PtSA News

Newsletter of the Production Technologies Association of South Africa

Issue 23— December / January 2023

Manufacturing Industry in 2023 – *what do the leaders predict?*

IMF warns of even harder year for global economy in 2023

For much of the global economy, 2023 is going to be a tough year as the main engines of global growth — the US, Europe and China - all experience weakening activity, the head of the International Monetary Fund said.

The new year is going to be "tougher than the year we leave behind", MD Kristalina Georgieva said on the CBS Sunday morning news programme Face the Nation. "Why? Because the three big economies — the US, EU and China — are all slowing down simultaneously," she said. *(Business Day)*

SA, Nigeria and Ghana are risks for Sub-Saharan Africa in 2023, says Fitch

Economic activity in Sub-Saharan Africa is likely to gather momentum in 2023, though SA, Nigeria and Ghana will continue to pose a significant risk to the region's overall performance, according to Fitch Solutions. *(Business Day)*

The latest 'Real Economy Bulletin', published by economic research institution Trade and Industrial Policy Strategies (TIPS) on Dec 8, points to an upswing in South Africa's economy and its trade and investment performance, with GDP exceeding pre-COVID-19 levels for the first time.

This outcome points to considerable resilience, especially around private-sector adaptations to the extraordinarily high levels of loadshedding over the past quarter. *(Engineering News)*

"I sense that more toolrooms will digitise their processes this year, to be more competitive; it was evident through the intervention projects that were done at the end of 2022." *(Theo van Rooyen, PtSA Regional Manager: Eastern Cape)*

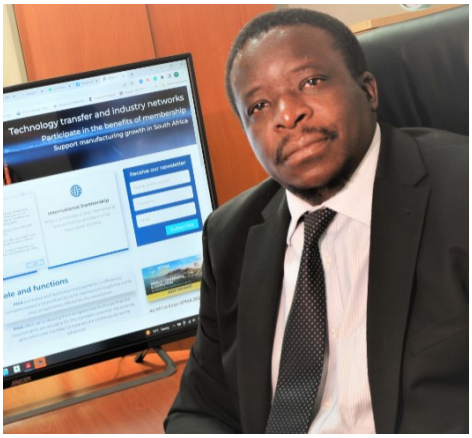
My comments are not solely focussed on the industry at large in terms of technology but rather the persons driving the industry. I think more focus is needed on employee motivation and the general working environment. Any company can only progress if their staff work in an environment conducive for growing as well as job satisfaction. Too many engineering companies still operate with an old-school mindset and overlook this critical point. The proverbial "happy wife happy life" also applies in the workplace. *(Stephan Aucamp, Business Director: Injection Technik; PtSA National Chairman)*

"This year we might see a substantial growth in Robotic Process Automation (RPA). Your business can use robotic process automation to assist with completing tasks more efficiently and affordably. RPA is most often adapted to emulate the actions of a human workforce and automate specific processes to work in concert with people. This type of technology can be beneficial to plastic injection moulding companies in cases where assembly and or testing of moulded components are required to meet customer and QC standards, and turnaround times." *(André Davies, PtSA Regional Manager, Western Cape)*

"CNC machines that have additive manufacturing capabilities, meaning a CNC machine that can weld a complex part and machine it after welding, is a cheaper alternative for manufacturing of prototypes."

Material-specific additive welding that leave minimal material for the machine to remove after the welding of the part saves material costs and machine time." *(Francois Beetge, PtSA Regional Manager: Gauteng)*

From the desk of the CEO Tapiwa Samanga



We are excited to be receiving new PtSA leadership from the regions from which will be drawn the national team.

The new team is a blend of experience and youth and as management, we welcome the opportunity to share the burden of growing our sector with them.

Plans are underway to start mobilisation of members and growing membership in KZN before the end of the year. We have made it policy that the regions will be the front end of our delivery as an association and that the regional EXCOs will be visible and provide tangible input into regional activities.

This issue of our newsletter has given significant columns space to our members and the great work that they are doing.

Of note, we would want to invite the whole PtSA to join Jendamark in celebrating their award as Africa's Technology Company of the Year. That is no mean feat and congratulations are in order to Quinton and his team.

We continue to highlight that PtSA will be hosting the 16th ISTMA Conference accompanied by the All Africa Expo and the Invest in Africa Manufacturing Indaba. WE are happy to report that some of our members have already secured their booths and cannot wait for the exhibition to start.

PtSA is reaching out to select African Manufacturing Associations to encourage their members to be part of this first and unique event. Tied to this is an initiative for PtSA, for the benefit of its members, to understand the dynamics of the emerging TDM sector on the continent.

Africa is full of opportunities especially as the trading under the Africa Continental Free trade Area begins. Circumstances are quickly changing on the continent and we urge our members to consider setting up shop beyond our borders. Should the demand be there PtSA will organise missions to select markets for its members.

- Tapiwa (tapiwas@ptsa.co.za)

NEW TECHNOLOGIES AND STRATEGIC PLANNING CUTTING A NEW PATH FOR CNC

One of the objectives of PtSA News is to inform members about ways or methods which are used in industry to enhance service and manufacturing; in the end the tool, die, mouldmaking and special machining as well as manufacturing sector all need to improve and maintain competitiveness.

Huntley Distribution, a PtSA associate member in the Western Cape, focusing on CNC manufacturing, believes one way to stay on top of their game is to be informed of new developments and technologies by being in close communication with suppliers and manufacturers.

Andries Victor, MD at Huntley Distribution, explained that the team was recently approached by a customer who used "old methods of machining" strategies and tooling to manufacture their aluminium parts on CNC machines. "By helping them use newer strategies and more advanced high performance cutting tools, such as the Kennametal cutting tools we supply, they could save 55% of the current cycle time which they were running at."

"We could also assist another company which mainly machines stainless steel parts for the canning machines they build. Just by careful strategic planning and suggesting better quality cutting tools, the company reduced their combined cycle time from seven hours to a mere 2,5 hours for the complete process."

(photo used: Strategic Planning for 2023: Think 'What' Not 'Why' | Wealth Management)

3D Printing and the Future

3D printing is on everyone's tongues this coming year, and Dr Devon Hagedorn-Hansen, Additive Manufacturing Specialist at Multitrade 3D Systems, a PtSA associate member sheds some light on this in the manufacturing industry

The role that 3D printing play in the manufacturing industry

Additive Manufacturing (AM), commonly known as 3D printing, has a growing role in the manufacturing industry. AM plays a significant role in prototyping for product development. New products can be printed and trialled for fit, new design considerations, and even market research and marketing purposes.

This was the most common use for additive manufacturing; however, AM technologies have grown in number and type over the years and different technologies are implemented for many different end user applications.

Additive manufacturing is being used to create end-use parts and products in a range of industries, including aerospace, automotive, medical, and dental. One advantage of AM is that it allows for the creation of complex shapes and geometries that may be difficult or impossible to produce using traditional manufacturing methods.

In the tooling industry, metal laser powder bed fusion is utilised to manufacture mould cores and cavities with conformal cooling channels that increase the cooling efficiency of the part which decreases the cycle time. In the aerospace industry, metal parts are printed using different technologies for lightweight structures, difficult to machine components, and even turbine blades.

In the mining industry, turbines and pump impellers are printed out of different types of materials with different shapes that would otherwise be difficult or costly to manufacture using conventional processes. Adoption of AM is fast-tracked due to the rising material prices and supply chain issues faced worldwide. AM is also used to produce weird and wonderful parts for making different manufacturing processes and lines more efficient. AM is also seen as a solution for jigs and fixtures as well as parts for production lines to improve specific operations on the line.

How Additive Manufacturing will affect production in the next 5 years

It is growing at a rapid rate with more and more companies opting for and designing for AM, especially during and after the pandemic when supply chains are constrained; AM is stepping up as the go-to technology to manufacture specific components locally.

In the next five years additive manufacturing is set to grow to a 40-billion-dollar industry. In South Africa, the implementation of additive manufacturing is proving to be a game-changer for the manufacturing industry. It is filling the gap left by traditional casting methods, as AM allows for the production of parts in smaller batches without the need for costly and time-consuming mould-making.

Additionally, AM allows for a wide range of variations to be produced, which enables greater flexibility in the design process and opens up new possibilities for customization. This shift towards AM is helping to streamline the manufacturing process, making it more efficient and cost-effective. AM also allows for a reduction in the number of components required in an assembly through part consolidation. This can result in a smaller supply chain, as fewer parts need to be sourced, produced, and transported.

Additionally, as a result of consolidation, assemblies may be lighter, stronger and more efficient. Furthermore, AM could lead to an on-demand production with smaller inventory holding, which is a significant advantage for companies that are looking for flexibility, faster time-to-market, or some sort of mass-customization.

AM machines can also run off uninterruptable power supplies and renewable energy sources, meaning parts can still be manufactured during load shedding. With the energy crisis being faced all over the world this also positions 3D printing in a good light over conventional manufacturing methods.

What are some of the pros and cons of additive manufacturing?

Additive Manufacturing is a rapidly evolving field with various technologies and methods, each with its own set of benefits and limitations. The general advantages of AM include the ability to quickly produce prototypes, parts, and tools, without the need for tool path programming or specialized tooling.

AM also only uses the material needed for the component and some support material, rather than needing a larger billet that is then cut away with lots of potential waste.

Additionally, AM allows for the production of consolidated parts, hollow components, unique structures, and complex geometries with internal features such as holes that are difficult or impossible to achieve with traditional manufacturing methods. While AM can be faster in producing small quantities of parts, when it comes to high volume production, the speed advantages may not be as significant compared to traditional manufacturing methods. Other potential drawbacks and limitations include the dimensional accuracy of parts produced using AM is often lower than traditional manufacturing methods. The material choices at present are somewhat limited with material costs for AM often found to be higher per-kilogram as compared to traditional manufacturing materials such as wrought billets or plastic pellets. It's also important to note that the choice of AM technology for a specific application will have a big impact on the outcome. Some AM technologies excel in material properties, others in precision, and others in speed. Therefore, it's crucial to carefully evaluate the specific requirements of a project and to determine the most appropriate AM technology to use.

Very Successful Visit to Europe by PtSA Executive

Bob Williamson, PtSA Executive Director, and Tapiwa Samanga, PtSA CEO, recently visited Europe to hold discussions with WerkzeugBau Akademie GmbH (WBA), Messe Stuttgart and DMG Mori with the objective of improving existing relationships and forging new relationships for the benefit of the South African TDM Industry. According to Bob, this visit was very successful and will bring benefits well into the future. He goes on to emphasise the importance of developing contacts and relationships in business, particularly in these times of change and uncertainty, and this visit more than achieved the objective.

The visit to **WerkzeugBau Akademie (WBA)** further strengthened and advanced the existing relationship between WBA and the South African Tooling Industry.

For a number of years PtSA has partnered with WBA – the worlds leaders in tooling specific research and consulting –to implement programmes to improve the efficiency and competitiveness of the South African tooling industry. The meeting with Dr Wolgang Boos (WBA Executive CEO) and Mr Gerret Lukas (WBA Head of Consulting), will ensure that these programmes continue to benefit the local tooling industry well into the future.

The meeting with Mr Bernhard Muller, Vice President of Messe Stuttgart, and his marketing team, discussed the working relationship between Messe Stuttgart and PtSA to ensure the success of the All Africa Expo which will be hosted by PtSA in November in Cape Town in conjunction with the ISTMA 16th World Conference.

Messe Stuttgart is one of the major organisers of trade fairs, congresses and events in Germany, with large exhibition spaces in Stuttgart Germany.

PtSA has a MoA in place with SBS Conferences and Messe Stuttgart to organise and hold the All Africa Expo, with Messe Stuttgart committed to offer their advice and assistance with such aspects as floor layout, exhibition stand design, and catering, as well as marketing the event internationally to attract both exhibitors and visitors.

Messe Stuttgart are enthusiastic to promote the All Africa Expo and to work with PtSA in making this a successful event, as well as enhancing their relationship with ISTMA World.

Bob and Tapiwa then attended the **DMG Mori** Technology Excellence days at the DMG Mori European manufacturing facility in Pfronten Germany, and met with the Senior Management of the company. DMG Mori is one of the worldwide leaders of cutting machine tools for turning and milling, as well as a comprehensive supplier in additive manufacturing.

Bob, in his capacity as the ISTMA World President, was a keynote speaker at this event, with his address focussing on the need for the tooling industry to "focus on high technology manufacturing processes as an overarching necessity for manufacturing efficiency".

This was followed by a tour of the manufacturing facilities and discussions regarding the establishment of a possible working relationship between PtSA and DMG Mori for the benefit of the South African tooling industry.

(Photo left: Pictured behind Tapiwa is a DMG Mori 5 axis machining centre under construction)

Capewell Never Fails to Surprise with Excellent Materials

Capewell Springs and Metal Pressings, a Western Cape member of PtSA, has recently acquired resale rights to provide imported springs to the tool, die and mouldmaking industry.

The Company is a high-volume manufacturer and supplier of metal pressings, springs, wire forms and strip springs, and is able to assist customers from concept to product. "We have been the preferred supplier for a range of metal pressings and springs for more than 40 years, and have ISO9001:2015 as a quality management system. We invest in our skill, capabilities and company culture," said Emile Coetzee, MD at Capewell. By focusing on the delivery of high-quality, local produced goods for the automotive, textile and consumer goods industries, Capewell Springs and Metal Pressings is becoming a very important part of the growth of manufacturing in the Western Cape.

One of the ways to stay at the top of their game is to build new tools for new products. The manufacturing sector is one of the most competitive sectors in the country, and Capewell engineers and toolmakers never shy away from taking on challenges and developing new products.

"We are participating in the manufacturing process; from conceptualisation to delivering a finished product. Recently, we developed a new battery terminal for an export product and adding our skills and experience - together with the customer - a viable solution was created. The challenge, however, was to use material and a design which is flexible enough, but not too strong which could damage the batteries. Being experts in spring steel and heat treatment, we could offer a product that will be conductive, solderable, and durable," added Emile proudly.

Capewell is also involved with various developments for the arms- and automotive industry, and also participating in looking for solutions to localise parts production services for a German-based company.

"Our work doesn't include only heavy equipment and materials though, as we were involved in making wire forms for the fashion industry," Emile concluded.

Being able to work on a project from the beginning to the finished product, is one of the reasons the company is fast becoming one of the manufacturing leaders in South Africa.

Why should Companies Exhibit?

PtSA Members often ask the questions:

'What Trade shows will get the best results? and **'What is the benefit of exhibiting at a Trade Show?'**

The answer to the first question lies in the focus. The focus of the exhibition must be aligned to the product or service you intend to exhibit.

The **All Africa Expo** in support of **ISTMA World 2023 Conference** is built on three pillars

1. African Manufacturing Excellence;
2. Tooling Industry Support to the Manufacturing Industry;
3. Machine Tool Support to both Toolmaking and Manufacture.

The answer to the second question requires statistical history for previous (TDM) specific exhibitions in South Africa and the All Africa Expo will be the first of its kind. However, we have established a partnering relationship with Messe Stuttgart (ISTMA World Global Partner) who have made available the statistics for the last Moulding Expo (pre-Covid) which has a similar ethos:

- **Achievement of Exhibitor Objectives:**

81% Achieved their objectives for the exhibition

85% See a stable or increasing importance of the Moulding Expo

- **The percentage of the target groups reached by the Expo:**

90% Tooling

86% Automotive & Automotive Supply Industry

84% Plastics Processing Industry

- **Would the exhibitors recommend the Moulding Expo:**

95% Of exhibitors are likely to recommend Moulding Expo to other exhibitors

- **Intention of exhibitors to participate again:**

93% Intend to participate again

The All Africa Exhibition focuses on five key areas essential to the growth of manufacturing in Africa.

African Country Pavilions

To showcase what African countries can offer manufacturing companies in terms of market potential, government incentives and logistical support.

African Manufacturing Companies

Carefully selected Manufacturers, demonstrating the variety of highly innovative products produced in Africa with high quality standard and technical sophistication.

African Tooling Systems Manufacturers

Exhibiting the support capability of the South African and African continental tooling Industry to design and manufacturer moulds. dies and advanced assembly systems.

Machine Tool Suppliers

Major international machine manufactures providing cutting edge technologies with fully established support networks.

Importers Tooling, Moulds and Dies

Strategic International partners supporting local industry with well-developed and supported supply chains.

Exhibition space is available in a variety of sizes to suit all requirements, from 9 square meters to 84 square meters. Larger spaces can be obtained by combining stands.

Costs:

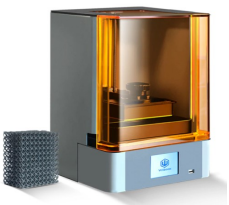
Cost for all exhibition stands is R3 700 per square meter plus VAT for floor space only

Cost for a stand package (consisting of shell scheme fabric walls, lighting, carpeting, power point, and fascia name) is R500 per square meter plus VAT. Note: the stand package is compulsory for the smaller stands (3 X 3 sq m in the African Tooling Systems area and the 3 X 4 sq m and 3 X 5 sq m stands in the Importers area). For the larger stands, the exhibitor can arrange their own stand design.

Please visit the website www.sbs.co.za/istma2023 to see the details of all stands available.

CALDEAZ Installs 3D Printer to Support Dental Sector

CALDEAZ recently installed a Wiiboox L130 LCD printer at a dentist's office in the HealthSmile Dental Practice in Paarl.



Caldeaz, an Associate member of PtSA, supplies 3D engineering products and services, including all related services such as 3D scanners, CMM's and software. Founded by Ludrick Barnard in 2007, the company's team is always looking out for the latest technologies and most effective solutions to customers.

The dentist will use the printer to print masters in-house. He will also print the models for the clear liners. This includes masters for clear liners, drill guides, moulds for testing crowns, working models and temporary implants and dentures. "The Wiiboox L130 LCD printer prints extremely fine detail, it is fast and easy to use and not expensive. Maintenance is also supported by us, and my team and I are just a click of the button away," said Ludrick. An additional advantage of the dentist using this printer, is that more work stays in-house and the time is saved with patients by being able to fit crowns etc. on printed models without the patient being present. "When changes or adjustments are needed, it is done before the patient come in for a consult," he added.

The Wiiboox L130 LCD printer, imported from China, uses different types of UV light sensitive resins and the whole process is digitised… no more moulds, castings etc. and no more shrinkages to compensate for. Ludrick concluded by emphasising the company's commitment to providing customers with solutions aiming to help them decrease production costs, time and to increase efficiency and to control the processes. The client does not only buy a 3D Printer but the support of a whole team.

Eastern Cape Members find Benefits of being Part of PtSA through Intervention Projects

Two PtSA members in Eastern Cape underwent intervention projects presented by PtSA Enterprise Development Department.

*De Wet van Veijeren, Business Development and Operations Manager at **Robbie Deyzel CNC** in commented "Once again, we are blown away with everything highlighted for us to change and implement to reach our goals. Thank you to PtSA and WBA in assisting us to take our business to the next level".*

*Duane Kritzinger, Head of Precision Engineering at the **Engineering Hub** in Gqeberha commented that the benchmarking project highlighted areas of improvement in the organisation and he appreciated the fact that critical issues – which will benefit the organisation – were discussed and recommendations for improvements were made.*

Both these companies suggested afterwards that they needed more time during the intervention process for in-depth checks and recommendations.

For more information about PtSA Benchmarking and Intervention Projects, please visit www.ptsa.co.za/enterprise development

Jendamark and MTN in Agreement Working on 5G-enabled Manufacturing Systems

Jendamark Automation (South Africa), a PtSA member recently signed an agreement with MTN to set up a prototype 5G network (5G technologies provide the network characteristics essential for manufacturing. Low latency and high reliability are needed to support critical applications. High bandwidth and connection density secure ubiquitous connectivity. These are requirements that manufacturers currently rely on fixed-line networks) that will be used solely for manufacturing purposes.

Jendamark is a global technology company that builds powertrain and catalytic converter assembly systems, as well as power electronic assembly systems for the electric vehicle market.

"There are a lot of theories around the opportunities around 5G and in manufacturing we'll be setting up a Virtual Private Network (VPN) using 5G technology at Jendamark. We'll be simulating a real-life production line and using the technologies we developed," said Yanesh Naidoo, Innovations Director at Jendamark.

The advantage of this is to prove the concept works. It enables small to medium scale manufacturers with advanced digital technologies using the cloud, controlling their shopfloor. That significantly reduces costs and increases flexibility for small scale to medium size manufacturers.

"It is a huge opportunity for us if we prove that it works. We are truly grateful for MTN in supporting us through this journey. I think it is a great opportunity for both Jendamark and MTN; however, I think it is a bigger opportunity for manufacturing as a whole so over the next six months we will be proving this concept and testing out our new digital technologies using 5G network provided by MTN," Yanesh added.

(Photo source: 8 industries that will benefit the most from the 5G network | 5G Connectivity (ecn.co.za)

PtSA KwaZulu-Natal fired up to increase membership in region

Thank you to MultiTrade Distributors for sponsoring the evening. Siva Padayachee, MultiTrade Manager for the region, was a guest speaker and delivered a presentation about Moldino Production 50. Moldino is a Global Partner of ISTMA World.

PtSA KwaZulu-Natal region presented a networking event in the beginning of November last year.

This event, held at the Splendid Inn (Premier Hotel) in Pinetown, was attended by members and companies in the tool, die, mouldmaking and special machining industry as well as the manufacturing sector.

Francois Beetge, PtSA Gauteng Regional Manager presented Maemo Kobe from Vaal University of Technology South Gauteng Science their PtSA membership certificate.

PtSA TDM Powered Toolmaker Apprenticeship Programme New Intake

All PtSA Centres of Excellence are preparing for a new intake of students into the PtSA TDM Powered Toolmaker Apprenticeship Programme.

The new group of students will start in March this year, and the training facilities' teams are all looking forward to welcome future Toolmakers!

Driving the circular economy turn-key solutions for mechanical recycling

As a specialist in shredding and comprehensive solutions for waste processing, Lindner-Recyclingtech GmbH has been making a decisive contribution to the circular economy since 1948.

Lindner develops and produces recycling solutions with a promising future at three sites in Austria, thereby setting standards in GREENTECH innovations. DMG MORI enables Lindner to produce crusher components with high performance, as shown by the latest installation: The process designed by DMG MORI Heitec comprises two DMU 80 P duoBLOCK with WH Flex.

Circular economy of plastics

Lindner's turnkey system solutions for plastic recycling are very much in vogue. A truly functioning circular economy can only be achieved when the result of recycling is of high quality. This requires the right starting material. In order to be able to produce it profitably with the lowest possible purchase prices, Lindner offers the complete modern range of crushers and washing and sorting components from a single source. Making it possible to circulate materials is one of the priorities of politics, the economy and society, but material-processing processes have to be cost-effective efficient and automated.

Mono-Fix – Flexible cutting system for shredding plastics

The selection of the correct cutting system depends on the type of plastic. Indeed, depending on the type of plastic, different blade systems must be used, since the correlation between rotor and stator blades and the speed are decisive for the quality of the shredded plastic. In addition, blade systems are subject to permanent wear.

Lindner has recognized this challenge and developed the intelligent Mono-Fix system. Mono-Fix allows the change of blades and knife holders with a single screw. This minimizes downtime with maintenance work. Various tip and flat blades are available, as well as blind plates and special counterblades that can be used in the same rotor body. This makes it now possible not only to replace the entire cutting system when it wears out, but also to use different or mixed rotor configurations.

Fully automatic production of crusher components

Two DMU 80 P duoBLOCK with WH Flex – fully automatic production of crusher components

Due to the increasing demand for recycling and the numerous variants of shredding systems required, Lindner needs a complete production Automated system Mono-Fix. DMG MORI provides 2× DMU 80 P duoBLOCK, which are powered via the WH Flex movable robot.

Ordinary Euro pallets with bulk product encourage raw material for blades and blade holders. The robot takes the part by camera detection (bin picking). Various clamps and clamping devices are available that can be changed automatically.

The fully automatic production system including process design and programming is provided by DMG MORI Heitec. The installation is planned so that it can be expanded by means of a third DMU 80 P duoBLOCK.

Digital engineering for digital testing and optimization

Another noteworthy aspect is digital engineering. While the actual system is still under construction, it is possible to operate the digitally completed system with all its functionality for employee instruction or also for planning, scheduling and simulating pending tasks.

Virtually all sequences can be tested and optimized. On day X all you had to do is connect the power and press the start button.

Join the Best - Become part of the Network

By joining PtSA, you become part of the network of companies which forms the tool, die, mould and specialised machining industry in South Africa.

Connectivity

- PtSA members have the opportunity to become part of the national and global network of TDM companies.

PtSA is the collective voice of the TDM industry

- The PtSA partnership agreement with government (INTSIMBI Future Production Technologies Initiative) facilitates dialogue between the TDM industry and government.

Improvement of competitiveness of PtSA members

- PtSA, through the process of improving the competitiveness of companies, facilitates the growth of the supplier base for the benefit of the larger corporates, and in particular the OEM's.

Training and upskilling programmes

- PtSA, as the Development Quality Partner (DQP), has developed a number of SAQA approved artisan qualifications and apprenticeship programmes for the TDM and Special Machining industry in South Africa.
- These programmes result in SAQA registered and QCTO and merSETA accredited Toolmaker NQF Level 5 and Tooling Machinist NQF Level 5.
- The programmes are offered in four facilities; QCTO accredited state-of-the-art PtSA Centres of Excellence across South Africa.

Networking, matchmaking and information programmes

- PtSA hosts regular Networking meetings in the Western Cape, Eastern Cape, Gauteng and KwaZulu-Natal.

Better understanding of the Fourth Industrial Revolution (4IR)

- PtSA facilitates the understanding of technology developments for its members by means of information programmes, demonstrations, publications and networking.

PtSA facilitates international connections for its members through its membership of the International Special Tooling and Machining Association (ISTMA World)

- Access to over 23 Associations in 22 countries/8000-member companies.

PtSA promotes sustainable development within the industry to ensure long term growth of the industry

- PtSA facilitates opportunities for members to have access to information, training, workshops, etc. on sustainable development.

PtSA corporate facilities are available for use by its members PtSA website provides information about international and national news, events and trends in the industry.

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- **PtSA is offering the opportunity to advertise in the PtSA News *(Newsletter of the Production Technologies Association of South Africa)***
- **PtSA News is widely distributed both in South Africa and Internationally**
- **PtSA News is the only publication which is focussed on the Tool, Die, Mouldmaking and Special machining Industries in South Africa**

Advertising Fee Structure: (Excl. VAT)

	Per Issue		Annually (6 issues)	
Size	PtSA Member	Non-Member	PtSA Member	Non-Member
1/4 page	R2 400	R4 895	R12 690	R25 395
1/2 page	R4 800	R6 630	R23 500	R34 875
Full page	R6 500	R10 760	R31 600	R55 680
Outside Back cover	R9 500	R16 600	R46 800	R85 500

Please contact Liza du Plessis at lizadp@ptsa.co.za for details, or to book an advert!