smooth integration.

Did you encounter any challenges during this project? How did you overcome them?

Jaeson: One of the main challenges we encountered was the programming of the cobot. We had to “teach” the cobot how to pick up the ice cream from the freezer. This involved a lot of brainstorming on how the gripper could accurately open and close the freezer door. Our initial plan was to have 3D imaging mounted on the cobot which would allow the cobot to identify the ice cream based on its object shape. However, we had to drop this idea as the cold air from the freezer fogged up the 3D imaging lens. In the end, the best solution was to stack up the ice cream instead. As the different brands and flavours of the ice cream had their own unique locations within the freezer, we had to programme the cobot to identify the right locations. We also had to fine-tune the design and 3D printing of the finger gripper several times so that it could grip the coffee cup and ice cream tubs at the right angle and strength.

Chee Keong: I was heavily involved in the fabrication work. After we started the assembly, we had to go back to the drawing board occasionally to modify some aspects of the design and iron out some issues that did not work practically. Initially, the cobot’s gripper could not activate the coffee machine’s touchscreen. After brainstorming with TDS Tehcnology, we decided to make our own touchpen out of aluminum. We mounted this to the gripper’s metal surface and made use of the cobot’s arm to create a conductive charge to the aluminum touchpen.

What did you feel was critical to the success of the project?

Jaeson: All of us did not have experience with this type of system integration so we were really starting from scratch. It was the first time we had done anything like this and we had no internal resources to guide us. We had to do a lot of self-learning and also tap on the expertise of our external vendors. But we counted on each other in the team, remain committed and persevered to make it a success.

Adeline: I felt that it was important to work together cohesively and take into account each other’s viewpoints. When we had challenges, we had to face them head on. We had to be open, flexible and innovative in finding solutions. It was an enriching journey and I’m glad I had reliable team members to work with.

Chee Keong: It’s important to understand how the cobot works and fully appreciate its strengths and limitations so you can integrate it into the design and actual flow of a retail business. We also relied on each other’s strengths and trusted each other to get the job done.



 **OPTIBELT PRODUCTS ARE USED WHERE DURABILITY AND UNCOMPROMISED QUALITY ARE REQUIRED.**



EWELLIX'S **OLAF DE BAKKER** ON HOW LINEAR MOTION AND ACTUATION SOLUTIONS CAN RIDE THE DIGITALISATION WAVE

IN CONVERSATION

In conversation with Olaf de Bakker, Director Distribution Sales at Ewellix, he explains how linear motion solutions can capitalise on Industry 4.0, the Internet of Things and the electrification trend.

Tell us more about your tagline "Makers in Motion" and how this drives your corporate philosophy.

Our new brand name Ewellix is inspired by the Greek acronyms for the words agile and motion. This is related to our vision of being the preferred engineering partner for energy-efficient motion solutions. Thus, the tagline "Makers in Motion" emphasises that we're in fact innovators and manufacturers of linear motion solutions.

Since becoming a stand-alone company, we've been more focused on creating solutions in linear guides, balls and roller screws and actuators. We've invested significantly in R&D to design new products with smart functions, state-of-the-art manufacturing capabilities, as well as in our people and capabilities to support our growth ambitions.

Formerly part of the SKF Group as SKF Motion Technologies, Ewellix has 50 years of rich heritage. How does your acquisition by the Triton Group in 2018 strengthen your business and why are you focusing on transformative linear motion solutions?

We're been very fortunate that SKF has given us a very strong foundation in the linear motion business. With 1,200 employees, 8 factories and a very entrepreneurial spirit, we are in a good position to capitalise on the opportunities offered by the Internet of Things and Industry 4.0, as well as the more recent trend of electrification.

Triton's acquisition has accelerated investments into our business. For example, we opened our largest actuator factory in Bulgaria in 2020 and have made significant investments in the sensorisation and connectivity of our products. We've also expanded our global footprint by establishing new offices in India, Spain and Portugal, and Hungary. This will open up new markets and growth opportunities.

Ewellix has launched the LIFTKITS and SLIDEKITS - a series of linear motion modules - that can increase the capabilities of small industrial automation robots and cobots. Tell us more about their plug-and-play capabilities.

Due to the increased demand for small industrial robots and cobots, we discovered a need to increase their reach to enhance their versatility in various applications. For example, in palletising, cobots reach their limits as soon as the pallet stack reaches a certain height. The easy-to-assemble LIFTKIT increases the reach of a cobot by moving it along a vertical axis. As the cobot base can be raised or lowered during palletising, it can remain in an optimum working position. This increased range improves productivity and reduces costs.

On the other hand, the SLIDEKIT increases the reach on a horizontal axis. Operations such as finishing, welding and parts inspection are performed over long distances but these repetitive tasks are usually done manually, are time consuming and add little value. By adding a linear module as a dynamic base for the robot, it is possible to extend the handling operating area of the robot, thereby increasing productivity and output quality.

The plug-and-play features make the LIFTKIT and SLIDEKIT easy to integrate within the software environment of the robot or cobot manufacturers. For example, the LIFTKIT-UR's ready-to-install system includes a lifting column with a UR mounting interface, a controller and a software plug-in for robots from Universal Robots (UR Cap). Movements can be programmed directly via the UR controller avoiding the need for a separate programming interface. The same features apply to the SLIDEKIT.

SLS' Cobot Café has been used to demonstrate how the LIFTKITS and SLIDEKITS can extend the range of cobots. What other industries are likely to benefit from their capabilities?

Since the launch of the LIFTKIT and the SLIDEKIT for the cobot market more than 2 years ago, we've seen this technology offer industries various ways of automating processes. This has resulted in increased and more reliable capacity as it's available 24/7.

I must say the SLS Cobot Café is a great demonstration of how versatile cobots with a LIFTKIT and SLIDEKIT can be. There are virtually no limitations to where this can be used, as long as there is a need to automate processes.

The most common seen application is the pick-and-place at the end of a production line. In the automotive industry, the LIFTKIT and SLIDEKIT have been used in combination with cobots to conduct the final inspection of vehicles that come off the assembly line. In the furniture industry, the SLIDEKIT has also been used with the cobot to automate the sanding of wooden garden furniture.

We're at the start of the collaborative robot era an exciting area that's likely to see double-digit growth in the next decade. In addition, the huge electrification trend will also lead to increased demand for electro-mechanical linear motions, which the LIFTKIT and SLIDEKIT offer. Electro-mechanical actuators which are more safe, reliable and energy-efficient will increasingly replace traditional hydraulic and pneumatic linear motion movements.

In the current era of Industry 4.0 and the Internet of Things (IoT), robots and automation at the heart of today's "smart" factories. What is Ewellix's strategy to capitalise on this?

This is a very good point you raise. Around the world, factories are betting on the potential of Industry 4.0 and IoT to unlock a new wave of productivity, profitability and growth. At the same time, it has become cheaper and easier for companies to introduce new, digitally-enabled approaches from the ground up to improve the performance and flexibility of the machines they already use and to automate a wider range of tasks.

Linear motion is one of the building blocks for automation in manufacturing. Here, Ewellix's electromechanical actuators can provide very precise control of linear movements.

One of the latest developments in this area, smart actuators have smart control functions, sensors and communication that can be integrated into the equipment and machinery in a "smart" factory. They can be applied in agricultural equipment, construction machinery, materials handling equipment, scissor lifts, and in electric vehicles such as utility task vehicles (UTV), road-sweepers and buses.

We believe that the Ewellix SmartX smart actuator digital platform can help customers in their journey towards digitalisation. Like the cobot market, we're at the cusp of something big and we will see Industry 4.0 initiatives in virtually every industry across the globe.

Which countries in Asia have the potential to be fast-growing markets for Ewellix?

Asia is a very important region for Ewellix, both from a manufacturing standpoint and well as growth potential. Our factories in China, Taiwan and South Korea produce some of our core products in linear guides and actuators. We also have sales offices in China, Taiwan, South Korea and India to help us realise our growth ambitions in Asia.

At the same time, we partner with strong distributors like SLS in Southeast Asia. This allows us to penetrate regional markets such as Singapore, Malaysia, Indonesia, Thailand and the Philippines, where there is growth potential as automation becomes increasingly important.

How do you collaborate with distributors like SLS in your go-to-market activities?

We see distributors as our family. They are our partners that represent Ewellix in the local markets. Ever since we were part of SKF, we have very good relationships with our distributors and see them as an essential part of our go-to-market strategy especially towards the aftermarket and small and medium-sized OEM customers.

Strong collaboration, joint sales and marketing planning, as well as logistics support result in a win-win situation for our distributors and us, but above all for our end-customers who can partner with a reliable supplier that is strongly supported by a manufacturer like Ewellix.

About Olaf de Bakker

Olaf de Bakker is Director Distribution Sales for Ewellix. He has been working 22 years for the SKF Group and the last 3 years for Ewellix. Olaf was based in Asia for SKF between 2003 and 2012 and was responsible for SKF's Distribution Sales development of bearings and related products in the Asian market. Today he looks after the global Sales and Development of Ewellix sales through Industrial Distributors and Partners which represents around 20% of Ewellix' total turnover.



Optimize your automation

50 years of experience - a future full of innovation

Ewellix develops linear guide and actuator technologies for industrial automation. Our developers and experienced engineers design flexible solutions that increase productivity, quality and safety while reduce operating and maintenance costs. Ewellix helps your company move forward. Perform faster, perform better, perform safer.



ewellix.com

EWELLIX
MAKERS IN MOTION

IN CONVERSATION

In conversation with James Gaskell, President - APAC at Enerpac, he shares how a safety first philosophy and customer-driven innovation are crucial to developing products that can solve customers' challenges.

Given the importance of a "safety first" culture at the workplace, working with the right tools and equipment is critical to protect employee's safety. How does this influence the design of Enerpac's products?

At Enerpac, we put safety and integrity before everything else. Safety is deeply embedded in our culture and is a key part of our values. We start each workday with a Toolbox Talk, where we share safety observations and exchange ideas on how to improve our workplace safety. We are committed to achieve our target of Goal of Zero when it comes to incidents which could harm employees, and are equally committed to the safety of our customers and end users of our products. All leaders in our organisation fully embrace Health, Safety, Security, Environment and Quality (HSSEQ). We promote ownership of safety and integrity matters throughout the organisation, empowering all employees to take action.

Safety is a standard design feature of our products and this starts with product innovation and listening to our customers. Understanding their pain points and observing how they perform tasks in their work environments are critical to our product development philosophy. Safety is always at the forefront when evaluating and developing new solutions and technology is increasingly an enabler to achieve this.

Please share how Enerpac's technology and products can enhance safety and efficiency in the workplace.

Through the efforts of a dedicated innovation team and a number of global centers of excellence, we develop new ideas and prototypes to improve safety and productivity for our customers. Functional design plays a big part in our innovation process and by taking ergonomics into consideration, our tools are designed to be intuitive to use through common connection points, valve handles, on/off switches as well as ensuring hand comfort when holding and operating tools. Integrated functional design improves the overall quantity of products, reduces operator fatigue, discomfort, and injury and thus, increases job safety and efficiency.

Enerpac embraces customer-driven innovation. What are some of the trailblazing products Enerpac has developed over the years and how did these help to solve the problems your customers faced?

For us, it isn't about being compliant, or "as good" as the next guy. We outpace the competition by delivering technically superior solutions through continual innovation. One of our industry firsts will most certainly include hydraulic jacks and cylinders vs mechanical devices. This dates back to 1951, when the early versions of hydraulic jacks were used to lift vehicles for maintenance or repair. Beyond that, customers needed similar solutions to push, pull, press, or bend. This inspired the long history of hydraulic product innovation and the comprehensive portfolio of Enerpac hydraulic cylinders today.

We are also the pioneer of developing Synchronous Lift Systems, which provide precise positioning of the lifting and lowering of high tonnage loads. The control panel developed in the early 1990s removed human error and increased safety by automating the maximum allowable positioning error between leading and lagging lift points. This early development paved the way for the controls found in the EVO multi-point control system.

The first-to-market, high-pressure battery powered hydraulic pump was the WalkPac. The pump was a direct-drive, 6-piston pump powered by an internally developed Ni-Cad battery system that ran very smoothly and had very low-pressure ripple. This gave the pump a very high-quality sound, feel, tool performance and low sound level. Now, the industry flagship battery-powered pumps are the Enerpac XC Series models providing reliable performance in tight spaces or when a power source is not available.

More recently, the Enerpac Cube Jack was born out of the proven Enerpac Jack-Up System to become the first lifting system that eliminates the need for wooden cribbing. With a small footprint and the safety features of the self-locking system, this innovative solution is a heavy load lifting system significantly safer and faster than the jack-and-pack methods of days past.

ENERPAC 



ENERPAC'S **JAMES GASKELL**
ON SAFETY, INNOVATION AND EXPANSION
IN THE REGION

Which recently-launched products by Enerpac have seen robust demand in Asia? Will there be new products we can look forward to in the pipeline?

Lock Grip Pullers, In-Line I&T Tool (MITT) and DSX Torque Wrench are some of the more popular products we have launched recently. We have an active funnel of new products being developed as part of a quarterly release programme.

Which product segments and industries do you see potential for further growth in this region?

We see growth pretty much across the board. Whilst we do have certain vertical market specific products in the portfolio, most of our range is more application specific (such as lifting or torque and tension-related products) and crosses industries across the board.

What megatrends are creating opportunities in these areas?

Strong commodity pricing is driving increased investment in the oil and gas markets as well as mining, but construction and larger infrastructure projects continue to be active and a core part of the broad spectrum of vertical markets we serve. We are seeing growth in the broader energy market, specifically powergen and wind as a subset of that vertical. The Industrial MRO market continues to be at the heart of our customer base.

How has SLS' distribution network in Southeast Asia helped Enerpac to make inroads into various industries in the region?

SLS' extensive network of branches or outlets throughout Singapore, Malaysia and Mongolia and their entrenched customer network serving diverse industries, have provided Enerpac access to new customers and markets. Enerpac has also benefited from SLS' strong team of field sales staff in these countries promoting and engaging customers on product inquiries. SLS' commitment to digital marketing and e-commerce in recent years has also helped Enerpac in expanding its coverage and accessing a wider ranging customer base in the region.

What synergies do Enerpac share with SLS? How can you further leverage these synergies to provide value-added solutions to end-customers?

Both Enerpac and SLS share the same beliefs of not only supplying equipment and tools to customers but providing value added solutions in the form of timely delivery or availability, critical technical support, comprehensive product training and good after sales support. SLS has a strong training culture where Enerpac can continue to partner to offer its ever-expanding training modules through the Enerpac academy in Singapore or via its e-Learning portal. SLS has also made investments in ensuring that many of its major branches have sufficient inventory of Enerpac products to provide availability advantage in the market. Enerpac has also established two authorised service centres with SLS in Malaysia and Mongolia to provide world class after-sales service to its customers.

You have recently relocated to Singapore. Are you excited about this new phase in your career and what are your expectations of living and working in Singapore?

I'm absolutely excited. I have travelled extensively during my career and spent a lot of time in the Asia-Pacific region, including Singapore. I love the culture, the diversity, the business philosophy and the weather. I think there are real opportunities to grow our business as we continue to adapt in the new world we now live in.

What will be your immediate business priorities in Singapore?

I'm keen to maintain Enerpac's outstanding safety record and better understand our customer's priorities so we can improve our offering to support their growth in a safe and sustainable manner.

About James Gaskell

James Gaskell is President - APAC for Enerpac, a position he assumed in August 2021. He is responsible for driving and executing Enerpac's business strategies in the APAC region. Prior to his current position, James was Vice President, Corporate Development at Enerpac. He has worked in Norway and the UK, and is now based in Singapore.

ENDLESS INNOVATION RESULTS IN THE RIGHT TOOL

SLS Bearings has been a valued channel partner of Enerpac. We work closely together to provide solutions for the toughest jobs and enhance workplace safety of our customers.

Why Innovate?

We believe it takes advanced technical expertise and ingenuity to develop the industry's most trusted solutions. Our relentless pursuit to deliver the highest standard of excellence means never compromising on quality. Yet, it all starts with a thorough understanding of customer needs, the environments they work in and the ideas of tomorrow that help get jobs done faster, easier and safer.

RC-TRIO CYLINDER



ZE2-SERIES PUMP



HMT-SERIES TORQUE WRENCH



CUTTER



MINI HYDRAULIC GANTRY



SELF-LOCKING CUBE JACK



THE RIGHT TOOLS MAKES ALL THE DIFFERENCE FOR ELITE PROFESSIONALS



MARTIN'S **ROBERT GIUNTOLI**
ON GROWTH IN ASIA AND PARTNERING WITH SLS

IN CONVERSATION

In conversation with Robert Giuntoli, President - International for EMEA, Asia & Australasia regions at Martin, he shares more about Martin's growth priorities and his views on the symbiotic relationship with SLS.

Please tell us more about your corporate philosophy and the meaning behind it.

Martin's corporate philosophy is "make a quality product, have plenty of it available, and be easy to do business with". This simple philosophy helps Martin stay centered on taking care of our customers. Our goal is to give our customers the best overall experience possible by exceeding expectations each and every time.

What do you think are the key operational challenges manufacturers and industrial players face and how can Martin be part of the solution?

There are many challenges, but none more evident than what we are experiencing today. In a time when factors beyond our control such as the global pandemic, rising raw material costs, increased transportation costs and geopolitical challenges are ever-increasing, companies must stay focused on what we can control.

By focusing on our values, such as prioritisation of our employees, continual investment in operations and constant improvement to our lean manufacturing processes to name a few, Martin stays resilient. We are able to meet our customers' demands without compromising quality and service, and are prepared to take on challenges, now and moving into the future.

In the next five years, which product lines are likely to see the fastest growing demand in Asia and what are the key factors driving this demand?

In the years ahead, we will continue to focus on adding products that enhance our current product portfolios. We will continue to expand our coupling and bulk material handling component lines, helping to add value to the total package of products available to customers. This is just as true for the Asia-Pacific area as much as it is in all other regions around the globe.

Martin added conveyor pulley manufacturing to our China operations nearly 4 years ago, which was key to our international growth plans, especially in Asia. This high-quality product paired with our local service, allowed Martin to partner with key distributors, like SLS, to target additional opportunities for growth. Adding and expanding our products has helped to bring in new and profitable business.

The mantra of "global strength, local service" has served you well. How has SLS helped to provide nuanced insights into the markets you serve in this region?

Our partnership with SLS has been a key component to Martin's success in Asia. The SLS team has valuable insights on their customer needs, such as the changing market conditions, potential new customer development, and value-added opportunities, which has helped our partnership grow into what it is today. This allows Martin to provide technical, product and application support in the areas most beneficial to our distributors. This is especially true in the area of end users, original equipment manufacturers and engineering firms, where Martin has developed tools to measure the value and reduction in total cost of ownership found in our products.

Martin

Market Expertise Global Strength, Local Service Custom Capabilities

How does Martin partner with SLS in its go-to-market activities to ensure that you are able to help end-customers increase uptime and derive cost savings?

When partnering with SLS on "go-to-market" strategies, Martin focuses on creating comprehensive and valuable strategies while maintaining a nimble approach to making changes when necessary. SLS continues to inform us, as you would hope for in a true partnership, of specific customer needs in the many multicultural and dynamic markets they serve.

It is always easier to do business when corporate values align. What do you think are the shared values both Martin and SLS have that enable this partnership to provide a superior experience to customers?

Martin is a family-owned private company, like SLS, with similar values. We are both leaders in our respective businesses, and are driven by our shared passion to bring value to our customers. At Martin, we strive to provide the highest quality products, service, and value to our customers, without compromising employee safety. We endeavour to support SLS' mission, and are proud of all we have accomplished together so far.

You have recently relocated to the UK after spending time working in China. How has working in Asia influenced your leadership style and management beliefs or values?

In 2013, I took over Martin's international division and relocated to Shanghai, China. I resided in China for the last seven years, until relocating to the UK in 2021. I have also had the good fortune of working and living in Japan, throughout the US, in China and now the UK. The experience of living in China for a substantial amount of time has been instrumental in my ability to manage multinational and cross-cultural teams. I have learned the importance of understanding how culture affects communications, etiquette and organisational hierarchy.

Just last year alone, my division shipped product to customers in over 30 countries. Building relationships with customers and understanding all the nuances within the wide range of cultures they represent is not easy. However, understanding the importance of recognising and respecting these cultural differences goes a long way in building strong and lasting relationships across the globe.

About Robert Giuntoli

Hailing from the US, Robert joined Martin Sprocket & Gear in 1998 and has held various roles across the Group in the US, Japan and China. He is currently President - International for EMEA, Asia & Australasia regions at Martin.

Martin manufactures Power Transmission and Bulk Material Handling products across the globe, offering same day on-site engineering and technical support. From individual components to complete assembled solutions, *Martin* focuses on providing exceptional quality, service and value across product portfolios and applications.



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BODY & FENDER TOOLS

SKF'S JOURNEY TOWARDS SUSTAINABILITY



All around the world, sustainability movements are gaining traction as both public and private institutions realise the importance of tackling climate change. More recently, as part of the outcome of the United Nations' COP26 climate conference in November 2021, countries reaffirmed the goals of the Paris Agreement and agreed to accelerate action to lower carbon dioxide (CO₂) emissions.

In the private sector, many companies are playing their part to address climate change by embracing more sustainable practices and taking steps to lower their carbon footprint. SKF is one such company.

Pledge towards net-zero greenhouse gas emissions across the supply chain by 2050

SKF has already committed to net-zero greenhouse gas emissions in its operations by

2030. Taking this a step further, SKF announced in October 2021 that it is setting a target of net-zero greenhouse gas emissions in its supply chain by 2050. This applies to SKF's entire value chain, from the sourcing of raw materials to the delivery of the finished product to customers.

To meet this new 2050 goal, SKF will need to meet several milestones. This includes:

- Reducing CO₂ emissions in its supply chain by 45% by 2035 and by 60% by 2040;
- Sourcing at least 40% of steel from carbon neutral steel plants by 2040; and
- Reducing transport-related greenhouse gas emissions by 80% by 2040.

These align with the goals of the Paris Agreement to reach net zero global emissions by 2050 and to limit global warming to 1.5°C.

Already, SKF is investing in more energy efficient

manufacturing processes and requiring energy-intensive suppliers of steel and forgings to adopt the ISO 50001 standard for systematic energy management. 85% of all suppliers in scope now have this certification.

From 2022, SKF's manufacturing site in Gothenburg, Sweden will become the third site to achieve net zero status. This will be achieved by utilising green energy and investing in more energy efficient processes. Other SKF sites that have already achieved this are Tudela, Spain, and Steyr, Austria.

Products which reduce friction lead to a more sustainable industry

Throughout the years, SKF has developed a strong track record of producing bearings and other industrial products which reduce friction. Not only do low-friction bearings lead to less

wear and tear on machines, but they also reduce downtime, improve uptime and lower the cost of maintenance and replacement.

The optimised design of low-friction bearings can extend bearing life, generate less heat, allows operations at higher speeds and also achieve energy savings.

In terms of sustainability, low-friction products play a very crucial role by helping to lower energy consumption which leads to greater energy efficiency. Ultimately, this helps to reduce carbon dioxide emissions and lowers the carbon footprint.

For more information on SKF's sustainability practices, visit www.skf.com/sg/organisation/sustainability



Performance optimized.
Maintenance minimized.



What are the biggest challenges in vibrating screens?

SKF Explorer spherical roller bearing and sealed SKF Explorer spherical roller bearing. Made to last.

For superior endurance in challenging environments, the SKF Explorer spherical roller bearing both standard and sealed are setting new standards of performance in cement and aggregate plants. Even for machines running in tough environments exposed to dirt, moisture and heavy loads, the latest SKF Explorer spherical roller bearings deliver double bearing life in poor lubrication and contaminated conditions.

The bearings contribute to make machines run twice as long with less maintenance and increased safety, saving money and supporting more reliable production.

Find out more at skf.com/mining

SKF Explorer spherical roller bearings (VA405) for vibratory applications

They last longer than other vibrating screen bearings, resulting in less downtime and more output. They run cooler, meaning less internal wear and longer lubricant life which reduces maintenance and exposure of workers to safety risks. All of this adds up to lower costs. In other words, these bearings answer the challenges. All of them.

Find out more at skf.com/mining

TIMKEN'S ENGINEERING EXPERTISE KEEPS VACCINES SAFE AND VIABLE

Across the globe, the world's largest-ever vaccination campaign has been underway. As at December 2021, more than 8.75 million doses of COVID-19 vaccines have been administered in over 180 countries. Even before the COVID-19 pandemic, vaccines have played a critical role in protecting humans against diseases such as diphtheria, tetanus and pertussis.

Vaccine production is a complex process which requires not only a high level of expertise but also strict quality control at each stage of manufacturing. Cooling towers, which function as industrial-scale air conditioners, play a critical role in keeping temperatures stable for optimal storage of vaccines. Stringent cold temperature management is required to prevent bacterial growth to keep each vaccine dose sterile, and to stabilise the molecular structure of each shot.

Behind the scenes, Timken has been playing a vital role in vaccine production. Through its engineering expertise and its bearing products, it has helped to support the operation of cooling towers which are instrumental in keeping vaccines safe and viable for patients.

In Europe, for instance, Timken has been collaborating with a cooling solutions provider to maintain a pharmaceutical facility which produces vaccines for various infectious diseases including COVID-19.

In this facility, cooling tower failures had been disrupting vaccine production. It was discovered that damaged ball bearing housed units (from a competitor brand) had been causing those performance issues. Housed units act as the linchpins between cooling tower fans and the electric motors that power them and are vital in making the whole system work.

Using Timken's Syber Bearing System Analysis software, Timken's engineers were able to analyse the damaged bearings and calculate the application's true technical needs. It was found that the competing brand's bearing design could not manage the misalignment or loading conditions of the application.

To overcome this issue, Timken provided specialised tapered roller bearing housed units for the vaccine maker's four existing cooling towers. In addition, four new Timken-equipped cooling towers were delivered to support the vaccine facility's expansion as it needed to ramp up production to meet COVID-19 vaccine demand. The Timken solution outperformed the competitor by two times.

What is Timken's Syber Bearing System Analysis platform?

The Syber Bearing System Analysis software platform allows Timken's engineers to identify the right bearing for any power transmission system. Through this software, Timken's application engineers are able to replicate the details of how equipment works to virtually predict how bearings will perform in a real-world system. This helps engineers to select the ideal bearing to maximise performance and aids in the design of efficient power transmission systems.



TIMKEN

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CASE STUDY

USING THERMOGRAPHY IN ELECTRICAL SAFETY

About our customer

This high-end luxury store sells high-quality leather goods, clothes, accessories and homewares and is well known for its exquisite and meticulous craftsmanship. Its stores can be found in Singapore's main shopping belt and other iconic locations.

The challenge

Designed to resonate with its luxury customers, the décor of our customer's stores reinforces the exclusivity of its brand. However, as a retailer, its stores can be exposed to unseen internal electrical safety hazards and faulty electrical equipment. If not rectified, this can cause power outages or create fire hazards.

Electrical accidents can cause physical damage to stores, lead to the loss of inventory and jeopardise the safety of customers. Therefore, it is critical for retailers to manage potential electrical threats to prevent the loss of business and protect brand image.

How SLS created advantage

The customer had long used a global safety consultant to provide testing, inspection and safety appraisal services to its various stores worldwide. The consultant needed a local partner to assist in the annual physical inspection of the installed electrical systems and fixtures in the luxury label's retail stores in Singapore to ensure that they complied with safety requirements.

It found the right partnership in SLS, which was able to step in and conduct the inspection using thermography to identify potential electrical hazards. Through the collaboration between the consultant and SLS, the customer benefited from a faster response and quicker job completion.

Thermography is a non-contact method used to obtain heat distribution images. This can help to identify malfunctioning equipment which will typically show discrepancies in temperature. Thermography can detect electrical problems such as overloaded circuits, poor insulation, hot spots or



deteriorated wiring.

Using thermography, SLS was able to pinpoint heat and ventilation issues in the stores caused by malfunctioning fans and overstuffed gadgets. From this, we provided suggestions to rectify those problems including repairing or replacing old fans, as well as relocating the gadgets to a location with better ventilation.

How Thermography works

Thermography employs the use of a thermal imaging camera to scan electrical panels and cables through infrared radiations. It can be carried out without direct contact with the equipment or component. Thermal gradients captured by the scanned image can be used to assess the function and performance of equipment.

Thermography imaging can help to identify problematic electrical components without the need to dismantle electrical panels, wires and cabling. This enables electrical problems to be identified quickly and accurately.

The most important aspect of thermal imaging is that the scanning is done on a working or a live panel. This reduces production downtime.

Benefits of thermography:

- Safe and reliable
- Able to pinpoint electrical problems accurately
- No need for downtime

"Thermography can be part of a long-term predictive maintenance solution used to identifying potential risks and non-conformities in electrical systems safety. Through this, we can recommend an action plan to address those risks."

- Ashraff Amin, Sales Engineer, SLS

Thermography can accurately identify stressed elements of electrical installations, preventing unplanned electrical shutdowns. Through regular predictive maintenance, the customer was able to continue the smooth running of its business and preserve the elevated in-store retail experience it offers to its customers.

CASE STUDY

OPTIMISING LUBRICATION CONDITIONS WITH OIL CONDITIONING SYSTEMS

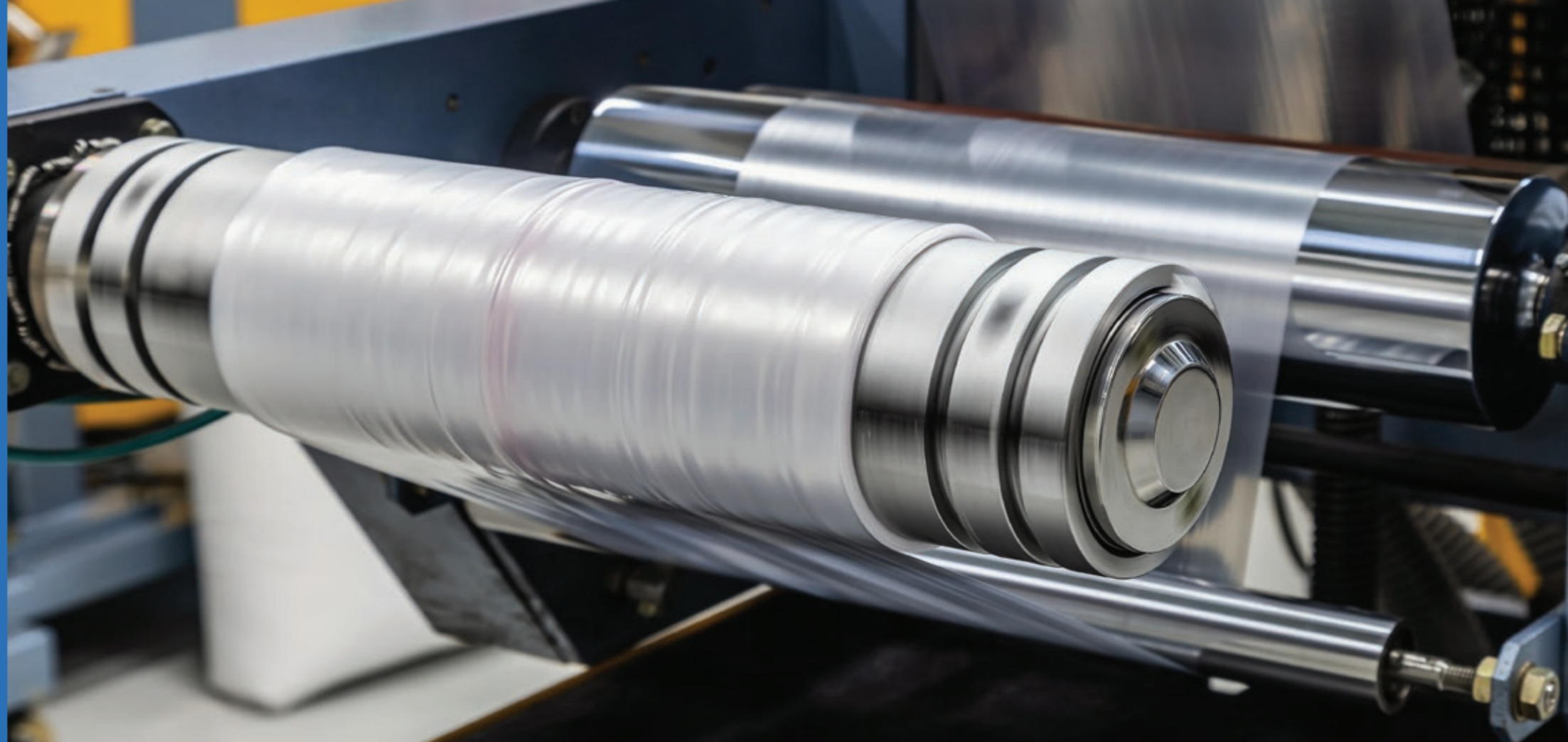
About our customer

This company is involved in the manufacture of specialty chemicals as well as synthetic fibres and polymers.

The challenge

In our customer's manufacturing facility, the industrial gearbox is used for heavy-duty functions and transmits mechanical energy to facilitate the manufacture of chemicals and other products. As it plays an instrumental role in production operations, it is important for the gear box to be well maintained. It needs to be reliable for operations to run precisely and efficiently.

A key problem with our customer's gear box was that it was lubricated with synthetic oil running at a high temperature of 80°C. This high temperature accelerated the wear of gears and bearings in the gearbox and reduced the oil service life. Therefore our customer required an oil circulation system with a filtration feature to regulate the temperature and remove contaminants.



How SLS created advantage

To bring down the oil temperature, SLS proposed installing SKF Oil Conditioning Unit (OCU). This compact plug & play unit can be used with existing oil circulating systems. Electrically operated, it is an all-in-one oil cooling, filtering and pumping system.

For our customer's gearbox, we proposed a water cooler OCU which could reduce the oil temperature and remove contamination effectively. This would play a key role in extending bearing and gear life. Our customer also required an ATEX-certified motor for the OCU and we worked with SKF to fulfil this request.

Our proposed solution of installing the OCU successfully helped reduce the oil temperature in the gear box from 80°C to 70°C. This also increased the service life of oil by two times.

"The installation of the OCU helped to provide continuous lubricant cooling and filtration. This can reduce wear and tear of the bearings and prevent premature gearbox failure."
- Yang Meng Fatt, Technical Support Manager, SLS

An OCU can keep gearbox lubricant free of contaminants, which lengthens the cycle of oil changes. The filtration system not only keeps the lubricant clean but also cools stressed bearings in the gearbox. This is essential in keeping the gearbox well-maintained and extending its operating life.



How an Oil Conditioning Unit (OCU) works

An OCU is an electrically operated oil pumping, cooling and filtration system. It removes contamination and allows the conditioning of oil temperature which contributes to optimum lubrication with correct oil viscosity.

Benefits of an OCU:

- Reduces wear in gears and bearings by good filtration
- Improves lubrication film and extends machine life. Increases the service life of oil

CASE STUDY

SAFE LIVE ELECTRICAL PANEL MICRO DUST CLEANING WITH NWK99 SOLUTION



Following our proposal and demonstration of the use and application of the NWK-99 solution to our customer, they were convinced of its efficacy and benefits. Our maintenance team subsequently came on board to assist with the cleaning of the electrical panels at the hotel.

"Hotels operate 24 hours a day. For guests to have an uninterrupted and enjoyable stay, preventive maintenance of the electrical panels is critical to prevent power breakdowns to the facilities. But with a hotel full of guests, it's very disruptive to switch off the electrical panels just for cleaning purposes. NWK-99 offered the perfect solution for the hotel because it is safe and live cleaning can be done at any time. With no need for downtime, efficiency and productivity is not compromised."
- Anil N. Sabannavar, Reliability Specialist, SLS

By replacing traditional methods of cleaning with the more efficient and safe solution offered by NWK-99, our customer was able to maintain operational efficiency and live up to its brand promise of providing an exceptional experience to its guests.

How NWK-99 works

NWK-99 blasts away dirt and other residue built up in electrical panels with precision. Slipping easily into the tiny, narrow gaps in between electrical parts, the force of the spray flushes the microdust and drains it. The cleaning liquid and trapped dust accumulates at the bottom and the solution vaporises within minutes.

Benefits

- Able to clean live equipment as it is non-flammable and non-conductive
- Does not damage components as it is non-corrosive
- Removes dust quickly
- Eco-friendly
- Evaporates and leaves no residue

About our customer

This 5-star luxury hotel is known for its award-winning hospitality. It prides itself on offering impeccable service to its guests.

The challenge

Electrical panels contain circuit breakers and other components that provide electricity to lightings, lifts and other electrical equipments throughout the hotel. Static electricity and other environmental conditions around the electrical panels can attract dust. Over time, this infiltration of dust can lead to risks such as overheating, malfunction or component failure. It is therefore important to clean and maintain electrical panels regularly to prevent power outages that could inconvenience guests.

In the past, the process of cleaning the electrical panel involved switching it off before using traditional tools such as the vacuum cleaner and brushes to remove trapped dust. This was time-consuming, needed manpower and required lot of planning. As the cleaning could only be done at certain timings, hotel activities had to be carefully coordinated to minimise the disruption of services to guests.

How SLS created advantage

Our customer required a more efficient method of cleaning the electrical panels to reduce downtime and loss of productivity. Therefore, SLS proposed using the NWK-99 cleaning solution to facilitate live cleaning without interrupting the power supply.

A pioneering solution to clean live electrical equipment, NWK-99 uses a specialised solution to clean equipment in a safe manner without needing to shut down operations. NWK99 has a very high dielectric strength making it safe to clean live electrical panels. It is also non-toxic, eco-friendly, non-corrosive and non-flammable.





CASE STUDY

HIGH PERFORMANCE SLEWING BEARINGS CRITICAL FOR MINING APPLICATIONS

About the customer

This established coal mining contractor in Indonesia provides a broad range of services including coal mining, coal hauling, overburden removal, reclamation and land rehabilitation.

The challenge

In the coal mining industry, it is critical to optimise utilisation levels of heavy equipment to maximise productivity and achieve production targets. Excavators are heavily used to remove overburden to allow the extraction of coal. They need to be well maintained and regularly checked for wear and tear to prevent

breakdowns which could affect production timelines.

In our customer's hydraulic excavator, the measurement monitoring of the slewing bearing indicated that the amount of clearance increased rapidly. This signified that the bearing raceways, which are designed to accommodate loads, were worn.

Slewing bearings optimise power transmission, connect rotating parts and facilitate the swiveling motion of the excavator. The bearing clearance impacts vibration, friction, noise and rotation accuracy. A higher clearance reading was a sign of accelerating wear, indicating that it was time to replace the bearing.

How SLS created advantage

SLS proposed the SKF Kaydon slewing bearing to replace the existing OEM bearing as it came with a warranty and could be configured to the excavator's needs. As part of our proposal, we provided value-added services including consultation, supervision of the installation process, as well as bearing clearance measurement and monitoring services.

The SKF Kaydon line of slewing bearings has a wide range of inventory that can be used in many excavator and shovel makes and models. SKF Kaydon slewing bearings come with high performance and can meet or even exceed OEM specifications. This provides significant cost savings to mine operators.

SLS was responsible for ensuring that the replacement slewing bearing could be delivered on time to fit the customer's replacement schedule. For this project, SLS and SKF engineers also worked together to supervise the installation on-site. This involved overseeing the dismounting and mounting procedures, as well as fastening of the bearing. Testing and measurements were conducted to ensure that the slewing bearing could perform after installation.

"Through our experience, we have found that SKF Kaydon slewing bearings are a longer-lasting alternative and offer enhanced performance compared to some OEM versions. They can also be customised to our customer's requirements. That is why we have no hesitation in recommending SKF Kaydon slewing bearings especially to customers in heavy industries such as mining."

- **Andy Saleh, General Manager, SLS Indonesia-Kalimantan Branch**

Through our close collaboration with SKF, we were able to complete the project engineering work and installation on schedule. With the longer-life replacement slewing bearing, our customer has been able to enjoy better performance and easier maintenance.



About the SKF Kaydon line of slewing bearings

SKF Kaydon slewing ring bearings come in various sizes and configurations. They are ideal for applications which require the transmission of heavy loads and can also be customised according to specifications.

They are ideal for:

- Optimal economy in a given envelope dimension
- Heavy-duty applications requiring a significant load-carrying capacity
- Designs where precise positioning is critical

CASE STUDY

ADJUSTABLE CHOCKS OFFER EASY AND ACCURATE MOUNTING FOR MARINE INSTALLATIONS

About the customer

Based in Singapore, this company is an established player in the design, construction and repair of mobile offshore platforms.

The challenge

In the jackup rigs on mobile offshore platforms, chocking systems play an important role by creating an interface between machinery and the rigs' bases. Due to the intricate engineering designs, precision machining is critical to ensure proper alignment of the machinery to the surfaces they are mounted to.

The conventional way of machining the base frame was costly for our customer. In addition, the use of epoxy resin chocks to support precise alignment required extra labour and curing time. The epoxy resin had to be poured into a cast to form a permanent chock and it needed time to cure and harden.

How SLS created advantage

Our customer needed a more efficient and cost-effective solution to mount equipment to the foundations of its jackup rigs. In the marine industry, accurate alignment of machinery is essential to prevent equipment breakdown and the loss of productivity.

SLS proposed a solution which involved the use of the SKF Vibracon line of adjustable chocks. Particularly suitable for a marine environment, these machinery mounting chocks can be easily and accurately adjusted. They come with self-levelling capabilities and height-adjustment features.



The additives added to mating surfaces provide protection before and during installation and avoid seizing of the parts when they are rotated. The chock can accommodate an angular difference of up to 4 degrees between the machine and mounting base. This maximises the contact surface between the foundation, the chock and the machine foot.

"With adjustable chocks, you don't have to deal with curing time. As they are adjustable, angular differences are also eliminated, providing a more secure contact with the foundation surface."
- Yang Meng Fatt, Technical Support Manager, SLS

SLS not only selected suitable adjustable chocks based on different requirements but also generated the required technical drawings. We assisted in submitting these to the relevant classification societies for certification that the structures complied with relevant technical standards.



The use of adjustable chocks helped our customer to reduce the cost of equipment foundations by design for the first build. This also eliminated the trial-and-error process that is typical in a "mill and shim" method. Adjustable chocks can also prevent soft foot alignment issues that can occur during a machinery's life cycle.

Benefits of the SKF Vibracon line of adjustable chocks:

- Easy to mount
- Durable
- Adjustable
- Saves installation time

Advantages of adjustable chocks over other chocks:

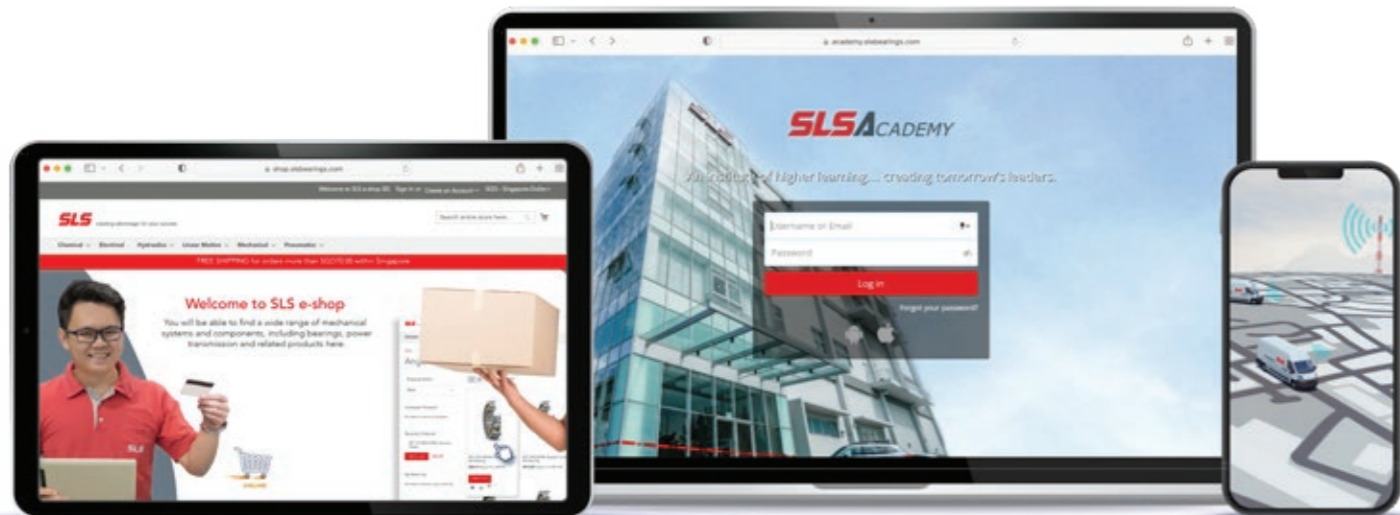
- No preparation and curing time required like epoxy resin chocks
- No time-consuming fitting and grinding of rigid steel chocks
- No trial and error like with steel shims

3 WAYS SLS IS LEVERAGING ON DIGITALISATION TO ENHANCE COMPETITIVENESS

Since the advent of Industry 4.0 a decade ago, digitalisation, automation and smart technologies have brought significant benefits to businesses, allowing them to innovate at a quicker pace.

From greater efficiency and improved customer experiences to enhanced skills and new business opportunities, SLS values the benefits digital transformation brings. Over the past few years, SLS has embarked on an ongoing journey of digital transformation. For instance, our warehouse in Tuas has installed an automated storage and retrieval system (ASRS) which increases operational efficiency.

More recently, the COVID-19 pandemic has accelerated several of our digitalisation initiatives. Here, we highlight 3 of the prominent initiatives.



1. SLS ACADEMY'S VIRTUAL TRAINING PLATFORM DELIVERS AN ENHANCED LEARNING EXPERIENCE



SLS Academy, our training arm, conducts product and technical training for our employees and customers. In 2021, SLS Academy implemented a new e-learning platform using the cloud-based Teamie collaborative learning management system. A social and mobile learning platform, Teamie allows companies to deliver online learning programmed and build learning communities.

As our employees had to embrace remote working due to COVID-19, we had to quickly move to an online learning platform to facilitate ongoing training for our employees. This included industry and product training, orientation for new hires, soft skills training and more.

Teamie enables our trainers to plan lesson delivery and create multimedia content using documents, videos and social media. Through dashboards, our

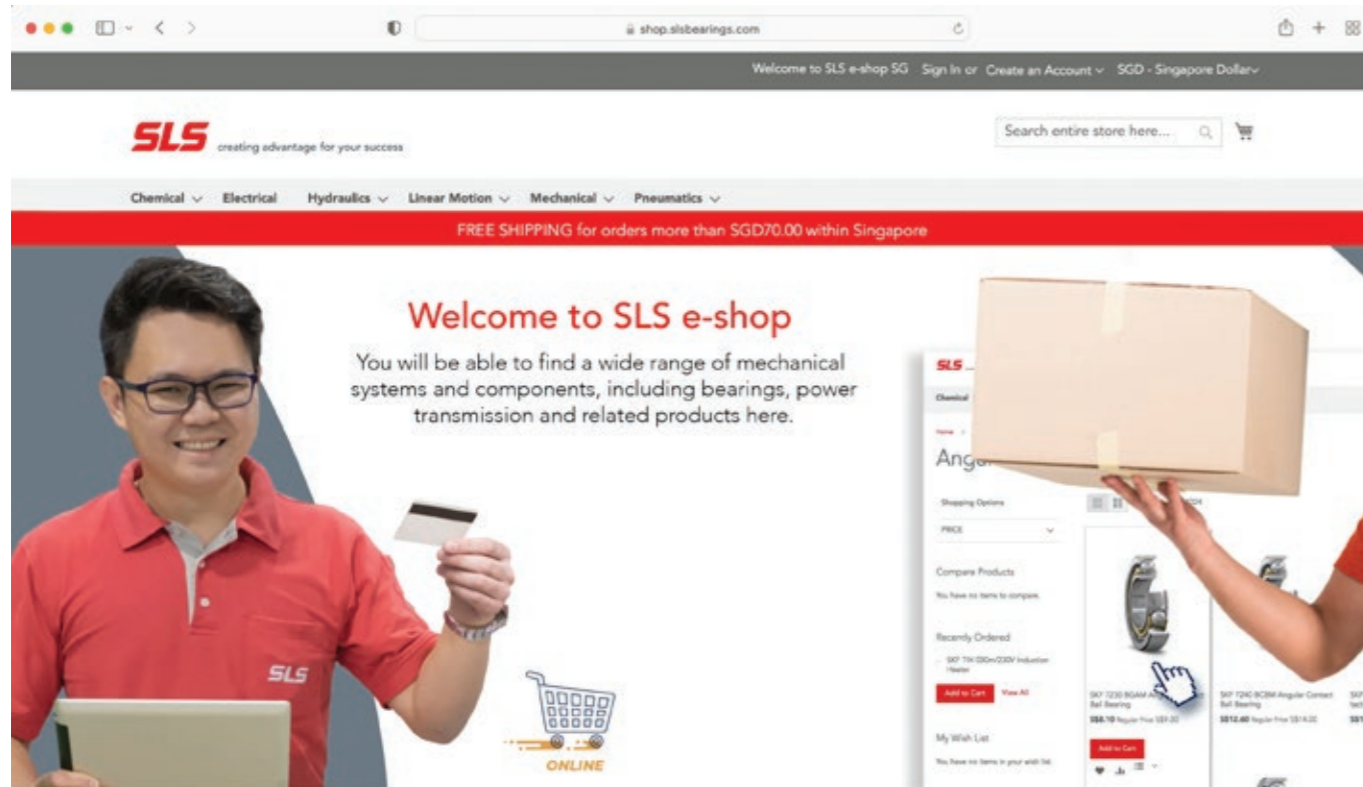
employees can sign up for training modules, track their progress and earn credits upon completion.

Each "classroom" also has a newsfeed where trainers and employees can participate in online discussions, post questions, share resources and provide updates. In addition, tools such as online quizzes and assignments can keep employees engaged and allow them to track what they have learnt.

Several of our employees participated in the pilot phase of the virtual learning onboarding programme with great success during the fourth quarter of 2021. The Teamie e-learning system will be rolled out to more employees from 2022 and we are planning to expand this online learning experience to our customers as well.

For more information on Teamie, visit theteamie.com

2. SLS E-SHOP OFFERS EASY ONLINE ORDERING FOR CUSTOMERS



In 2021, SLS launched its e-commerce store in Singapore and Malaysia. The SLS e-shop carries a wide range of inventory including chemical, electrical, hydraulics, linear motion, mechanical and pneumatics products. By bringing SLS' extensive inventory range online, the site offers a faster ordering process for our customers.

Through the e-shop, customers can search for and compare products and prices. The store also includes a live chat feature with a virtual assistant that can assist with enquiries. The e-shop offers our customers greater flexibility and convenience as they can now easily place an order online.

We plan to roll out the e-shop in Indonesia and Mongolia in 2022.

Visit the store at shop.slsbearings.com/sg



3. TRANSPORT MANAGEMENT SYSTEM IMPROVES DELIVERY EFFICIENCY AND ACCURACY

In 2020, SLS implemented the VersaFleet Transport Management System to enhance the efficiency of our last mile deliveries to customers. Through the software, our logistics team can schedule deliveries to optimise delivery routes, reduce multiple trips and save time.

Our drivers are able to use the app on their smartphones to receive delivery orders and check off delivery milestones such as collection and completion through the app. A navigation tool is available for drivers to use.

Overall, the software has saved many hours of daily planning. With the consolidated tools in a single web-based app, our logistics team is able to track, monitor and update deliveries in real time. This has enabled us to increase productivity and customer satisfaction.



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PEOPLE

LIVING OUR CORPORATE VALUES DURING THE PANDEMIC

Our values define us - as a company, as employees and as people. More than just words displayed on a website or on a wall, corporate values are the core set of guiding principles that anchor what we do.

Living our corporate values has helped to sustain and strengthen us throughout the uncertainty brought upon by the COVID-19 pandemic. In particular, the 2-month circuit breaker that was enforced in Singapore in April and May 2020 had a significant impact. Then, businesses had to deal with lockdowns, travel restrictions and the curtailment of non-essential business activity.

Here, we visit several compelling employee stories demonstrating how they brought our corporate values to life during that time.

THRIVING AMIDST CHALLENGES

CLOSE TEAMWORK SAVES THE DAY

During the 2-month circuit breaker, only 17% of our workforce was allowed to work on site. As social distancing measures were implemented nationwide, the scale and shift of pace to telecommuting was sudden and unprecedented.

Upon the announcement of the circuit breaker, our HR team had to spring into action. Overnight, they had to ensure the deployment of staff at appropriate strength levels, coordinate resources to support a shift to remote working, develop policies and procedures to implement safe management measures and cascade timely information.

Despite the small window of time to activate business contingency plans, our HR department was an instrumental force in keeping employees safe and minimizing disruptions to business operations. Thanks to close teamwork across SLS, we were able to continue servicing our customers during this time.

"It was a very busy time for us. Amidst the rollout of the circuit breaker measures, our main priority was to safeguard the health and well-being of our employees and ensure that the business could continue to operate despite the reduced physical workforce. We focused on ensuring that our employees had access to everything they needed so they could continue performing their roles. The fears of COVID-19 and the uncertainty it brought amplified levels of anxiety. Therefore, we made it a point to check in with our operations team daily to provide the emotional support. This new modus operandi played a crucial role in building up a close support network and helped the team to stay resilient during those uncertain times."

- Kris Ong, Senior HR Manager, SLS Singapore



Post-circuit breaker, the HR team continued to support SLS Singapore employees in adjusting to the "new normal" of hybrid or flexible working. This included helping employees to upgrade their skills in order to navigate an increasingly digitised workplace, managing manpower disruptions, engaging staff and looking out for their mental well-being.

SERVICE HEROES IN ACTION

EXCELLENCE STARTS WITH A CUSTOMER-DRIVEN MINDSET

Being client-centric is ingrained in our DNA. We have always prided ourselves in providing that personal touch through our customer service. But we had to adjust to new ways of connecting with our customers especially during the circuit breaker and various stages of heightened alert in Singapore throughout the COVID-19 pandemic.

From our account managers to warehouse personnel, as well as the management to the IT department, everyone has chipped in and played their part in delivering excellence to our customers especially during this challenging period.

"With the news of the circuit breaker, we knew we had to ensure that our colleagues would be able to connect from home and have access to whatever they needed. We literally only had a day to quickly procure extra laptops, tablets, headsets, microphones, webcams and other IT items so our essential frontline teams could work virtually and continue interfacing with customers. Meanwhile, we also helped to make arrangements for other colleagues to cart their desktops home. Throughout the circuit breaker, we were on standby to remotely assist our colleagues with any IT matters so they could continue connecting with our customers."

- Agnes Eng, System & Infrastructure Manager, SLS Singapore



Our account managers and customer service teams had to reorient their customer-service efforts to continue to meet our customer's needs and ensure timely delivery. With directives to remain at home from the government during the circuit breaker, we had to pivot quickly to alternative channels of service.

"Our main priority was to stay easily available to customers so we could meet their needs and be able to solve their problems. I'd never heard of Zoom more than two years ago, but now, we use it regularly to check in on our customers and have online meetings with them. The learning curve was steep and rapid but we had to rise to the occasion. We've also used increase the use of our business WhatsApp accounts to communicate with customers or to attend to their enquiries." - Alvin Liew, Account Manager, SLS Singapore

With the "new normal", many SLS employees have adjusted to remote working. Embracing digitalisation, investing the time to learn new technologies and replacing face-to-face conversations with virtual teleconferencing have become the norm.

TAKING PRIDE IN OUR WORK

AN UNWAVERING DEDICATION TO QUALITY

With the circuit breaker looming, we needed to make critical decisions in order to minimise disruptions and maintain the quality of our services. Of particular concern was the impact on our Malaysian colleagues, many of whom commuted to our Tuas headquarters daily. Many took pride in their work and did not want to compromise on the quality of their work especially in order fulfillment and delivery of services to customers.

We armed those in administrative roles with home-office equipment so they could work remotely from their homes in Johor. They also had the option of working in our existing offices in the Iskandar region. Meanwhile, as only a small percentage of our workforce allowed to work in our headquarters, the Singapore nationals from our warehouse operations team assumed the responsibilities for order fulfillment.

"I would like to recognise the dedication and perseverance of our employees in still taking pride to deliver quality services. They continued to fulfil their duties whether working from home, on-site in our headquarters or at other contingency locations. Their can-do attitude has been nothing short of inspiring. It was especially heartening that some of our Malaysian staff volunteered to stay back in Singapore in order to fulfil their duties. It was an immense personal sacrifice as they could not see their families for some time. I am very grateful to the SLS family for their dedication and perseverance." - Roy Tan, CEO, SLS



WHEN DUTY CALLS

WHY I DECIDED TO MAKE A PERSONAL SACRIFICE

During the circuit breaker in 2020, Johor resident Shum Kok Wei chose to remain in Singapore to work. The Senior Warehouse Team Leader looks back on his decision.

On why he decided to stay in Singapore ... To me, it's all about a sense of duty and responsibility. I've been at SLS for more than a decade. Due to the limit on the number of employees that would be able to come to work then, I felt I needed to step up because I'm more experienced and familiar with the warehouse operations. It would have been unfair to hand over my work to other colleagues at such short notice. The company also needs to be there for its customers and the warehouse is at the heart of the supply of our products. We receive, store and send out products from the warehouse.

On whether it was a difficult decision ... I did feel bad about leaving my wife and three children behind in Johor. However, I'm the sole breadwinner for our household and I need to work to support my family. My wife was very understanding and backed my decision. The pandemic situation was very fluid at that time. I was worried that if I had remained in Johor, the uncertainty over the border controls and quarantine rules would make it difficult for me to return to work in Singapore.

On how he coped with being alone in Singapore ... You just have to be resilient. During that time, all I did was to go to work and then go back home. Due to the social distancing measures then, that was all you could do. Of course, I was afraid of contracting the virus so I took all the necessary precautions like wearing a mask and only going out to buy food or other necessities. I kept in constant contact with my family in Johor - I would video call them every night.

On how he felt being reunited with his family ... I went back to Johor to visit my family only when border control measures were lifted in a safe manner. By then, I had not seen them physically for about a year. I turned up at the doorstep after clearing all the necessary procedures and tests. My wife was overjoyed to see me and tears were flowing down her face. Coincidentally, that was also her birthday so it was a double joy! My eldest two children were very happy to see me. But my youngest child could not recognise me. I had missed out on several milestones - she was slightly over a year old when I left. By the time I returned, she had grown so much and could walk and talk. I've since come back to Singapore. I don't know when I can go back to visit my family again. It all depends on the measures.

On how the company supported him ... My bosses and colleagues were very supportive. Given the suddenness of the circuit breaker, the company helped me to get temporary accommodation in Singapore during the first two weeks. I subsequently managed to find a room rental on my own and the company helped to paid the rent for the initial four months. When I came back to Singapore after visiting my family, I had to undergo mandatory quarantine for 14 days. The company covered the costs for the quarantine period. I'm very grateful for that. SLS looks after its employees well.



MAKING A DIFFERENCE

KEEPING EACH OTHER SAFE THROUGH ACTS OF KINDNESS

The 2-month circuit breaker in 2020 forced the majority of SLS employees to work from home. Before its onset, face masks, thermometers and hand sanitisers flew off retail shelves as many people rushed to stock up on hygiene and health-related supplies.

With face masks in short supply, a group of SLS employees decided to band together to sew face masks for their colleagues. Spearheaded by Agnes Tan, Senior Procurement Manager, the group sourced for natural fabrics that were free of dye and researched for a mask template that had good coverage. They also had to check for instructions on how to sew the mask and use the sewing machine.



"There was a shortage of surgical masks then, so we stepped up to sew fabric masks. The tech-savvy ones did the research, but we were too slow in sewing the masks. We pulled in the experienced sewers to help, and they completed about 100 masks in just a few days"

- Agnes Tan, Senior Procurement Manager, SLS Singapore



From sourcing and measuring to cutting and sewing, the team rallied together to finish as many masks as they could. A few volunteers picked up the completed masks and distributed them to our colleagues who had to continue working in the warehouse to ensure the timely fulfillment of customers' orders. Working on the project allowed the team to focus on something positive while playing a part in keeping their colleagues safe during the pandemic.

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PEOPLE

BUILDING AN INNOVATION CULTURE

THE DESIGN THINKING APPROACH TO SOLVING PROBLEMS

Design thinking is a process that uses design principles for solving complex problems. It helps organisations identify opportunities, unlock innovation and improve their businesses.

Unlike conventional problem solving, design thinking adopts a more iterative approach by embracing flexibility and creativity to better understand the unmet needs of customers and by devising tailored solutions to solve those needs. From that insight emerges a process for innovation that encompasses concept development, applied creativity, prototyping and experimentation.

In July 2021, SLS' high potentials embarked on a virtual mini-series Design Thinking workshop as part of the IDP curriculum. Divided into groups, they had to apply design thinking principles to tackle challenges they faced in the workplace.

WHAT IS THE INDIVIDUAL DEVELOPMENT PLAN (IDP)?

Potential development is one of the key pillars in our Organisation Development efforts to support the company's growth. The IDP curriculum comprises targeted learning and development opportunities to build and stretch the potential of our employees. It helps to chart a career development path for employees and empowers them to set goals and cultivate a vision for their growth. Employees take an active role in their own development to increase their skills, knowledge and critical competencies.

To facilitate the transfer of learning, each group had to decide on one challenge, identify target users they interacted with and interview those users to understand their pain points. The participants had to brainstorm ideas to address those challenges, prototype those ideas as potential solutions and present those solutions to the management as part of their project assessment.

Through the workshop, the participants discovered new ways of approaching and creating solutions to meet users' unmet needs. They gained valuable insights about the situation or problem by asking questions in an empathetic way to uncover users' pain points.

A journey rather than a destination, design thinking's true value lies in its process of problem hypothesising, needs finding, observational research and problem solving. By embracing design thinking as a way of working, our employees were able to harness the power of collaboration and ideation to tackle challenges. Ultimately, this enables SLS to innovate and create human-centered solutions that will elevate the customer experience.

*"The Design Thinking workshop is a unique platform for our high potentials to explore new ideas, gain fresh perspectives and collaborate with diverse teams. They had to co-create and experiment with users to design meaningful solutions that open up new horizons and embark on a journey of learning and adaptation."
- Kris Ong, Senior HR Manager, SLS Singapore*

KEY TAKEAWAYS

Here, some participants share the key takeaways from their positive experience at the Design Thinking workshop.

*"A key takeaway for me was that we have to adopt an empathetic mindset to understand problems from users' perspectives. From conversations with them and our own observations, we can then discover meaningful insights and identify with their pain points."
- Alvin Chan, Senior Sales Engineer, SLS*

*"Don't make assumptions, but always ask WHY. It's important to ask the right questions. This can then help us to define the problem and better understand user needs. Ultimately, this will help steer us in the right direction to solve those needs."
- Lynn Chua, Senior Purchasing Executive, SLS*

*"I learnt that it's important to do prototyping and testing. Getting feedback from users can help us refine our designs based on user needs."
- Jessica Yeo, Senior Customer Service Executive, SLS*





UNDERSTANDING DEMENTIA AND TIPS FOR CAREGIVERS

Did you know that dementia affects 1 in 10 people above the age of 60 in Singapore? With a rapidly-ageing population in Singapore, we may, at some point in our lives, need to care for a parent or grandparent who has dementia.

As part of our Corporate Social Responsibility (CSR) initiatives, SLS organised an online talk for our employees in October 2021 to create greater awareness about dementia. 47 employees tuned in to the talk, which was presented by Dementia Singapore.

Formerly known as the Alzheimer's Disease Association, Dementia Singapore is a social service agency that aims to advocate for the needs of people living with dementia and their families. Through its programmes and services, Dementia Singapore aims to increase awareness about dementia and reduce the stigma surrounding the condition.

Alzheimer's Disease is the most common type of dementia, accounting for about two-thirds of cases. It occurs when chemical changes in the brain cell causes cell destruction and eventually cell death. Symptoms usually get progressively worse over time. Vascular dementia is the second-most common type of dementia and is caused by strokes.

During the talk, our employees learnt how dementia differs from normal ageing, discovered the stages and symptoms of dementia and received tips on how to reduce the risk of developing dementia. The talk also shared practical approaches on how caregivers can support persons living with dementia, as well as initiatives to build dementia-friendly communities in Singapore.

Voices for Hope, an empowerment programme by Dementia Singapore, aims to bring persons with dementia and their caregivers on a self-advocacy journey. As part of the talk, guest speaker Brinda Naidu, a Voices for Hope graduate, shared her experiences as a caregiver to her father who has dementia. She provided useful tips on how to communicate with family members living with dementia and stressed the importance of self-care for caregivers.

Overall, our employees found the talk very insightful. Said Jacqueline Liaw, accountant at SLS: "The information I picked up will certainly come in handy as I have aged parents at home. I learnt how to differentiate between normal signs of ageing versus the symptoms of dementia. I also appreciated Brinda's candid sharing of looking after a loved one with dementia."

10 SYMPTOMS OF DEMENTIA

Activities

1. DIFFICULTIES COMPLETING FAMILIAR TASKS



Behavioural Changes

2. WITHDRAWAL FROM HOBBIES & ACTIVITIES



3. PROBLEMS WITH RECENT MEMORY



4. CHANGES IN MOOD, BEHAVIOUR & PERSONALITY



Cognitive Decline

5. DIFFICULTIES IN COMMUNICATION



6. POOR JUDGEMENT & IMPAIRED SOCIAL BEHAVIOUR



7. DIFFICULTIES IN PLANNING & THINKING



8. MISPLACING THINGS



9. PROBLEMS WITH VISUAL PERCEPTION



Disorientation

10. CONFUSED WITH PLACES & TIME



Source: Dementia Singapore

For more information about dementia, visit dementia.org.sg or www.dementiahub.sg

IMPORTANCE OF MAKING A LASTING POWER OF ATTORNEY

Dementia is a progressive condition, which means that initial mild symptoms are likely to worsen over a period of time. There may come a time when a person with dementia may be unable to make sound decisions about their care or finances.

If you have a loved one who is diagnosed with mild dementia, it is a good idea to broach the subject of making a Lasting Power of Attorney (LPA). This will prepare for the event that your loved one may one day lose his or her mental capacity.

The LPA is a legal document which allows a trusted person or persons to act on behalf of the person living with dementia should he or she eventually lose the capacity to make decisions on personal welfare and property matters.

It is important to draw up an LPA while the person with dementia still retains cognitive functions. By having this conversation up-front, you will also understand your loved one's wishes and preferences about how they want to be cared for in the future and how they want for their financial affairs to be handled.

Delegating a reliable and competent person who can act as a decision-maker and be trusted to act in the best interests of the person living with dementia will provide peace of mind. This will alleviate stress and prevent family disharmony further down the road.

For more information, visit: www.msf.gov.sg/policies/Pages/Lasting-Power-of-Attorney.aspx

100 COMMON SOCIAL MEDIA ACRONYMS YOU NEED TO KNOW



Today's digital world is dominated by hashtags, memes, tweets, tiktoks, IG posts ... and a whole bunch of acronyms that might not make sense to you. You'll find this internet lingo peppered all over social media or in text messages from Millennials or Gen Z. You're not alone if this seems like a whole new language altogether.

To help you decode all this, we've compiled a cheat sheet of the 100 most-commonly used text and social media abbreviations. See how many you can use the next time you text younger co-workers or friends!

AFAIK =	as far as I know	MRW =	my reaction when
AMA =	ask me anything	NBD =	no big deal
ATC =	all things considered	NGL =	not gonna lie
ATM =	at the moment	NM =	not much
BC =	because	NP =	no problem
BFF =	best friends forever	NVM =	nevermind
BRB =	be right back	OBV =	obviously
BTW =	by the way	OFC =	of course
CU =	see you	OMG =	oh my gosh
DM =	direct message	OMW =	on my way
DYK =	did you know	OOO =	out of office
EOD =	end of day	OOTD =	outfit of the day
ESP =	especially	QOTD =	quote of the day
ETA =	estimated time of arrival	PLS =	please
FB =	Facebook	PM =	private message
F2F =	face to face	PPL =	people
FBF =	flashback Friday	RMB =	remember
FOMO =	fear of missing out	RN =	right now
FTW =	for the win	RT =	retweet
FYI =	for your information	ROFL =	roll on the floor laughing
GG =	good game	SM =	social media
GOAT =	greatest of all time	SMH =	shaking my head
GTG =	got to go	SRSLY =	seriously
GTR =	got to run	TBA =	to be announced
HBD =	happy birthday	TBD =	to be decided
HBU =	how about you	TBH =	to be honest
HIFW =	how I feel when	TBT =	throwback Thursday
HMU =	hit me up	TFW =	that feeling when
HTH =	happy to help	TGIF =	thank God it's Friday
IAM =	in a meeting	TIA =	thanks in advance
ICYMI =	in case you missed it	TIL =	today I learned
IDC =	I don't care	TLDR =	too long didn't read
IDK =	I don't know	TMI =	too much information
IG =	Instagram	TMRW =	tomorrow
IIRC =	if I remember correctly	TN =	tonight
IK =	I know	TTYL =	talk to you later
IKR =	I know, right?	TW =	Twitter
ILY =	I love you	TY =	thank you
IMO =	in my opinion	UR =	your
IMHO =	in my humble opinion	WBU =	what about you
IRL =	in real life	WDYM =	what do you mean
JIC =	just in case	WFH =	working from home
JK =	just kidding	WYD =	what (are) you doing
JSYK =	just so you know	WYWH =	wish you were here
KK =	okay	YGTR =	you got that right
L8 =	late	YK =	you know
LI =	LinkedIn	YOLO =	you only live once
LMK =	let me know	YNK =	you never know
LOL =	laugh out loud	YT =	YouTube
MFW =	my face when	YW =	you're welcome

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