

PtSA News

Newsletter of the Production Technologies Association of South Africa

Issue 18—December 2021 / January 2022

Tooling and its Pivotal Role in the Growth and Development in the South African Manufacturing Sector

Comments
from the
recent PtSA
Webinar

There is **no such thing as manufacturing without tooling** and more to the point, 60% of the effective cost of a product is directly linked to the tools that you use for manufacturing that specific product.



When a country's manufacturing sector outsources its tooling, not only is it disclosing the quality of the product being produced, but it's also allowing competitive nations to have detailed insight into how efficient your own production processes are.



When a tool is imported, there is always local support needed once the tool has landed at the production facility.

Through PtSA, the **government** has contributed **R900 million** to the programmes to rebuild the TDM sector with about a third of that value also contributed by **industry to support the programmes** that are being implemented for the benefit of the TDM sector.

As well as these Programmes, PtSA continues to be the voice of the TDM industry and promotes networking, matchmaking, sustainable development and a better understanding of 4IR.

We are very fortunate that government realised that the TDM sector needed direct intervention, not only in terms of resources, but also putting policies in place that assist the value chain around TDM for the benefit of the manufacturing sector.



From the desk of the CEO

Tapiwa Samanga

After the shock and horror of 2020, we all hoped that there will be a respite in 2021. Alas that was not to be. The Covid-19 pandemic continued and continues to adversely affect our lives and businesses. There was therefore a need to make a make a plan to adjust to the new normal. We had to make a plan, and we did! Whilst several companies across several sectors have closed shop, we have noted, with a sense of pride how a number of our members sought and secured new opportunities and ventured into new areas of enterprise.

Through diligent planning we were able to get a fresh of enrolment of Toolmaker trainees artisans in October 2021. From an unprecedented 8000 plus applications we selected 65 students for placement in Gauteng, Western Cape and Eastern Cape. We will continue to raise resources to ensure that the skills pipeline is maintained.

We continue to get tremendous support from our members in providing workplace based training for our students and employment on completion. The mentorship provided during placements is invaluable and we remain grateful to our members and partners for that support.

As we take a well-deserved break, our hearts go out to all those who lost a loved one during this year or were affected in any adverse way. We pray for a better 2022.

I wish every one of our valuable members a blessed festive season and prosperous 2022! Keep safe and yes, VACCINATE!

- Tapiwa



Comments from the COO - John McEwan



We are nearing the end of a very busy yet challenging year, and I am sure that we are all looking forward to a welcome break, in which we can take a well-deserved rest and reflect on the challenges that we have overcome during the year and the challenges that lie ahead.

During this year PtSA has undergone some organisational changes and changes in our focus to improve our support for our members and the industry. These have been reported on in previous PtSA Newsletters and I trust that our members are receiving the benefits of these changes.

During this year we have recruited a new intake of Toolmaking Apprentices who have started their careers in the TDM industry which will provide much needed skills for our industry. We wish all the young people every success with their apprenticeship and congratulate them with their choice of a career in toolmaking.

This brings me to reflect on the comparison of the situation in South Africa against the situation in many countries in the developed world. According to statistics there is an "11 million skills gap in the

world" at the moment, which has been caused by "myths and misperceptions that keep people from pursuing careers in the skilled trades".

In South Africa we are fortunate that our young people want to pursue careers in skilled trades. This is supported by the fact that we had over 8 000 applications for the apprenticeship positions offered by PtSA. We will make more positions available for young people to enter an apprenticeship programme during 2022 (see article in this Newsletter).

We have also recently launched benchmarking projects in a number of toolmaking companies, as well as some furniture manufacturing companies to augment the work we are undertaking in support of the Furniture Master Plan.

We are finalising our negotiations with a large group to launch a PtSA Medical Assistance Scheme for the benefit of our members, which we plan to launch at our National Networking Event to be held on 17 February 2022, depending on the situation with COVID-19. More details will follow.

We hope that you find this Newsletter both interesting and informative. I would like to take this opportunity to wish everyone a happy and safe festive season, and every success for 2022.

- John

PtSA recently hosted a successful webinar to discuss the topic of tooling and its pivotal role in the growth and development of the South African Manufacturing Sector.

The Webinar was moderated by **Sherrie Donaldson** of the BRICS Business Council Manufacturing Working Group, with the panellists who included:

- **Emile Coetzee** – Chairman of PtSA and MD of Cape-well
- **Bob Williamson** – Executive Chairman of INTSIMBI Future Production Technologies Initiative, President of ISTMA World and National Secretary of PtSA
- **Tapiwa Samanga** – CEO of PtSA
- **Stephan Aucamp** – Charman of PtSA EC Exco and Business Director of Injection Technik
- **John McEwan** – COO of PtSA



The following are the questions directed at the panellists and some highlights of the answers given by the panellists.

Question to Bob: You have been quoted as saying that 60% of the cost of a product being manufactured can be directly attributed to the tooling used in the manufacturing process. Could you expand on this? And also, why is tooling so important to South Africa?

Answer – Bob:

- That is correct. There is no such thing as manufacturing without tooling and more to the point, 60% of the effective cost of a product is directly linked to the tools that you use for manufacturing that specific product.



- When you buy tooling, it is a case of buying the right tool to reduce the cost of the product being made.
- When a country's manufacturing sector out-sources its tooling, not only is it disclosing the quality of the product being produced, but it's also allowing competitive nations to have detailed insight into how efficient your own production processes are.

Question to Tapiwa: During your time at the dtic, you recognised that SA needed a strong tooling capability to support the growth of manufacturing. What government support is available to manufacturing and what interventions are being implemented? Where do you see opportunities for the tooling manufacturing industry in SA?

Answer – Tapiwa:

- Around 2005 there was a dialogue between the tooling sector and government, which highlighted the need for government to understand that tooling is critical and central to developing a sustainable competitive manufacturing sector.
- The outcome of that dialogue was the creation of INTSIMBI Future Production Technologies, which is the partnership between government and industry.
- This has created an opportunity for government to support an industry-led programme to rehabilitate the tooling sector.
- During the past 10 years government has contributed almost R900 million to the initiative with about a third of that value being contributed by industry to support the programmes that are being implemented.
- If you support the tooling / TDM sector, it enhances other government programmes like for instance automotive, which is an important consumer of tooling.
- We are very fortunate that government realised that the TDM sector needed direct intervention, not only in terms of resources, but also imple-

menting policies that assist the market, that assist the value chain around TDM for the benefit of the manufacturing sector.

Question to Emile: As an entrepreneur and owner of a manufacturing company what is the practical role that tooling plays in your own business and particularly in its impact it has on manufacturing?

Answer – Emile:

- I visited a few German companies and one of the things I noticed there was that everyone was engaged when it came to tooling.
- So, at Capewell, tooling is the heartbeat of the company.
- We turn 40 years this year and we have a lot of IP value in our tools and tooling which protects us with our relationships with our customers.
- At Capewell, we are reliant on other companies in different regions, to help us to manufacture a lot of the tooling that is needed. It is important to select the right partners.

Question to Stephan: You are the Business Director of a Tooling Company in the Eastern Cape, mainly serving the automotive industry.

What do you think are the issues with regard to imported tooling versus local tooling for the South African manufacturing industry and how can we grow our local capability?

Answer – Stephan:

- When a tool is purchased, there is always support needed once the tool has landed at the production facility.
- When the Toolmaker sits at the other side of the world, we need to carry their responsibility on their behalf in SA. They can contact us in an emergency, and we will react immediately.
- This has opened our business to different markets, so we now form linkages with international mould manufacturers, and it opens doors to more opportunities. We must spread our networks.



Question to John: The PtSA mission is to promote, protect and support the collective interests of the Tool, Die, Mould and Special machining industries of South Africa in continual support of the growth and development of all manufacturing sectors.

What are the driving factors that led to the establishment of the Association?

What programmes does the Association offer?

Why should people who are on this webinar become a member of the PtSA?

Answer – John:

- By 2004 the TDM industry in South Africa could only supply 15% of the local tooling needs for manufacturing.
- The industry then formed the Association (known at the time as the Toolmaking Association of South Africa [TASA]) and approached government to jointly address the decline in tooling support for the manufacturing sector in South Africa.
- At the time, **the dti** commissioned the FRIDGE study (Fund for Research Industrial Development Growth and Equity) into the tooling industry which concluded that:-
 - * The industry was under skilled
 - * The industry failed to invest in new technologies
- The tooling industry, represented by TASA and government (**the dti**), formed the INTSIMBI partnership to address these issues.
- Programmes were developed to address these issues, consisting of the TDM Powered Skills Development Programme and the Enterprise Development Programme.
- As well as these Programmes, PtSA continues to be the voice of the TDM industry and promotes networking, matchmaking, sustainable development and a better understanding of 4IR.
- Companies should join the Association and become part of the national and global network of TDM companies, and thereby join into the collective voice representing the industry.

Upcoming Events

2022

PtSA is planning a national networking event to be held in February 2022. More details to follow soon.

PtSA launches Benchmarking for 2021

In order to improve the competitiveness of our PtSA members and the tooling industry in South Africa, PtSA has recently launched a number of benchmarking projects as part of the PtSA Enterprise Development Programme.

This programme forms part of a structured value chain which covers the following areas:

- Benchmarking – determining the current state of a business
- Intervention Project – improving the business in line with international practices
- Human Resource Development – improving the skills at all levels of the business
- Technology upgrading – modernising all aspects of a business
- Matchmaking – improving the marketability of a business



A number of companies are participating in the Benchmarking project, which is undertaken in partnership with the WerkzeugBau Akademie (GmbH), who are the leaders in tooling-specific research and consulting.

To date, over 130 companies in South Africa have undergone a Benchmarking process. The companies undergoing this round of Benchmarking include:

- AAT Composites
- Chantex
- Classic Revivals
- CS Tooling
- Home Concept Furniture Manufacturers
- MCR Plastics
- McWade Productions
- Wagner Systems



Benchmarking process at MCR Plastics.



The PtSA Enterprise Development (ED) team busy with the Benchmarking process at Classic Revivals.



The ED team at CS Tooling.

MetalHeart Achieves ISO 13485



MetalHeart Additive Manufacturing, a PtSA member in Gauteng, recently achieved ISO 13485 certification for medical devices.

The ISO 13485 standard provides a practical foundation for manufacturers to address the regulations and responsibilities for the manufacture of medical devices, as well as demonstrating a commitment to the safety and quality of such devices.



Gerrie Lombard

According to Gerrie Lombard, CEO of MetalHeart, "this certification allows us to manufacture any medical device or implant which is

customer-specific, or in other words, matched to the specific needs of a patient".

MetalHeart focuses on advanced manufacturing technologies to improve their product offerings.

Additive manufacturing (3D printing) makes it possible to manufacture more complex and improved designed components.



Toolroom at Capewell is well positioned to support the business

Capewell Springs and Metal Pressings, which recently relocated to new premises in Epping Cape Town, considers their tooling to be the "heartbeat of the company".

The company manufactures most of their own tooling, as well as outsourcing some manufacturing to local toolmaking companies. According to Emile Coetzee, owner, and MD of Capewell, "it is important to select the right partners to support your tooling. At Capewell we have a lot of IP value in our tools and thus the design and manufacture of our tooling is critical for the success of our manufactur-

ing processes, and ultimately for the success of our company".

Emile added that being a member of PtSA helped the company find the right partners to assist them with their toolmaking and production processes.

"Just recently Capewell had a new tool produced by the help of another PtSA member which is now ready for manufacturing of new parts".

Capewell also finds themselves well-positioned to continue taking on new projects as they are continuously contacted by various industries for new parts including the big localisation drive in the automotive industry.

Because of this Capewell will continue to look to expand their capabilities by investing in new equipment.

"We have a very well trained and experienced team working in our toolroom. Two members of the team, Alroy Kiewitz and Luxolo Ngcengce, graduated from the PtSA Apprenticeship Programme, and have demonstrated the importance of skills and training for the success of a business", he concludes.



From left are Alroy Kiewitz, Luxolo Ngcengce, Emile Coetzee and Gary Olivier (Toolroom Foreman).

PtSA welcomes the latest Tool, Die and Mouldmaking Apprentices

A new group of students have been enrolled in the PtSA Tool, Die and Mouldmaking (TDM) Apprenticeship Programme at the PtSA Centres of Excellence in KwaZulu-Natal, Western Cape, Eastern Cape, and Gauteng.

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 qualifications.

The four years full-time study include, amongst others trade theory, simulated practical workshop training and work experience with participating companies.

These **dfic** sponsored students were selected from an overwhelming number of applicants and started their studies in October 2021.



A few of the apprentices who started their studies in October.



PtSA is also offering the opportunities for self-paying and company sponsored students to enrol in the PtSA Tool, Die and Mouldmaking Apprenticeship Programme. (4-year full-time programme)
The next intake for self-paying and company sponsored students is planned for 2022.

Entry Requirements

PtSA will do a full assessment of interested applicants before enrolling in the programme.

Costs

R62 000 per year for four years

Includes:

- All lecturing costs
- All learning materials
- All Personal Protective Equipment (PPE)
- On-the-Job Training (OJT) at selected companies

Excludes:

- Accommodation
- Transport
- Monthly stipend

Benefits:

- Training in state-of-the-art QCTO and merSETA accredited facilities
- Internationally recognised qualification
- SAQA approved Artisan Qualification
- Employability—(to date, 95% of graduates from the Programme have found employment)
- The qualifications support one of the Department of Trade, Industry and Competition (**the dfic**) listed trades with skills shortages in South Africa
- Graduates have workplace experience in the tooling and machining industry when exiting the Programme.

PtSA KZN Centre of Excellence team didn't allow unrest and looting stop their daily operations!

Richard Kannigan, PtSA Regional Manager in KwaZulu-Natal describes the few days of unrest and looting during which the PtSA students and employees operated "as usual" at the PtSA Centre of Excellence (KZN).

From the morning of 9 July to the 12th, the looting and violence escalated, and we could see protestors walking off with appliances such as TVs, washing machines and shopping trolleys filled to the brim.

PtSA students and employees couldn't get out of their living areas to go to the CoE (where roads were blocked off).

We were all in a situation where the ability to get basic essentials, was taken away.

We realised that we then had to act swiftly to support our employees and students, and at the same time try to establish some sort of plan for business continuity.

Everybody being extremely emotional – not only fearing for our lives and property, but also not being able to get basic food supplies and fuel – my amazing colleagues showed strength to support our families and our students.

We implemented virtual sessions with the students, and quickly developed a contingency based on what the students were currently busy with at the CoE. The virtual platform was created using WhatsApp, Skype, Zoom and SMS to communicate with students.

The lecturers designed assignments and tests, which were emailed to the students.

Screenshots were also sent to the



Richard Kannigan (far right) and Dr Melissa Jackpersadh (far left) with apprentices and employees.

students and a plan to keep classes going took shape.

The benefits of carrying on this way was valuable. It kept the students and employees busy, it allowed students to stay ahead with work, and it gave us (employees and students) something to focus on other than the rioting and unrest.

The lecturers presented virtual sessions in the morning and afternoons, giving students a platform to discuss items, ask questions and get as much information as possible to assist them with their assignments.

Class tests were also completed virtually! Students were allocated specific times during the day to

write their tests and either email it to the lecturer or take a screen shot and submit it to the lecturer.

Dr Melissa Jackpersadh, our CoE's Student Liaison Officer, also utilised the virtual platforms to keep track on the state of the students' emotional ability to deal with the effects of the unrests and be able to stay focused on their studies.

She had virtual one-on-one sessions with each student and reported any cases of concern to me.

PtSA Senior Management interacted with the employees via the Regional Manager on a daily basis to provide unconditional support and assistance during this chaotic period, and on behalf of everybody at the CoE, I would like to thank Senior Management and other employees for their support to the team at KZN.

We are here to help!

Meet the PtSA Industry Liaison Officers

PtSA has appointed key employees to take responsibilities for the interface between the Association and its members. The group of highly skilled Industry Liaison Officers can be contacted for any enquiries or assistance needed.

Vincent Nel – Western Cape



Vincent qualified as a tool & jig and die maker in 1996, and has worked in the robotics and robotic welding industry as a Production Toolmaker before joining PtSA as a TDM lecturer. He has recently been assigned the new responsibilities of Industrial Liaison Officer.

Tel: 082 674 8513

Email: vincentn@ptsa.co.za

Toni da Mota – Gauteng



Toni is a qualified Toolmaker since 1978. His specialist field is tooling for plastic moulding, metal pressings and die casting.

Toni is well-known in the Gauteng area for his knowledge in toolmaking and enjoys working with members of industry.

Tel: 072 422 1697

Email: tonid@ptsa.co.za

Ruann Grobbelaar - Gauteng



Ruann is a qualified tool jig and die maker with a vast experience in tooling and machine tool sales.

He has been a part of the PtSA team since 2017.

Tel: 076 021 3330

Email: ruanng@ptsa.co.za

Praneel Avadianund – KwaZulu-Natal



Praneel is a qualified tool, die and jig maker who enjoys challenges. He has an Honours degree in education specialising in vocational training.

He enjoys seeing new technologies being implemented in industry, such as 3D printing.

Tel: 084 678 9202

Email: praneela@ptsa.co.za

PtSA issues Membership Certificates

The membership certificates for all paid up PtSA members have been printed and are being distributed to each member by the PtSA Regional Managers.

These certificates are mounted in frames which will be handed over to each member to display the certificates in their premises. These frames can be re-used for all future certificates.



John McEwan, PtSA COO handing over the Productivity SA membership certificate to Albert Brink, Productivity SA Executive Manager Regional Operations.

Improve Productivity within your Business

Contribution by Albert Brink (Productivity SA)

PRODUCTIVITY SA is a Member and Partner of PtSA.

The organisation has an array of funded services which can assist you to kickstart the journey of PRODUCTIVITY IMPROVEMENT.

A journey of a thousand miles begins with a single step

Productivity improvement is a prerequisite for creating a competitive, profitable, and ultimately sustainable business. There are no shortcuts! The cornerstone of a sustainable business is always 'PRODUCTIVITY'.

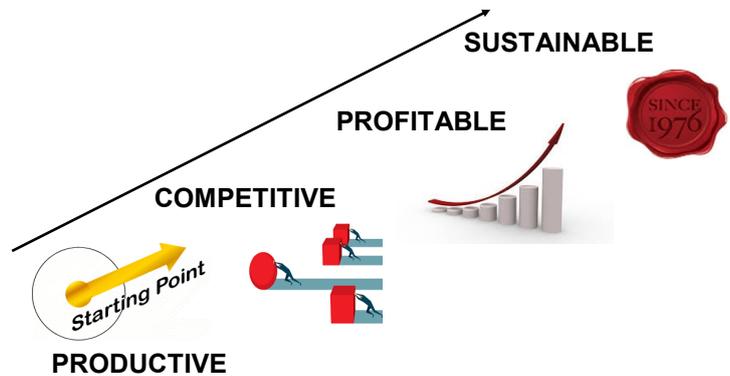
Where to start

I would suggest one starts off by creating an awareness of productivity.

How?

Implement a practice of short morning briefing sessions, where the objectives and priorities for the day are clarified, where the previous day's performance is discussed, and where challenges and concerns are raised.

Performance is generally defined as '...meeting expectations.' Morning briefing sessions provides the opportunity for clarifying expectations - clarify the focus for the day.



DID YOU KNOW? The most frequently cited reason by employees for non-performance is vague or ambiguous performance expectations.

You could also consider launching a 5S Programme which could enable you, amongst others, to:

- Streamline work-, production processes and workflow,
- Optimise efficiencies,
- Eliminate all forms of waste.

Please Note: 5S is a foundation of **KAIZEN** – the practice of Continuous Improvement where the pursuit of regular small incremental improvements results in improved financial performance.

Create focus through Visual Management

Visual Management communicates important information regarding:

- goals,
- performance standards,
- actual performance,
- challenges,
- issues that are critical to productivity, competitiveness, and profitability.

A visual management system can reduce the opportunity for miscommunication, it highlights abnormalities and deviations, and provides an immediate insight to what needs to be done next.



'Fully 50% of human brain function is dedicated to finding and interpreting visual information.'

Through our Productivity Awareness Workshop, Productivity Champions Training, 4 -6 month KAIZEN programme, 12 month Workplace Challenge Programme (WPC), and Business Turnaround & Recovery Programme (BT&R) we can assist you in reaping the benefits of PRODUCTIVITY IMPROVEMENT.

Contact me at albertb@productivitysa.co.za

RGC Engineering

completes another successful Kinematic Measuring System Installation

RGC Engineering (Pty) Ltd, a leading South African precision engineering company and a PtSA member, recently installed a GOM ATOS ScanBox Series 8-Axis Kinematic optical measuring system as well as a 6-Axis system at a local automotive company.



The 8-Axis Kinematic Measuring System (including the 6-Axis system) is used to measure complete car bodies and reduces measuring time by 80% compared to conventional methods and has increased measuring accuracy.

The ATOS ScanBox Series 6, 7 or 8, is an optical 3D measuring machine for automated dimensional inspection, suitable for different applications and part sizes.

The new system is an illustration of 4IR being implemented in practice, with the following results:

- Accurate and traceable measuring results
- High measuring speed and through-put
- Flexible solutions regarding the components being measured
- The system is suitable for the production environment
- Auto teaching for minimised programming efforts
- Eliminating the influence of human error through automation
- Reliable information for statistical process control
- Increased efficiency and reduced production costs.

For more information, please contact:

Lizette Gerber (Operations Manager)

Tel: +27 11 531 0776

Email: lizette.gerber@rgcengineering.co.za



www.rgcengineering.co.za

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 21 Associations in 20 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.

Contact details:

John McEwan (Chief Operating Officer)

Mobile: +27 (0)82 882 0599

E-mail: johnmc@ptsa.co.za

Hettie Foord (PA to Chief Operating Officer)

Office: +27 (0)21 931 0070

E-mail: hettief@ptsa.co.za

Liza du Plessis (PtSA News: Editor)

Mobile: +27 (0)82 643 8962

E-mail: lizadp@ptsa.co.za

PtSA Partner

momentum
consultants & actuaries