

2022
edition 4



CAMASA

Commercial Aerospace Manufacturing Association South Africa



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REPUBLIC OF SOUTH AFRICA

Foreword

CAMASA has continued its growth trajectory as the 'go-to' aerospace association of choice for industry manufacturing concerns in South Africa.

The Association isn't resting on its laurels – conscious of the ever-evolving marketplace in this APEX Industry. (We refer the reader to an extract from the A&D MP w.r.t to the notion of Aerospace being an APEX sector of the economy under the Section on the PPGI).



We, as everybody else on this planet, have had to contend with COVID 19. The keen reader will notice that we have elected not to revise the numbers estimating our sector's strengths under the "Business Sector – Commercial Aerospace" section below. With the impact of COVID 19 on the Sector still largely unquantified, we can only provide anecdotal evidence of how the Sector has fared under COVID 19 conditions. Equally, the pandemic is not over, and hence, its impact is still ongoing. Consequently, we have elected to reprint the numbers under said section as we had them in our 2019/20 version of the brochure. We freely admit that these numbers are only indicative and the Reader should apply her/his discretion as to the impact of the pandemic. Our guide can only be that a certain decline has taken place.

We remain grateful and obliged to the Public-Private Growth Initiative (PPGI), which continues to be a great support to the Aerospace industry. For instance, with the current rather glacial progress being made with the Aerospace and Defence Masterplan (A&D MP) the PPGI is assisting Industry to address the blockages experienced.

The Public-Private Execution 'SPV' mooted in our last brochure has been vested in the A&D MP instrument dubbed the Executive Oversight Committee (EOC). The EOC comprises of Government and Industry Stakeholders. It is designed to reconcile and resolve any impediments experienced in the implementation of the A&D MP, whilst, remaining the primary Industry/Government instance for primary co-operation between the two Parties in the advancement of the economic prospect of the Industry in South Africa.

As a bi-partisan instrument, the EOC is eminently suited to further articulate and launch the APEX Industry character of the aerospace and defence sector envisaged in the A&D MP.

As we strive for greater co-operation within the industry, i.e., the inclusion of the RPAS sub-sector, closer collaboration with CAASA and AMD, we are encouraged by the response we have received thus far. Bread and butter issues continue to focus CAMASA's mind – as demonstrated by CAMASA leadership in championing public-private co-operation in the furtherance of certification initiatives of SA manufactured AEROSPACE technology for world-wide markets.

Lastly, some Members have reported a negative perception within the ranks of their counterparts overseas arising from recent week-long internal disruptive events characterised by localised socio-economic upheavals. CAMASA regrets the unwelcome tarnishing of our county's image resultant from said events. Nonetheless and notwithstanding said perceptions, CAMASA would like to re-assure the integrated world of Aerospace manufacturing and our trading Partners world-wide, that the Industry remains a 'going concern' as we continue to be active and trusted participants in the global Aerospace Industry.

All in all, still a good read – ENJOY!

fr 

Purpose of CAMASA

Establishment of a Growth-Bilateral between Government and Industry to significantly boost South African Commercial Aerospace Manufacturing Exports through:

- Public-Private partnership
- Integrated Industry Growth Plan
- Expanding Advanced Manufacturing
- Future-orientated Competitiveness (IoT, Ind 4.0)
- Labour Engagement & Skills Development

Business Sector - Commercial Aerospace

- Commercial Aerospace - Aero-structures, Systems and Interiors
- Advanced Manufacturing (and Design & Engineering)
- Sector in South Africa - (CAMASA):
 - › 100 companies active
 - › Export R3.0b annually
 - › 40% Added Value (Local content)
 - › Employ 3 000+ people in high skill jobs
 - › Train 600+ people annually
 - › 90% of activity in Gauteng and Cape Town region.





Outcomes for the Commercial Aerospace Manufacturing Sector

- Doubling manufactured Exports over a period of five years
- Localisation of imports of materials and components
- Growing Sector employment by 60% in high-tech jobs
- Transformation of the Sector including Ownership, Skills- and Supplier Development with particular emphasis on Black Industrialisation;
- Leveraging and deploying the Advanced Manufacturing Skills
- Driving the industrialization and commercial deployment of leading edge Technologies such as Additive Manufacturing
- Establishing a Best-Practice Advanced Manufacturing Hub by applying Advanced Manufacturing Best Practices to the CAV and possibly other regional off-shoots;
- Promote direct partnerships with international OEM's and/or Technology partners to demonstrate and showcase local industry capabilities and capacities to collaborate
- Forging stronger ties with global Aerospace and Advanced Manufacturing companies.

Commercial Aerospace Manufacturing Industry in South Africa



Commercial Aerospace – Aero-structures and Systems Advanced Manufacturing and Design & Engineering



100 companies active



Export **R3.0bn** annually



40% Added Value (Local content)



Employ **3000+** people in high skill jobs

Train **600+** people annually



90% of activity in Gauteng and Cape Town region

Public-Private Growth Initiative (PPGI)

The Public-Private Growth Initiative (PPGI) continues to be a great support to the Aerospace industry. For instance, with the current rather glacial progress being made with the implementation of the Aerospace and Defence Masterplan (A&D MP), the PPGI is assisting Industry to address the blockages experienced.

The Public-Private Execution 'SPV' mooted in our last brochure has been vested in the A&D MP instrument dubbed the Executive Oversight Committee (EOC). The EOC comprises of Government and Industry Stakeholders. It is designed to reconcile and resolve any impediments experienced in the implementation of the A&D MP, whilst, remaining the primary Industry/Government instance for primary co-operation between the two Parties in the advancement of the economic prospect of the Industry in South Africa.

As a bi-partisan instrument, the EOC is eminently suited to further articulate and launch the APEX Industry character of the aerospace and defence sector envisaged in the A&D MP. Below is an extract of the A&D MP w.r.t the APEX Industry.



A New Industry Vision- Rationale

- Aerospace and Defence is the **Apex Ecosystem** to ensure a smooth and successful transition to the fourth economic wave (4R).
- Digital tech (and ICT) is the means by which the apex ecosystem and all others are supported- like electricity in the 3rd industrial wave; it is the means to transition, not the end.
- Without the technology developed by the industry, we will not transition optimally through the interregnum between the 3rd and 4th waves.
 - We will become technology takers (and price takers)
 - We will be vulnerable to sovereign pressure
 - We will not diffuse competitive technology throughout South Africa industry.
 - Our citizens will not benefit as they must, from the Fourth Economy Wave – inequality and poverty will increase and:
 - We will be less able to protect ourselves.





AAT COMPOSITES

For over 30 years AAT Composites (Pty) Ltd, based close to Cape Town in South Africa, has gained experience in the designing and manufacturing of high performance products using composite materials and has established itself as a preferred partner in various industries worldwide. Nowadays, AAT's target market and customer base focuses on Commercial aviation aircraft seat products and interiors, General aviation aircraft interior and structural parts and High-end automotive parts. With an overall workforce of over 500 and key equipment including Autoclaves, Press claves, Thermo presses and various 3-, 5- and 6-axis CNC trimming machines and robots the company is able to produce more than 3000 mouldings and ship up to 500 composite assemblies per week. Furthermore, AAT Composites adheres to LEAN manufacturing principles and associated value stream analysis using a benchmark visual shopfloor management system.



Engineering support

The Engineering department offers a high level of technical expertise combined with project management experience to develop and industrialize advanced composite products and associated processes and tooling. It also provides dedicated internal production support, as well as customer engineering change support throughout the product life cycle. The team is experienced in using 3D CAD/CAM tools such as Catia V5 incl. material draping investigations, NASTRAN/PATRAN for stress analysis and master CAM/ICAM for machining simulation. The Engineering department offers a material selection and lay-up design service incorporating structural analysis and design. The team will select the most appropriate processes and technologies to be used with every unique program. AAT Composites (Pty) Ltd has material engineering capabilities consisting of a fully functional material test laboratory, including microscopy and can perform mechanical property testing and characterisation of metals and composites as well as basic flammability screening.

Tooling

Requisite tooling and moulds are designed for in-house manufacture at the AAT tooling facilities. Specialised in Manufacturing composite mould, with machining capabilities that extend to press-clave moulds, made of aluminium, and highly complex fixtures mafe for bonding processes.

Quality

AAT Composites (Pty) Ltd is an AS/EN 9100/D and ISO9001 accredited company for the design and manufacture of composite products for the aviation and seating industry. It is our policy to ensure complete customer satisfaction through superior quality and service. All parts are quality checked to the specifications set out by the customer. In addition we perform static testing to limit load on all load structures as part of our standard production validation process.



ADEPT Airmotive is a dynamic organization, which was founded with the vision to design, develop and manufacture a range of modern, multi-fuel tolerant, high performance, fuel efficient and environmentally friendly General Aviation engines to meet the demands of new generation aircraft.



ADEPT's award winning team recognized that the combination of impending regulatory changes, environmental legislation, the "green" economy, the convergence of technologies such as Electronic Flight information Systems, Digital Electronic Control systems, Computer Integrated Manufacturing, Additive Manufacturing and other innovative technologies would underpin the engine of the future.

The organization comprises of two entities:

- Airmotive Technology (Pty) Ltd – Technology development; Prototyping; Applications engineering; Testing; Brand development and promotion.
- ADEPT Manufacturing (Pty) Ltd – Advanced manufacturing of components; Engine assembly.

Through effective collaboration with established development, manufacturing and aviation industry partners, ADEPT engines are poised to become the powerplant of choice in the General Aviation industry.





Aerometals is a sheet metal fabrication company. Our main business is Cleaning, Deburring, and Bending sheet metals with precision. We endeavor to provide excellent services to all our customers. The organisation is a level 2 BBBEE compliant.

Aero Metals (Pty) Ltd. has the capacity to produce individual parts in large batches, we also have efficient processes in place that would enable the company to maximize the production output.

The organisation is predominantly producing for the Aerospace Industry with an expansion plan to service the entire transport sector (Rail, Automotive, Maritime); Energy, Petroleum and Mining Sectors.



Our Vision

We aim to become the global premier provider of sheet metal products from simple hand-formed sheet Metal parts to complex press-formed parts and die punched parts.

Our Mission

- Invest in cutting-edge technology to enhance our manufacturing and maintenance processes.
- Grow the business in Engineering programs
- Develop strategic partnerships with Tier 1 & 2 Suppliers, OEM's, Government and SA industry in general.
- We are committed to uphold the highest standards of compliance.
- Our goal is to create value for our customers, by offering superior quality products and services timeously
- To create a conducive working environment with empowered and engaged employees

Our Values

We pride ourselves in being:

- Transparent
- Accountable
- Honest & Fair
- Responsible
- Professional





Established in 1989, Aero Services (Pty) Ltd. (AS) is one of the very few companies in South Africa with South African Civil Aviation Design Organisation, Manufacturing Organisation and Aircraft Maintenance Approval. These approvals enable us to be uniquely suited to provide turnkey services for your aircraft, whether it be spare parts made per sample, composite refurbishment, or a full STC.



Aero Services provides mainly interior components/systems such as: tray tables, arm rest covers, shrouds, interior trim pieces etc., galleys and TSO'd galley equipment, equipment racks for antenna, LIDAR etc., Airborne Patient Care Systems, Intrusion resistant Cockpit doors, Cargo handling systems, LOPA Certifications and Commercial/Civil Bulkheads. Exterior Components/Systems: cargo pods, geo survey equipment and stores, wingtip lenses, composite fairings and stingers.



Aero Services has over 20 years' experience in vacuum thermo forming components for the aircraft industry. We have formed a large variety of components such as: side wall panels, tray tables, seat backs, seat fairings and many more. We have a wide range of material that enable us to meet FAR25.853 flammability specifications.



Aero Services has been designing and manufacturing aeromedical evacuation units since the late 90's. We hold a number of STC's for aeromedical installations that can be used in SACAA Part 138 operations for aircraft such as: Beechcraft 1900D, King Air 200, BAe 125-800 and Cessna Grand Caravan 208B.





AEROSUD

Aviation



Aerosud is an established supplier of aero structure components and aircraft interior systems with more than 25 years experience in product development and complex industrialisation projects.



With the in-house availability of multiple manufacturing technologies together with on time delivery and unquestionable quality, Aerosud is able to provide a competitive total cost of business solution.



Our strive to be an ever flourishing company is driven through our investments in research and development focused on complex metallic and thermoplastic forming, additive manufacturing and advanced composite manufacturing techniques. In addition our know-how in robotics and automation as well as collaboration in various Industry 4.0 initiatives guarantees the continuation of our world class value offering.



AEROSUD

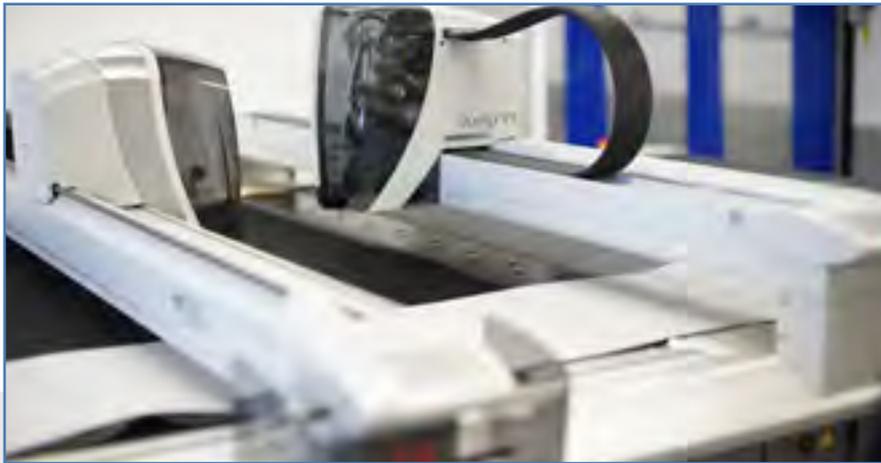
Technology Solutions



Aerosud Technology Solutions (ATS) is a subsidiary of Aerosud Holdings and holds the intellectual property for Cellular Core Technology (CCT).

CCT is a revolutionary manufacturing method for composite structures. This manufacturing technique provides the opportunity for assemblies consisting of multiple components to be manufactured in one piece, resulting in significant cost and weight reductions. A further advantage of CCT is that it uses existing material and process specifications thus avoiding any new qualification efforts. With many demonstrator components successfully manufactured for several OEM's and Tier 1 customers, it is clear that CCT is a relevant technology with significant growth potential.

CCT together with a new structural composite facility further enhances Aerosud's drive to be recognised as a world class manufacturer of aerospace components providing a competitive total cost of business.





AFRICAN NDT CENTRE



African NDT Centre provides Non-Destructive Testing services to international standards and practices in both the general and aerospace industries:

- through our Airbus/Nadcap approved testing facilities and our French NANDTB qualified technicians.
- through our British Institute of NDT (BINDT) approved training and qualification centre in Centurion
- through the ground-breaking NDT level 3 consultation services by our team of general and aerospace independently certified consultants.
- through our robust AS/EN 9100 and BS/EN/ISO 9001 certified quality management system.
- through our development and fostering of sustainable business relationships.





ALTI is an award-winning unmanned aircraft manufacturing company, based in Knysna South Africa, focusing on next-generation ultra-long range and endurance fixed-wing vertical take-off and landing unmanned aircraft. ALTI has also been identified as Africa's premier and largest commercial UAV manufacturer and was born as a new division and brand of SteadiDrone, the highly successful drone manufacturer which has been exporting products since 2012 and sold over 1000 drones internationally.



ALTI aircraft offer increased efficiency and high endurance and longer range, allowing users to capture live data, as it is happening for longer. Using both VTOL and fixed-wing capabilities enables our aircraft to complete high endurance security & surveillance missions of up to 8 hours at an extremely low running cost.



Our flagship ALTI Transition, which has been shipping since early 2017, is an industry-leading, 3-meter wingspan dual hybrid VTOL fixed-wing aircraft with an endurance of up to 8 hours and caters for payloads of up to 1 kg. The Transition was built to cover long ranges of up to 600 km in a single flight and comes equipped with an all-in-one ALTI AvioX autopilot, flight & power distribution management system. This allows for complete autonomy of the aircraft, from take-off to landing.





BAT HAWK

The Bat Hawk is a proudly South African “Light Sport Aircraft” designed and built by Micro Aviation SA in Africa for tough conditions.

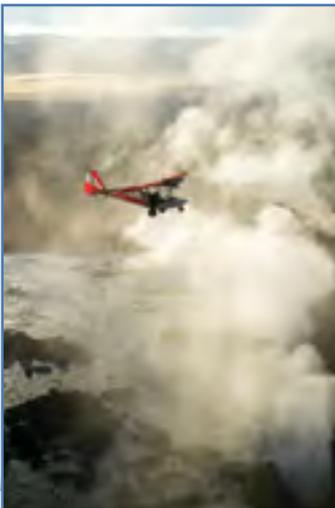
The aircraft is supplied as a complete ready to fly aircraft. The aircraft complies with the ASTM2245 Build Standard rules and regulations as well as South African Civil Aviation Type Approval Certificate.

It features a strut-braced high-wing, a two-seats-in-side-by-side configuration open cockpit, fixed tricycle landing gear and a single engine (Rotax 912 ULS) in tractor configuration.

As a conventional 3-axis light sport aircraft LSA, the Bat Hawk does not rely on pilot weight shift to affect control. Twin seats are positioned side by side for full dual control and both crew members are well protected from the weather by an aerodynamic fibreglass pod and large wrap-around windshield.

Performance of the Bat Hawk in its multiple options has been widely acclaimed as nothing short of sensational.

In the hands of a learner it remains perfectly balanced for fingertip control and hands off flight, but pushed to the maximum by an experienced pilot the manoeuvrability is breath-taking.



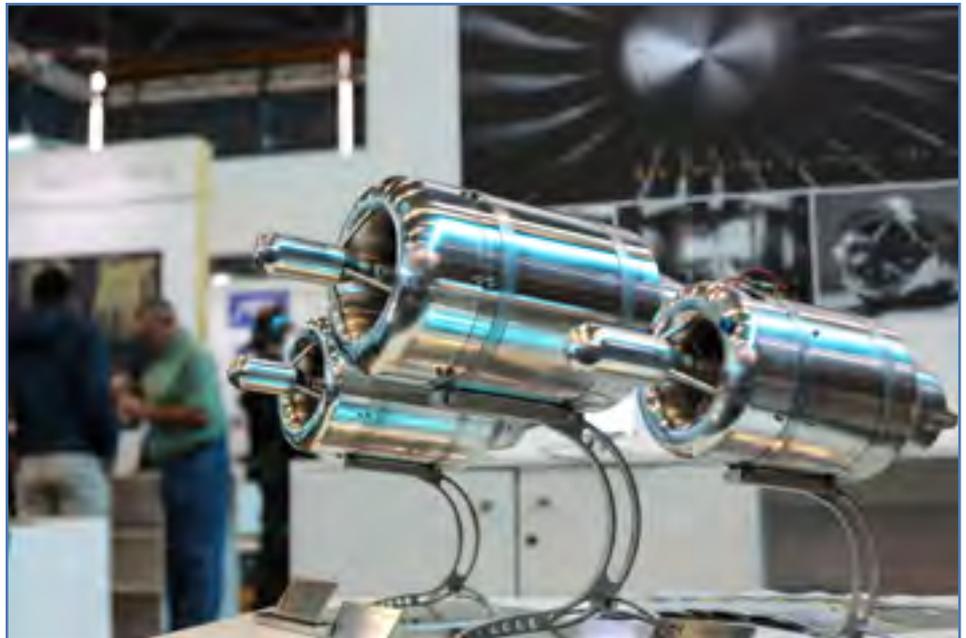


Cape Aerospace Technologies (CAT) provides the micro- and small gas turbine industries with various propulsion system solutions. CAT designs, manufactures and tests high performance gas turbines for use in model aircraft, high speed target drones, UAV's, experimental aircraft and full-size gliders.

The sophistication of the gas turbines produced by CAT, and that of the aircraft they power, have blurred the lines of distinction between model aircraft, military- and commercial UAV's.

CAT owes its success to its meticulous in-house design-to-manufacture process, including engine and subsystem assembly and testing. These processes make use of the latest technology to deliver a product of superior class.

The company continues to advance the state of the art within the gas turbine industry.





Quality - Delivery - Cost

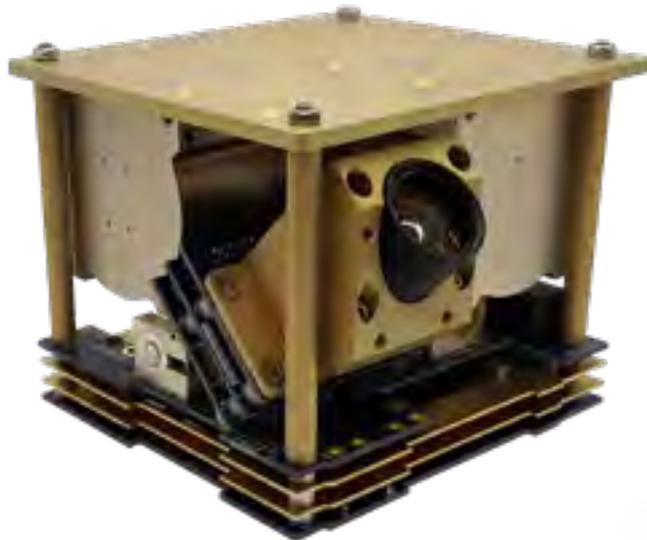
Compumach is a privately owned business situated in Johannesburg. The company is exclusively focussed on machining services in the Advanced manufacturing and Aviation sectors, specialising in Turning, and 3 and 4-Axis machining.

Reliable supplier of quality parts to the Aerospace Market providing capabilities in:

- 3-Axis Vertical CNC machining
- 4-Axis Vertical CNC machining
- CNC Turning

The company holds EN9100 approval and various OEM approvals





CubeSpace is an aerospace company that specializes in small satellite Attitude Determination and Control Systems (ADCS). We offer modular, low-power CubeSat ADCS sensors and actuators with class leading performance, which are designed to be compatible with almost all commercially available hardware suppliers. Further, we provide flight proven closed loop ADCS controllers based on our robust, radiation tolerant computer. These controllers are able to interface with virtually any ADCS sensor/actuator, and can be customized to any satellite ADCS mission requirement.

We help each customer to evaluate their ADCS needs, choose the correct hardware solution, and tailor this solution to correctly integrate into their satellite. Our service is personalized, and we strive to help each customer find the balance between powerful ADCS performance, and simple and robust operations.

Our team consists of highly qualified Aerospace engineers that all have post-graduate degrees focused on satellite control systems. Our company has delivered ADCS systems for over 50 different small satellites. Collectively we have, together with our senior staff, over 100 years of experience in satellite ADCS. For more information, please visit our website at www.cubespace.co.za or mail info@cubespace.co.za.



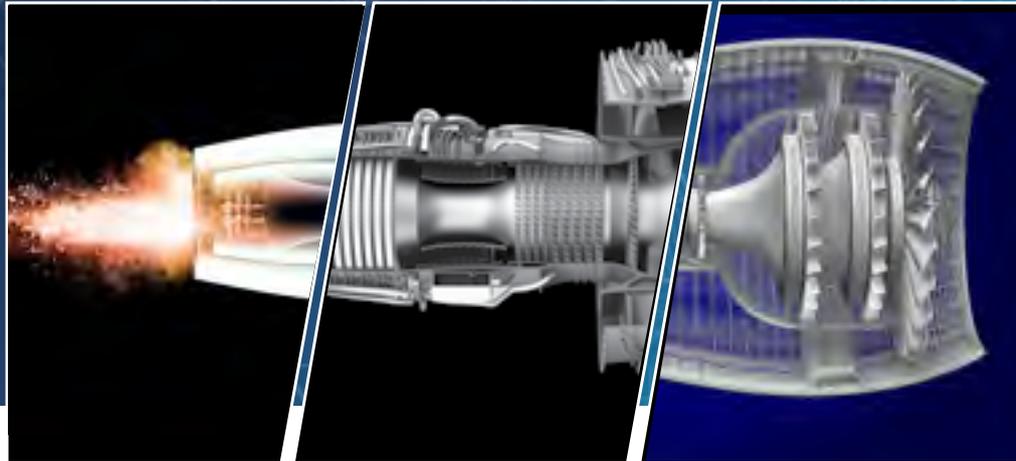
Daliff Precision Engineering
A little excellence goes a long way .



WE MAKE THE COMPONENTS

that are precision engineered
and delivered on time
and hidden from view

THAT MAKE YOUR ENGINES WORK



Does your outsourced manufacturing partner supply precision machined components on demand in order to improve your bottom line?
We do.

Not only do we physically deliver machined components that meet your technical specifications, we also manage the supply process, giving you both peace of mind and time to focus on your core business.

We understand what it takes to be successful in the aerospace, defence, energy and rail sectors – our track record of supplying both the local and global supply chains has given us insight into the value of:

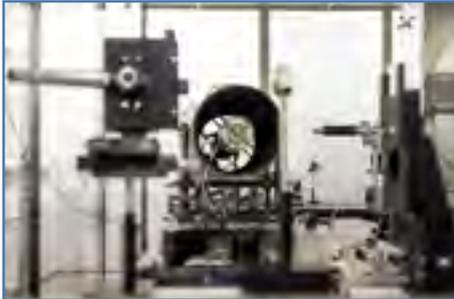
- Guaranteed delivery date
- Quick industrialisation
- Short lead times
- Simplified supply chain management
- Reduced stock holding
- Replenishment based on consumption
- Stock financing option

For more information,
please contact
ROWLAND CHUTE
C: +27 82 461 8420

AS 9100:2016 / ISO 9001:2015 /
BBBEE Level 2

We support businesses that rely on regular large volume stock replenishment to support their assembly lines as well as those requiring quick industrialisation and prototyping, with short lead times and a flexible attitude to design changes, and look forward to discussing the design of a bespoke solution to meet your specific needs.

Tel: +27 21 386 1851
Email : rowland@daliff.co.za
www.daliff.co.za



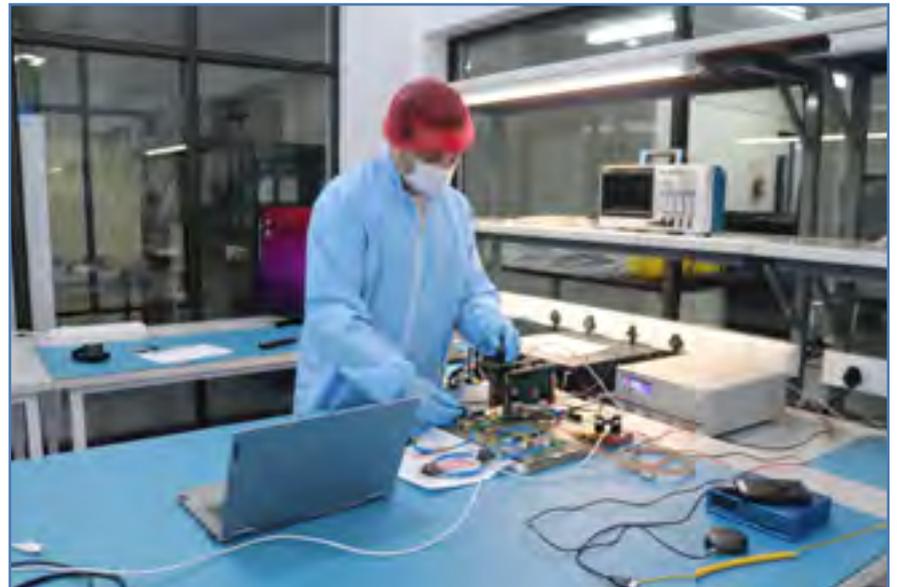
Dragonfly Aerospace has a vision to create compact high-performance imaging satellites and payloads that are designed for large imaging constellations that provide persistent views of the Earth in a wide range of spectrums enabling unprecedented business intelligence and improving the lives of people around the world.



Our team has a strong experience and heritage dating back to the first earth observation satellite missions starting in the 1980's through to our most recent satellite launch in 2018 and imager launch in 2020. Members of our team have worked on every microsatellite space mission since South Africa entered the space race.



Today Dragonfly Aerospace is investing in a 3000m² design and manufacturing facility with 1000m² of cleanroom areas for microsatellite constellation production. We are planning a production line with up to 16 satellites being built in parallel and up to 48 satellites produced per year. The facility is designed to build satellites from 50kg to 600kg and imagers from 1U CubeSat imagers to 400mm aperture sub-metre imagers. It is intended to serve commercial and civil space customers.





Dynamic Aerotech (Pty) Ltd is a manufacturing company that aims to establish itself within the manufacturing space by creating an in-house efficient end to end manufacturing and maintenance of parts and components. The organisation aims to invest in new and existing technologies such as Non-Destructive Testing, Laser Shock Peening and various Industry 4.0 technologies. Our organization is a 100% black owned entity with a level 1 BBBEE status, founded by 88% Women, 12% Youth who are a highly motivated team of individuals.

Vision Statement

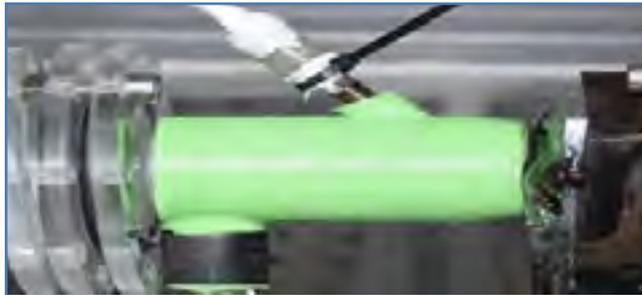
To become the global premier provider of Aerospace and Automotive manufacturing and maintenance solutions.

Mission Statement

- We invest in cutting edge technology to enhance our manufacturing and maintenance processes.
- We are committed to uphold the highest standards of compliance.
- Our goal is to create value for our customers, by offering superior quality products and services timeously
- To create a conducive working environment with empowered and engaged employees

Values

- Transparent
- Accountable
- Honest and fair
- Responsible
- Professional





Products & Services:

- Production of Aircraft Wiring Harnesses and Cable Assemblies. Panel Wiring, Control Panels, Distribution Panels, LRU's and Test Equipment.
- Automated Testing (4 Wire, Hi-Pot, Components, Electro-Emulation) using WEETECH W434 and W454 Test Equipment with Special Process Approval from Airbus. RF-Cable Testing including Vector Network Analysis.
- Laser Wire Marking (from 6 to 26AWG, up to 25m/min) using Spectrum Technologies Nova 820 machines with Special Process Approval from Airbus.
- System and Product Design and R&D Service, including Data-Pack Creation and using Mentor Graphics CHS (Capital Harness) CAD Software.
- System Installation, Integration and Field Services.
- CERTIFICATIONS:
 - EN9100:2009 / AS9100C and ISO 9001:2008 Certified Quality Management System (Certificate No. UK272016-1).





EMSS Antennas was established in 2002 as the antenna design and analysis subsidiary of the EMSS Group, which recently rebranded as Alphawave. Over the last decade we have been integrally involved in both the local MeerKAT and international Square Kilometre Array (SKA) radio astronomy telescope projects. We conceived and developed the cryogenic receiver systems and the associated vacuum and helium support services for MeerKAT in the UHF and L-bands, and have refined the L-band product to pre-production readiness for SKA. We were also responsible for the electro-magnetic design and performance analyses of the shape of the offset Gregorian antenna reflecting surfaces for both these projects.



We are predominantly an R&D house, but for MeerKAT we have established a production facility to build the 130+ receivers and helium- and vacuum support subsystems. This facility was tailor-made for that purpose, but should the need arise it can easily be transformed to produce similar limited-quantity, highly-specialised products. EMSS Antennas maintains an established culture of quality management and product assurance due to our long-term commitments to radio astronomy, and we have been ISO 9001 certified since 2017.

Our capabilities and facilities have been of use to the satellite industry cluster in the past, and we remain available to assist on component or subsystem level.





Jonker Sailplanes Pty Ltd (JS) is a privately owned, South African company, who designs, manufactures and maintains sailplanes from their main facilities based at the Potchefstroom Airfield.

The first product, the JS1 Revelation, an 18m wingspan sailplane, was rolled out in 2006. In 2010 the JS1 Revelation was issued with a type certificate by the Civil Aviation Authority of South Africa (SA CAA); the first type certificate for an aircraft designed on the continent. The JS1 has been dominating the international contest scene since 2014 and was recently rewarded with gold medals in 2 classes in the 2017 World Gliding Championships in Australia.

Several new innovations have been introduced to the JS1 platform since the development of the prototype. In 2012 JS introduced the 21m version of the JS1, penetrating the open class market; in 2013 the JET Sustainer option build by our European partners M&D Flugzeugbau, and in 2014 the 18m "EVO" outboard wings, improving the performance of the 18m version. A Hand Control system, for pilots with reduced leg function, was also completed in 2014, offering disabled pilots access to a high performance glider.

In 2016, exactly 10 years after the release of the JS 1 Revelation, the JS3 Rapture flew its maiden flight. After five plus years of CFD work, which is the equivalent of more than 15 years of wind-tunnel work, Dr Johan Bosman, the company's Aerodynamicist, had developed a new fuselage shape which was ready to be developed into a new production glider. The new glider was named the JS3 Rapture and the aerodynamic shape was frozen in January 2016. Also in development is the JS1 Self Launcher which is a complementary product line with the ability to take off on own power, focused on the leisure market and addresses the need of 80% of the possible glider market.

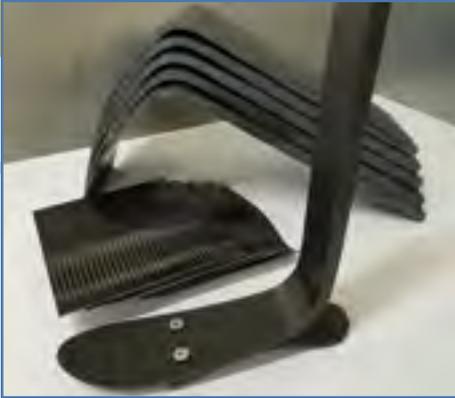
M & D Flugzeugbau has requested the European Type Certificate at EASA, so that a registration in all EASA Member States would be possible. This application was made as part of an agreed partnership between Jonker Sailplanes and M & D. It is important to gain EASA Type Certification (TC) or Type Validation (TV), both for market confidence and to enable local registration in Europe.

With more than 100 products sold worldwide Jonker Sailplanes is certainly living up to its vision and that is to manufacture the most sought of sailplane in the world.





Lightweight Structures Technology



LST (Lightweight Structures Technology) is a family owned organization at the forefront of manufacture of composite structures and components. LST has been in business for over 20 years. Our technology is new and innovative and we therefore strive to be known as the market leader in our field.

We realise that a great proportion of our marketplace is the supply of safety critical components. We therefore undertake to comply with our customer requirements, both as specified by the customer and known by our technology, to reasonably ensure the safety of the end user.





NEWSPACE

NewSpace Systems (NSS) is a privately-owned, advanced manufacturer of robust spacecraft components and sub-systems with facilities in South Africa, the United Kingdom and New Zealand. Particularly strong in the area of Attitude Determination and Control Solutions, the NSS team has more than 30+ years of experience in this industry.

Whether offering clients access to flight proven off-the-shelf ADCS products or, working closely with teams to develop custom solutions, the NSS team understands that each mission is unique and strives to enable the mission success of our partners through close collaboration. In this spirit, the NSS team have also supported several partners with extended services such as contract manufacturing and technology commercialisation.

Ultimately, the NSS team are committed to delivering on high-quality solutions and services and do so via our state-of-the-art facilities which comprise of ISO 14644-1 certified cleanrooms and ESA accredited technicians who closely follow the rigorous ECSS standards.. Furthermore, our Quality Management System is ISO 9001:2015 certified.



Tel: +27 21 300 0160

Email: mark@newspacesystems.com

www.newspacesystems.com





PEGASUS

Universal Aerospace



Pegasus Universal Aerospace has over the last few years quietly gone about its business of developing an executive jet that's capable of vertical takeoff and landing. It's called 'Pegasus VBJ1®' (Vertical Business Jet), and its market debut represents a tectonic moment in global aeronautics. With South African patents already approved and patents pending in the US and Europe, exciting times lie ahead.

Until recently, vertical takeoff and landing was something one associated with helicopters, high-tech military jets, or as featured in sci-fi cities dreamed up by Hollywood. Few would've imagined it being introduced to South Africa, let alone so soon.

Targeting government operations, companies, VIP's, medical evacuation, anti-poaching, offshore & resource development, as well as A-list business executives, politicians and celebrities, Pegasus One VBJ® is about to change how the world's elite travel and businesses operate.

With this plane one would be able to take off and land anywhere, whether it's on a rooftop, a yacht, or a helipad – the possibilities are endless. Thanks to its cool-air fan technology, it's even safe to land on grass or on wooden decks. In fact, Pegasus One is heralding in a new era of point-to-point air travel.



Tel: +27 11 483 0881
 Email: Info@pegasusua.com
www.pegasusua.com



Rivaero (Pty) LTD. is a new-entry, manufacturing-organisation positioned in the design and development of NTCA – Gyroplanes.

Having begun with a planning clean-sheet, Rivaero was able to complete a lengthy study into the merits and 'misses' evident amongst the various gyroplane-marques available, before defining the user requirement specifications for this innovative gyroplane development. The consequent blueprint incorporates all of the necessary safety & modular-operability in the final design as well as lean methodology & expediency in the manufacturing processes.



The result is, quite-frankly, the safest, most versatile gyroplane available today! The Rivaero 'uTe' (so named for its unprecedented, inherent utility) is a real work-horse gyroplane, able to switch readily & promptly between several roles, ranging from the comfort & leisure of simple recreational-flight, to the rugged reliability & lifting-capacity required by advanced, agricultural-support assignments.

Following imminent Part 148 Manufacturing Organisation certification, Rivaero's order-book will be open! Don't delay . . . for further information or to lodge your expression of interest in procurement, please feel free to communicate with us, at any time, using the contact details provided, otherwise via the contact-link provided on the Rivaero website (www.rivaero.com).





Satellite Authorisation Systems (Pty) Ltd. (SatAuth), has entered into the aviation manufacturing industry in 2017 with our real-time communication server. Our innovative team has led the way and delivered an industry first -to the global aviation industry - the first independent solution to the ICAO Autonomous Distress Tracking (ADT) requirements.

The SatAuth hardware system was designed, built and tested in South Africa, to meet the most stringent international standards of the European Aviation Safety Agency (EASA), and is now flying on selected commercial aircraft of the South African national carrier, SAA.



Installation of the system follows strict aviation standards. To improve efficiency, the SatAuth team have designed a tool which allows for installation during a CK-A check, with no additional time delays, ensuring that aircraft productivity is optimised.

Aircraft communications have now been enabled through multiple channels, and multiple applications can now communicate in real-time to customer friendly ground based applications, chosen by the customer, and customisable to their own specific user requirements. The system can also interface to ICAO's planned ADT data repository, in anticipation of future regulatory requirements.



The SatAuth approach to manufacturing is targeted at growing the local, internationally certified manufacturers, to build our state-of-the art infrastructure. This not only benefits the South African economy, but offers easily accessible options for design modifications.

The communications server provides AES-256 encrypted communication interfaces which are FIPS140 and PCI-3 compliant, the most secure levels of encryption available. Individual customer specific encryption requirements can also be added.

SatAuth prides itself on maintaining the highest quality and design standards, whilst constantly being on the leading edge of innovation

“ Globally secure real-time peace-of mind ”



SIMERA GROUP

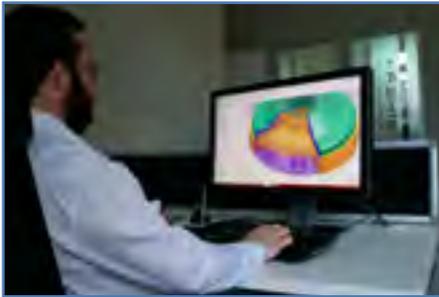


The Simera Group is a design-focused group of companies specializing in engineering consultation and product development. We possess and mobilize centuries of collective experience among our team members, skilled in the aerospace, precision optical, and automotive domains.



Simera Africa (Pty) Ltd is a Level 2 BEE accredited company that builds on the specialist engineering consultancy and bespoke product development experience of the group. Our expertise lies in optical system design, advanced structural design, simulation and optimization as well as prototype production and testing. Our team possesses significant know-how and experience in developing bespoke space-borne optical systems and specialized unmanned aerial systems (UAS) solutions.

Simera Sense (Pty) Ltd are specialists in developing production-oriented optical payloads. Our xScape100 family of spaceborne imagers have unprecedented capabilities, capturing the earth in greater detail, more depth and a wider range of spectral bands within a CubeSat form factor. This provides our customers with deeper and more valuable predictive insight, enabling pre-emptive action regarding their environment and commercial interests.



Our South African-registered companies work closely with our internationally-registered sister companies, Simera Innovate GmbH (Switzerland) and Simera Innovate Saudi Arabia, collaborating and assisting each other on aerospace-oriented projects and Industry 4.0 focused product and production process development, in the European and MENA regions, respectively.

The head office for Simera Group is in Somerset West, where the engineering core resides. This facility boasts with 100 m² of ISO 7 facilities, dedicated to optical integration and testing, as well as other engineering laboratory space and equipment.





SCS is a privately-owned space systems engineering and consulting company located in the Western Cape, South Africa.



SCS was established in 2009 by experienced professionals who have initiated and successfully managed space engineering projects dating back to South Africa's first space programme more than 25 years ago. The company contributed leading roles on a number of South African and international satellite missions, with a specific focus on Earth observation (EO) satellites and EO payloads.



SCS conducts business through several channels, including Space Advisory Company (SAC). SAC offers consulting- and training services for satellite and other cutting-edge engineering projects that include the Square Kilometre Array (SKA). SCS and SAC have commercialized products for nano-, micro- and small satellite programs in the domestic and international markets. Current focus areas include Synthetic Aperture Radar (SAR) technology, as well as compact hyperspectral imaging payloads. SAR will add to SCS's existing EO technology with enhanced day-and-night all-weather observation capabilities. In addition, the company also offers an extensive space engineering training program.

SCS has always reinforced its commitment to long-term relationships, to ensure mutual value for its partners and customers at home and abroad.



S-PLANE Automation (Pty) Ltd is an international aerospace company specialising in the delivery of complete certification-ready Automation, Simulation, Communication and Ground Control Solutions for manned, unmanned and optionally piloted ISR aircraft systems. S-PLANE combines its market-leading products with system engineering, integration and test support services to customise and deliver these Solutions to its clients. S-PLANE's Solutions and experience span aircraft ranging from civil to military manned and unmanned fixed-wing and rotary-wing aircraft. Most notably, S-PLANE Solutions are used by various clients to create Unmanned Aerial Vehicles (UAVs) and Optionally Piloted Vehicles (OPVs), as well as Manned ISR Aircraft that are upgradable to become UAVs or OPVs.



Our slogan, Automation Innovation, accurately captures the company's outlook and key strategic focus. All S-PLANE products are unique in their respective classes, in terms of a combination of features and functionalities, specifications, ease of use, certification-readiness, modularity and interoperability/compatibility. Our products are rapidly customised with minimal effort to fit a wide variety of airborne systems. S-PLANE's exceptional system engineering, integration, testing and system certification support is unparalleled in the industry. Our approach is to work with and understand our customers' requirements, before tailoring our innovative solutions to precisely meet their needs.





Sling

AIRCRAFT



Based in Johannesburg, Sling Aircraft is a Manufacturing Organisation which designs, manufactures and markets the highly acclaimed Sling range of light aircraft and light aircraft construction kits. Following the worldwide success of the Sling 2, the company developed a 4-seat variant, the Sling 4, which was launched in 2011. In 2018, the company launched the award-winning Sling TSi, a high-performance variant of the Sling 4.



More recently, the company launched their all-new Sling High Wing, an outstanding 4 place high-performance aircraft available in tricycle and taildragger variants and powered by the turbocharged fuel-injected Rotax 915 iS. Sling Aircraft is represented globally across six continents via their distributor network and to date has sold more than 600 aircraft.

As a South African Civil Aviation Authority (SACAA) approved organisation, their AMO offers a wealth of experience, knowledge, and skill and their aircraft maintenance technicians are some of the finest in the industry and are Rotax approved in accordance with iRMT.



As an ever-growing organisation, however, the Sling is not the only range of aircraft they maintain. They now maintain a broader variety of aircraft, including the ever-popular Vans RV range, a variety of gyrocopters as well as metal and composite airframes alike. In addition, they specialise in Lycoming and Continental engines and all associated propellers, as well as compass swing, pitot-static testing and ATF applications.





Ti-TAMED (Pty) Ltd is an AS9100:2016 accredited company, which specializes in high precision engineering with titanium and other exotic materials such as super invar, various stainless steels, nitronic, different grades of aluminium and high performance polymers. Established in 1996, with additional certifications in ISO13485:2015 and ISO9001:2015, Ti-TAMED is dedicated to quality manufacturing in critical sectors including Aerospace, Aviation, Marine and Medical.



Ti-TAMED excels in low volume, custom precision manufacturing. Our engineers can work with design teams to suggest inputs that make components efficient and cost effective to manufacture. We pride ourselves in on-time deliveries and excellent service. Ti-TAMED applies the stringent manufacturing and regulatory processes for traceability and quality control, required for the medical and aerospace certification, to all manufacturing conducted at Ti-TAMED.



Ti-TAMED's machining capabilities include:

- CNC Mills – 3, 4, and 5-Axis
- CNC Lathes
- CNC Multi-Axis Turning Centers
- EDM Wire cutting
- Conventional machining
- Laser Marking
- Engraving
- Sand blasting
- Polishing
- CMM Measuring

Ti-TAMED's aerospace and aviation portfolio includes OEM manufacturing for international and local companies producing optical components, radio communication parts, satellite optics, turbine blades, satellite componentry and sub-contracting the manufacture of certain products for Aerosud's Airbus projects.





AeroStruct Consulting CC is a SACAA-approved Design Organisation (DO672) based at the ITC building in the Aerosud complex in Centurion. We specialize in aeronautical modifications and new product designs. We are capable to assist you with your minor or major modification, or new design through the whole process of design, development, testing and certification.

This includes:

- Aeronautical design: Aerodynamic, structural and system design from concept to detailed design.
- Minor modification and repair scheme designs and approvals.
- Product development: Prototype manufacture and improvements throughout the development process.
- Product evaluation: Testing including functional tests, static and dynamic load tests, and flight tests for the purposes of design approval and certification.
- Certification: Type certification and supplemental type certification for new products, parts and appliances, and design changes to existing products.

The engineering team at AeroStruct has combined over 100 years of experience in the design of composite and sheet metal products and parts for the aviation industry. This includes the design of five completely new aircraft of which four were series manufactured and one was the first type certified aircraft in South Africa.

We like to put smiles on the faces of all our aeronautical clients.





Since 1994, Aerotechnic has been supporting the Aviation Industry through global offices and Representatives (located in South Africa, France, Singapore, USA and UAE) by holding stock in close proximity to Clients. Aerotechnic Pty Ltd core business is to support the African Aviation industry, by distributing leading Manufacturers products and offering spare parts for Airbus, ATR, Boeing, Bombardier, and Embraer aircraft from stock located in South Africa and our global partner network.

Our Clients are Commercial and Regional Airlines, MRO's, Manufacturer's, as well as African Air Forces. We have just acquired a new facility at Great North Industrial Park, +1000m² of warehouse and offices, which will allow Aerotechnic to grow into the future.

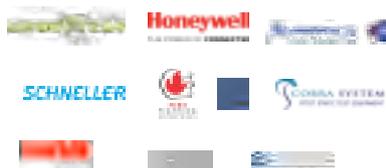
Capabilities:

- Stockist
- Representation and Distributorship of leading Manufacturers:
 - Recently Aerotechnic became the first African Honeywell distributor for the Air Transport and Regional (ATR) products offered by Honeywell International, Inc.
 - Other Distributorships include: Cobra Systems, Eastman, Goodyear Aviation, Lufthansa Technik GuideU, Perrone Aerospace, Schneller, to mention a few.
- Mankiewicz Aircraft Paints (Interior & Exterior):
 - Full Technical Support, Training as well as colour tinting and mixing capability.
- Management of Component Repair and Overhaul
- Management of Consignment Stock
- Spare Parts Manager (SPM)
 - A powerful multi-currency, multi-outlet, multi store, Aviation dedicated Software designed for the management of Spares Parts, Exchanges, Repairs, Kits and more.



Quality approvals & certificates:

- Aerotechnic Quality Management System is developed and implemented to comply with Highest Aviation Standards and Requirements:
 - ISO9001:2015 ○ FAA AC00-56B
- Aerotechnic is a Level 4 B-BBEE Supplier, certified by an accredited SANAS Verification Agency.
- Holders of Conventional Arms Development, Manufacturing and Services Permit registered under the National Conventional Arms Control Committee.





amt.

COMPOSITES
Advanced MaterialsTechnology

AMT Composites was established in 1988 and is the leading supplier of advanced composite materials into aerospace, marine, automotive, defence, mass transportation and general composites industry. With our branches in Johannesburg, Durban and Cape town, we offer the most extensive range of composite materials for the manufacture of patterns, composite tooling and composite materials.

Our team of technical experts can assist our customers with products such as modelling boards, adhesives, prepregs, core materials, engineering fabrics, epoxy resin systems as a broad range of accessories. At every branch, we also offer a retail store where you can purchase small quantities

AMT supports the transfer of composites processing knowledge to our industry by offering technical expertise and holds regular training courses on how to manufacture with composite materials. This includes the manufacture of composite tools, autoclaving, vacuum infusion and reproductions.





Simplified Manufacturing



AMTC Pty Ltd specialise in supplying innovative AMT (Additive manufacturing Technology) and services to our clients, enabling them to benefit from AMT to simplify manufacturing process throughout all business divisions and departments. In short SIMPLIFIED MANUFACTURING!!

Services

AMT Consulting, Design for AM, Topology design We have partnered with ABB Robotics to provide customers a complete "Turn Key" solution for their automation needs.

Equipment Supplier

Metal 3D Printers
Desktop Metal Studio and Production Systems.- 17 core metal materials.
FDM Printing systems for Composts and engineering plastics.
ABB Robotics arms and equipment.



Printing as a service

Proto type printing, Molds, Jigs, Dies & Fixtures, Functional parts, Bridge Manufacturing 10 to 500 units, Custom Parts, Sand casting and Investment casting patterns.



System Integrators



Sales partners



Desktop Metal



Castle Metals®



Castle Metals is a leading service provider of high performance metals and supply chain solutions to the Global Aerospace and Defense industries. With 22 locations worldwide, Castle is well positioned to support all metallic raw materials and processing requirements. Castle specializes in all forms of Aluminum, Titanium, Steel and Nickel Alloys as well as tight-tolerance processing to size/shape and first stage CNC machining.





JHPE Precision Engineering



Established in 2001, we are an ISO 9001:2015 accredited high precision manufacturing company. We specialise in small and large batch manufacturing services including CNC Milling with 4th Axis, CNC Turning and Wire Eroding with the ability to machine a wide variety of materials such as titanium, aluminium, stainless steels, engineering plastics and other exotic materials.

Our facility houses 24 CNC machines, a very well equipped inspection area which includes two Carl Zeiss CMM Machines as well as a designated polishing area. We also offer laser marking and anodising services. We have strong technical support staff and utilise various CAD and CAM software to ensure that we create the most effective and efficient process possible.



We cater for clients in various industries out of which the main areas are Dental, Aerospace and Defence, both locally and internationally. We pride ourselves in being able to manufacture components with fine tolerance restraints and providing high quality services. Our team works two shifts increasing our capacity and ability to provide shorter lead times. We also aim to provide a one-stop solution thus offering to source any requirements that we don't offer directly including heat treatment, surface treatments, etc.





RAPID 3D



3D Printing — Reduce inventories. Improve efficiencies. Lower production costs. Meet regulatory standards.

Cabin interior components, brackets, mounts, cable guides, engine parts are ideal for 3D printing technologies (Additive Manufacturing - AM).

Design components with lightweight, complex geometries, that are not feasible, using traditional manufacturing.

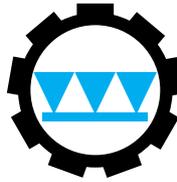
1. **No set-up and tooling costs.** Production costs are only incurred for the parts, at the time of manufacture.
2. **Tool less production** requires less energy and raw material.
3. **Small production runs** and one-off pieces are possible.
4. Parts can often be realised as a single part. **Reducing assembly and quality assurance costs.**
5. **Inventory reduction.** There are no minimum production run requirements. Modified parts, upgrades and spare parts can be produced as needed, obviating the need for storage.
6. AM designs **combine high strength with weight reductions** of 40–60%. Savings that translate into lower fuel consumption and carbon emissions, improving efficiencies, while meeting or exceeding emissions standards.

Local partners for EOS, Markforged, Artec, Dyemansion, Envisiontec, 3D Systems, 3D Platform and DLyte. Rapid 3D also offers 3D printing bureau and consulting services, assisting organisations with due diligence, specification and implementation of AM in their work-flows.

Contact Rapid 3D today to discover Additive Manufacturing possibilities in your work-flows.



Images from EOS & Liebherr



RETECON (PTY) LTD
Your Partner in Metal Working



Retecon is a leading machine tool, tooling, consumables, services and accessories supplier to the metal working and related engineering industries. The Retecon Group represents a number of prestigious international manufacturers including DMG MORI, Trumpf, Kasto, Ficep and Hexagon Manufacturing Intelligence, to name a few.

For over 50 years, Retecon has covered all the metal forming and cutting disciplines including milling, turning, gear cutting, boring, grinding, tube and wire, EDM, pressing, punching, laser, bending and measuring by importing high quality, well-known brands from all over the world.

Retecon's various products range from vertical and horizontal machining, turning, multi-spindle lathes, universal milling and boring, tool and cutter grinding, laser cutting systems, bending systems, punching and forming machines, automatic sawing equipment, roll forming and tube bending machinery, manufacturing lines and much more.



Services offered by Retecon include machine installation, servicing, repairs, importation of spare parts and consumables, programming, training, machine moves, time studies, after-hour support, project implementation and a portable coordinate measuring arm calibration service.





S4, established in South Africa in 1994, is a service oriented company that offers superior turnkey automation and machine building solutions. In addition to automation, we offer various solutions applicable to the aerospace industry:

- **Shopfloor control system** - Information and control are essential to providing a quality product within the constraints of your products cycle time! From simple Andon, line call systems and Poke-Yoke systems, all the way through to basic OEE and fully integrated MES systems.
 - **Data capture and management** – collect the data coming from all equipment and CMMs in one place and analyse them
 - **Real-time visibility** – view the equipment and processes as they happen on an entire plant or network of sites
 - **Conformance to product specifications** – manage all the product specifications and the latest revisions in Shopfloor-Online and enforce the quality control plan
 - **Time-saving** – monitor all features of products or parts and identify quickly non-conformance and low capability issues
 - **Trending** – advance warning of trends and events makes it possible to avoid problems such as tool wear.
- **Assembly lines** - S4 has a wide range of skills and in-house competencies that allow them to design, manufacture and commission complete assembly lines.
- **Automated work cells** - Automated work cells are used for mundane, difficult, complex or dangerous tasks. Our wide range of skills and expertise enable us to offer you a custom built work cell for your specific purpose.
- **LaserGauge measurement systems** are used for a variety of applications aerospace assembly, repair and servicing.



Safomar Industrial Brands is home to the world's best-known aerospace brands. For over thirty years we have believed in bringing exceptional performing aerospace products to Africa.

With our exclusive brands and hundreds of products to choose from, SIB is here to serve you. Effortless ordering and delivery through Stocksmart® with the added value of our Greenleaf Loyalty Programme means you are never far away from the best product at the right price.



PPG aerospace is a leading manufacturer for aerospace applications, delivering new technologies and solutions to the aerospace industry globally.



MAPAERO develops and manufactures aircraft coat-



Ceelac are top rated support products that meet the most demanding applications in aerospace.



Socomore specialises in the application of chemical solutions for surface preparation with more than 40 years knowledge in the aerospace Industry.



Sherwin Williams Aerospace Coatings provides coating solutions for the aerospace industry. From new construction to a recoat or commercial fleet operation.



sondor

PERFORMANCE FOAMS



South Africa's pioneer in the manufacture and conversion of closed cell expanded Polyethylene, Aerothene, BubbleWrap, EVA and various foam, rubber and related products.

Servicing Industry for over 70 years, the manufacturing facility and Head Office supplies conveniently located branches in major centres with bulk materials for quick conversion to customer specifications.



Sondor Performance Foams is the leading manufacturer and converter of open and closed cell Performance Foams and related products. We service all industries needing technical solutions for sealing, thermal & acoustic insulation, protection, packaging and buoyancy applications in local and selected export markets. We maintain ascendancy through centralised bulk manufacture and decentralised converting operations, with agility and entrepreneurial flair.

We continually improve our products and processes and invest in technology and human capital. We provide safe working conditions whilst being mindful of the impact our operations have on the environment.





SRS Aviation (Pty) Ltd is South Africa's first, and only, fully empowered, black women-owned and operated airborne services business. Piloted and pioneered by Sibongile Sambo, SRS Aviation offers clients professional and personalized flight options to destinations around the world, Our Air charter services varies from VIP Charter, Tourist Charter, Cargo Charter; Game Count & Capture and Helicopter Services.

SRS Aviation is the African distributor of new and overhauled aircraft spare parts for the commercial, commuter, corporate, Military and Cargo

We also provide Ground handling

Services Equipment:-

- Leasing / Rent
- Maintenance
- Fleet Management
- Sales



The freedom to fly is considered SRS Aviation's most treasured prize to its individual clients, business partners; because each staff member understands what freedom truly feels like, the company considers qualified and experienced candidates that can add value to the services and overall business offering. It's one thing to give someone an opportunity to learn to fly. It's quite another to watch them soar on wings into new worlds.





STEELBEST MANUFACTURING

The incubator provides a host of services aimed at identifying and empowering Design SMME's in the manufacturing space.

We provide these services in three phases:

- Pre-incubation – Taking the SMME from ideation to developing a robust business plan.
- Incubation - support given to the entrepreneur from the start up to the expansion phase.
- Post Incubation – support services provided to the company which has reached the maturity phase, and therefore is ready to walk on its own two feet.

For our young designers, we have the Design Develop Create programme. This programme consolidates design skills and directs design toward industry needs and developments

HOW DO WE PROVIDE OUR SERVICES ?

Services are provided at the incubator in the form of business assessments and improvement programmes using the Growth Wheel methodology. To support the SMME's we provide focused group presentations, mentoring and coaching as well as business support services ie email, wifi, printing, scanning etc.

For the engineering designers, we have provided 10 workstations which have the latest and most comprehensive engineering design packages and software compatible with most major automotive companies. The designers will be coached by our in-house design team and will have access to designers from other companies.



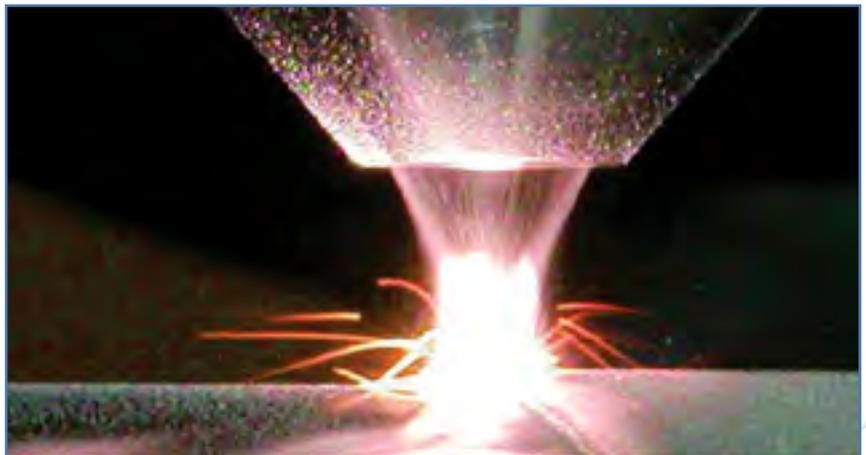
WEARTECH (PTY) Ltd



Founded in 1984, Wearthech (Pty) Ltd offers a comprehensive range of products for use in wear, corrosion and hardfacing applications, as well as maintenance and fabrication.

Wearthech have been supplying consumables and equipment to the Aerospace Industry for over 30 years. These products range from advanced Plasma spray equipment to very fine high alloy welding wires.

In keeping up with current technological advancements, Wearthech supplies metal powders and equipment used in Additive Manufacturing (AM), which is believed will play an important role in the fourth industrial revolution.





Our services and offerings

Our multi-skilled team has experience in the areas of:

- Fit for purpose Product Life-cycle Management (PLM) systems.
- Enterprise Resource Planning (ERP) systems.
- Manufacturing Execution System (MES) solutions.
- Cross-system integration.
- Industrial & business process automation.
- Lean & Agile methodologies.
- IT infrastructure establishment and operations.
- Project management.
- Change management.
- Soft skill:
 - Culture changes.
 - Creating Digital transformation awareness.
 - Providing Industry 4.0 knowledge and or access to such expertise.
 - Changing the mindset of the people.
 - Establishing the approach to the challenge(s), i.e. a "roadmap" for the I4.0 journey.

For more information on our services or assistance, please contact us on octi@aerosud.co.za

Your trusted partner for business and digital transformation.

The Fourth Industrial Revolution and digital transformation have become major strategic drivers to ensure future success.

Many organisations do not know how to start this transformation process or how to use it to their benefit or why digital transformation even applies to them. Furthermore, when an organisation decides to embrace this change they face the challenge of where to find the applicable know-how to make the right changes and to deal with the issues that will be faced.

Future technology is not as daunting as it may seem but it does require decisive planning and actions in order for businesses to withstand the threat of disruption and to thrive in an ever evolving environment.

Over the past thirty years Aerosud has gained real-life skills and experience across multiple business functions and systems in the innovative and competitive world of aerospace design and manufacturing and has become an internationally recognised supplier to the most significant aircraft manufacturer's such as Boeing and Airbus. With this experience we have developed unique techniques to deal with business challenges and to find new opportunities. We are product agnostic and focus on satisfying our customers' needs through the leveraging of existing and new technologies, best practices, and our unique skill sets as well as being able to identify the right resources via access to best-of-breed eco-systems.

We believe that we can share and transfer our skills and know-how to other business in such a way that it provides workable solutions that have a measurable effect on the growth and development of a business.

Our services and offerings we provide range from fit for purpose Product Life Cycle Management (PLM) systems, Enterprise Resource Planning (ERP) systems and Manufacturing Execution System (MES) solutions through to industrial and business process automation as well as lean and agile management methodologies. Included in our services and often overlooked are the softer skills that are crucial in order to ensure a successful transformation.

For more information on our services please contact us on octi@aerosud.co.za.





The Aerospwift project was established to develop the world's largest and fastest powder bed metal 3D printer. The end goal of the project is to supply a variety of 3D printed metal parts to Aerospace OEM's. The Aerospwift machine was developed by Aerosud Innovation Centre in close collaboration with the CSIR National Laser Centre and funded by the Department of Science and Technology (DST).

Additive manufacturing (or 3D printing) is a relatively new manufacturing technology. The technology is used to manufacture parts layer-by-layer, directly from computer generated 3D models. With Aerospwift technology, parts can be "built" by sequentially melting layers of fine metal powder with a laser.

The Aerospwift system has the ability to produce parts that are substantially bigger than what is achievable with current state of the art systems. Parts can also be produced up to ten times faster than with present systems. The large build volume of the Aerospwift machine does not only allow for the production of large parts (up to 2m x 0.6m x 0.6m) but also allows for the production of large batches of smaller parts.

Aerospwift started producing Aerospace parts in 2016 for the locally developed AHRILAC aircraft with first flight testing in 2017. The technology is delivering on expectations of producing high-quality material at improved production rates.

Aerospwift has the potential to revolutionise manufacturing by allowing for the production of large, highly complex parts, with minimal material wastage. Increased production rates, coupled to the design freedom offered by the technology, can lead to drastic cost reduction in various industries, including Aerospace.





TRANSFORMING THE FUTURE WITH THE CONVERGENCE OF DATA ANALYTICS, SIMULATION, AND HIGH-PERFORMANCE COMPUTING

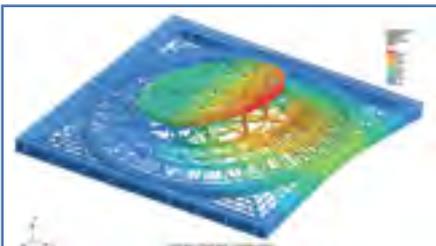
Altair (Nasdaq: ALTR) is a global technology company that provides software and cloud solutions in the areas of data analytics, simulation, and high-performance computing (HPC). Altair enables organizations in nearly every industry to compete more effectively in a connected world, while creating a more sustainable future.

Our technologies are woven into the fabric of everyday life. Look around you. Wherever you are, and whatever you are doing, chances are Altair's solutions surround you; keeping you safer, more connected, more productive. They can be found in big places and small — on highways, hospitals and hockey rinks, in stadiums, skyscrapers, and subways, and in banks, bikes, and boats.

Altair exists to unleash the limitless potential of the creative mind. Our vision is to transform customer decision making with data analytics, simulation, and high-performance computing.

Altair software enables customers to enhance product performance, compress development time and reduce costs. For more than 35 years, we have been helping our customers integrate electronics and controls with mechanical design to expand product value, develop AI, simulation and data-driven digital twins to drive better decisions, and deliver advanced HPC and cloud solutions to support unlimited idea exploration.

In solving our customers' toughest challenges and delivering unparalleled service, we are helping the innovators innovate, drive better decisions, and turn today's problems into tomorrow's opportunities.



Tel: +27 21 831 1500
Email: info@altair.co.za
www.altair.com



I provide specialist procurement services to organisations in need of assistance with, inter alia:

- **Procurement Department Structuring**

The structure of the organisation, needs of the operating units, nature of goods and services required, and other relevant factors are taken into account to ensure that the optimal structure is determined.

- **Procurement Function Evaluation**

Various aspects are investigated in order to determine whether the procurement organisation is performing in a manner that will support the organisation optimally.

- **Staff Evaluation and Selection**

An evaluation of applicants (internal or external) is done through a comprehensive on-line process which measures procurement skill, and/or through interviews.

- **Policy and Procedure**

Compilation of policy- and procedure documentation will be based on the current practices of the organisation and global best practice relevant to the industry/business in question.

- **Strategic or Complex Tenders**

A flexible (to suit your needs) enquiry process designed for an optimal procurement outcome for strategic or complex tenders (e.g. freight forwarding, high risk services, performance based prices or rates) is followed through, inter alia:

- o Stakeholder involvement (including expert internal users and trusted suppliers);
- o Proper identification and specification (generic or proprietary) of the subject matter;
- o Pre-testing of critical documentation with potential suppliers, where necessary;
- o Market research, as required;
- o An independent, arm's length approach;
- o A "total cost" approach;
- o Clear and time-tested enquiry documentation;
- o Continuous communication to invitees during the open period;
- o A watertight transition from tender/proposal to contract; and
- o Advice on and assistance to retain gains.

- **Outsourcing Enquiries**

From preparation of enquiry documentation to recommendation and final agreement

- **Development of Niche Procurement Tools**

Specification and development of niche tools to manage complex procurement situations

- **Master Data Management**

Evaluation and re-specifying of the material / service / supplier data

*Proper procurement
requires effort.
But that effort is often
handsomely rewarded.*





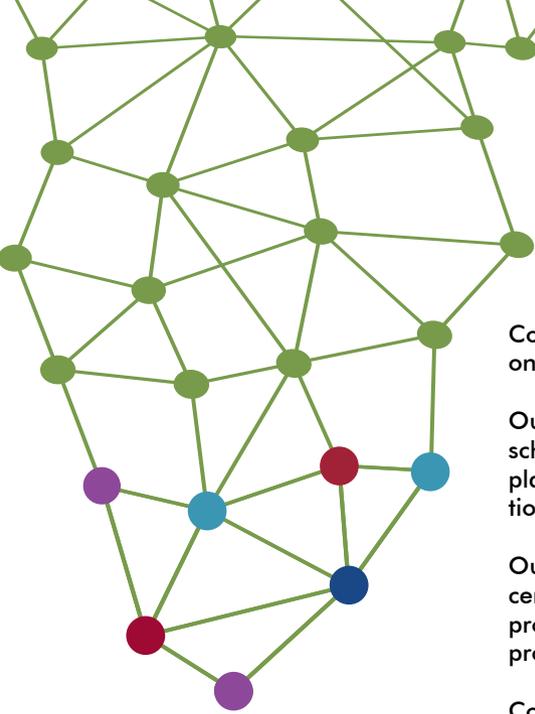
Big Ideas 3D Printing is bringing manufacturing back to South African people through Additive manufacturing and sale of Industrial 3D Printing technology, creating empowerment as well as productivity. We source or create the most viable manufacturing techniques to suite each specific product for each customer in a variety of Metals, Plastics, Rubbers and Ceramics.

Big Ideas 3D Printing has worked extensively both through the sale of hardware as well as custom manufacturing in the following fields:

- ✦ Automotive
- ✦ Aviation
- ✦ Mining
- ✦ Various Universities
- ✦ Product Development
- ✦ Home & Decor Manufacture
- ✦ Advanced Prototyping (Functional testing and certification)
- ✦ Large volume manufacturing Solutions
- ✦ Marine Manufacturing
- ✦ Agriculture
- ✦ High Specification Electrical Components and Equipment

Think Big.. Think Big Ideas 3D Printing...





Cova Advisory is a 51% black owned professional advisory company with a specific focus on government grants, finance and incentives.

Our service offering includes assessment of projects to determine the best incentive scheme available, full assistance with the preparation of applications and business plans, liaison with government agencies and the vital follow-up on successful applications to ensure that all criteria for sustained support are met.

Our team can help with education and training of clients on the workings of the incentive value chain; high-level advisory on which grants are most appropriate for the project; feasibility studies on grants at project level; providing advice on the location of projects to ensure incentives are taken into account.

Cova has positioned itself as an independent advisor on matters ranging from carbon and energy strategy, green related funds, carbon tax and policies, and renewable energy, and is accredited by SANAS to measure and verify energy savings.

Cova also offers professional advice on Customs and Excise, supplier development and broad based black economic empowerment matters.

 @cova_advisory

 Cova Advisory

 B-BBEE Level 2





AEROSUD

DFC Software is a stress analysis automation tool for the Aerospace industry that streamlines the analysis process from CAE to certification. The tool has been designed around MSC Apex which allows for customisation and automation of the stress analysis process.

Some of the key benefits using the tool includes:

- DFC is built around MSC Apex which is a modern, award winning CAE software package.
- DFC uses the aero industry trusted CAE solver MSC Nastran.
- DFC is a proven certification tool.
- DFC is designed for doing the same tasks as before, just quicker.
- DFC allows for the efficient utilization of stress resources, irrespective of their experience.
- DFC is designed around the principle of customisation - use your own stress report templates, use your own stress analysis methods.
- DFC allows for a quick turnaround due to load changes and design changes.





Dyondzo Technical Training Academy bought the Aerosud Apprentice Training Center. The school has been in existence for over 25 years. The technical training will expand beyond the aerospace sector specific training to all other industries. The academy is fully accredited by QCTO. Dyondzo Technical Training Academy (Dyondzo TTA) offers Aircraft Composite Structures and Aircraft Structures (Sheet Metal).

Dyondzo TTA offers:

- Theoretical and practical training;
- Workplaces for apprentice on-the-job training (in partnership with Engineering Industries); and
- Trade testing for the external summative assessment.



Dyondzo TTA is ideally positioned to train highly skilled artisans for the aviation and manufacturing industry by focusing intensely on practical experience and theoretical excellence (outcome and target focus) during the training period not exceeding 4 years. The theoretical and practical workplace experience gained during the learnership period builds high-quality skills, contributes to productivity and equips the individual with skills needed for recruitment.

All these training delivery mechanisms play different and critical interlinked roles in the artisan development value chain.



- Our training supports the National Development Plans (NDP) 2030 & national, provincial and local government priorities and National Skills Development Plans (NSDP);
- Improve the efficiencies, effectiveness and productivity of the economy through artisan development;
- Improving livelihoods through artisan development;
- Improving prospects of employment of trained artisans;
- Innovation and partnerships in delivering artisan development; and
- Supporting capacity building initiatives.



Who are we?

Group Six Investments (G6I) is a black majority owned engineering solutions provider with key skills in the development of technology infrastructure in high-tech industries.

G6I competencies :

- Program and Project Management
- Satellite mission programs
- Ground Station Developments
- Human capital developmen

Core- Centric Focus

- To assist our clients in realizing technologically advanced infrastructure for business and social well being
- G6I upgrades the high-technology infrastructure from the aging technology to the high-tech advanced facilities
- Spacecraft and ground station systems development to launching satellites

Our Stakeholders are:

- South African Government Departments as follows:
- Department of Science & Technology
- Department of Trade & Industry
- Department of Communications
- Department of Telecommunications and Postal Services
- Department of Education
- Department of Higher Educations and Training

South African Government Agencies :

- South African National Space Agency (SANSA)
- South African agency for Advanced Science & Technology (SAASTA)

South African government State owned companies:

- Denel Spaceteq

Private Industry

- Space Advisory Company

National Maths & Science Centres

- Maths Centre in Northern Cape
- CT Science Centre

Your High-Technology solutions provider for South African Space industry



GrowthMap Infonomics

Future-Fit Solutions That Work



Have you ever-needed advice but didn't know quite where to go? Or several skills together, which seem an unlikely combination? We could be what you're looking for. We like unusual challenges, and put together a unique approach for each client and problem. Our team's breadth of expertise allows us to push the boundaries of our practice areas.

OUR CONSULTING PRACTICE SERVICES:

- Business Growth Solutions
- Immigration and Relocation
- Government Incentives and Grants
- Black Economic Empowerment Advisory

WHY US

- Personal Customer Attention
- Return On Investment
- Just-In-Time Delivery

WE INVITE YOU TO PARTNER WITH US AS ...

- Your Solution-Provider
- Your Problem-Solver
- Your Value-Add Partner



You've tried the rest. Now work with the best!

LET US HELP YOU NAVIGATE THE COMPLEXITIES OF GROWING YOUR BUSINESS

Connecting is something we enjoy at GROWTHMAP INFONOMICS, so we invite you to get in touch with us. Visit www.growthmap.com or send us an email at info@growthmap.com and tell us something about your business. It will be great to talk further.



Tel: +27 61 355 8244
Email: info@growthmap.com
www.growthmap.com



HEXAGON

MANUFACTURING INTELLIGENCE

Hexagon is a global leader in sensing, software and autonomous solutions. The global company drives smart manufacturing by leveraging data from both real and virtual worlds to enable digital transformation and inspire autonomous solutions.

Hexagon Manufacturing Intelligence is well-known for its metrology and inspection solutions for quality control and validation processes. They also represent Production Software solutions for CNC operations and toolpath verifications. Additionally, Hexagon acquired MSC Software in 2017, adding to their Design and Engineering capability to fulfill the complete product development and manufacturing process chain, enabling smarter manufacturing for a sustainable and profitable future.



Tel: +27 012 004 1362
 Email: info@simteq.co.za
www.hexagonmi.com



Kutleng Engineering Technologies is a consulting engineering company whose skills stretch across the Built Environment, Information Technology as well as Advanced Computer Systems Technology; the key focus being in engineering planning and design, architecture, training and project and contracts management.

Kutleng Engineering Technologies is a 100% black owned company

Driven by a passion for excellence, we work to ensure the successful delivery of every project we embark on.

 <p>Electronic Engineering Business Unit</p> <p>200 engineers (incl. 2005, System Design, Embedded PCB, Firmware), Image processing, Digital Signal Processing.</p>	 <p>Built Environment Business Unit</p> <p>Structural Development Plans, Matter Planning, Load Planning, Electricals, Networks, Building Services.</p>	 <p>Information Technology Business Unit</p> <p>PC sales and related products, Installation, training and on-site maintenance, Computer repairs in small businesses.</p>
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About Luvhone

Luvhone Engineering and Consulting Partners (Pty) Limited is a South African company, based in Johannesburg. The company provides niche and high technology solutions within the industry segments of Aerospace, Air Traffic Management, Terrestrial and Satellite Communications, Information and Communication Technologies. The flagship projects that Luvhone has worked on include Africa's largest nanosatellite ZACube02 satellite ground station system integration and deployment.

Services portfolio

Luvhone aims to help its customers to realise operational efficiencies and tap into the African markets through systems engineering and integration of technology, research and development, engineering and service consultancy in specialist skills areas of satellite operations, software applications development, infrastructure implementation and RF systems in UHF, VHF, Ku-band, S-band, X-band. The company has particular focus in technology areas of:

- Space systems engineering and integration
- Air Traffic Management and Airport security solutions
- Satellite & Terrestrial Broadcast technology and operations solutions
- RF and EMF evaluation
- Professional services consultancy in operations management, R&D
- Software applications and solutions

The company cooperates with multinationals across various countries in Europe and across the Atlantic such as Luxembourg, Czech Republic, Netherlands, US amongst others. It is a woman owned business with a high level of engineering skills in Air Traffic Management, Satellite Broadcasting and Terrestrial networks operations spanning more than 60 years combined experience of its engineering professionals.

For more information on cooperation and prospective business in the Africa Region, please contact us on:





Metal Heart Additive Manufacturing is South Africa's first and currently only commercial metal additive manufacturing (3D printing) company in South Africa. State-of-the-art SLM Solutions machines are used, which utilises laser powder bed fusion technology.

The company currently has an SLM Solutions 280 machine, as well as an SLM Solutions 125. Maraging steel 1.2709 is used for the tooling industry, with AISi10Mg that can also be 3D printed.

The SLM Solutions 125 machine is dedicated to Ti6Al4V for the biomedical industry, with aerospace applications also planned in future. In addition to additive manufacturing, Metal Heart offers designing services, reverse engineering and vacuum heat treatment capabilities.

Advanced manufacturing is a key component for Industry 4.0 and Metal Heart is an important contributor to allow South Africa to remain globally competitive.





About Minerva Group

Minerva Group is one of the fastest-growing vendors of Product Lifecycle Management (PLM) software solutions globally. Our core competence is to provide manufacturing organizations with the right tools to manage their product development across the complete value chain.

What we do

Services offered:

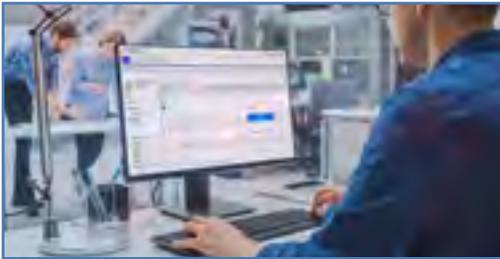
1. Leading implementation partner for PLM software

With more than 26 years of implementation experience across various manufacturing industries, Minerva has invested both time and resources in becoming the leading implementation partner and solution provider of PLM innovation software. We have developed dedicated implementation methodology for Aras Innovator and Minerva PLM, powered by Aras, which reduces time and optimizes the entire implementation process.



2. Minerva PLM – Out-of-the-box, yet flexible PLM for your business

Minerva PLM combines the best of two worlds. A strong, feature-rich, out-of-the-box application that enables you to go live fast with best practices and a strong, flexible platform with capabilities to rapidly adapt the solution to special or changing requirements. Minerva PLM speeds up initial implementation and helps our customers achieve efficiency and faster product development.



3. More than 350 man-year experience in delivering the right solutions for industrial and discrete manufacturing companies captured in one tool suite – Minerva DevOps

We have been in business for more than two decades, and we have managed to hold on to our experience and know-how throughout the years. We combined this knowledge in one tool suite - Minerva DevOps, designed to optimize the entire way you build & configure, test, and deploy your Aras Innovator and Minerva PLM environment with speed, quality, and control. The main goal is to shorten the delivery cycle of functionalities in production while improving collaboration, quality, and stability.



Email: info@minerva-plm.com
www.minerva-plm.com



Advanced Manufacturing Automation & Collaboration Platform

Are you stuck managing clients and manual processes? Is jumping between multiple software solutions just to get the job done wasting unnecessary man-hours?

MWorx™ gets you easy access to scarce and specialised resources, using an automation framework that allows for quick and agile adaptation, giving you flexibility to scale and automate where you need it most.

MWorx™ evolved through the digital transformation of our parent company, Aerosud, an international manufacturer and supplier of components to the aerospace and military industry. That means that when we deliver solutions, we know that it has been tried and tested in the real world.

We do this not just to help other engineering and manufacturing businesses to standardise, improve scalability, traceability and efficiencies, but to give them a competitive advantage against the larger industry leaders out there.

An off-the-shelf solution that behaves like custom software

Not one business is alike. Most off-the-shelf business solutions force fit a one-size-fits-all approach, this leads to companies trying to plug the gaps with various 3rd-party or bespoke software solutions and manual processes. MWorx™ bridges the gaps between operations, seamlessly integrating the complete manufacturing process saving you time and money.

The Manufacturing Worx (MWORX™) platform is vital for any manufacturing organisation who want to scale with confidence, simplifying and connecting clients and suppliers to ultimately reducing the time of collecting information. This cross-system integrated solution is the perfect space for easy access to scarce and specialised resources, using an automation framework that allows for quick and agile adaptation, giving you flexibility to scale and automate where you need it most at a very competitive cost to your business

The platforms offers secure and standardised collaboration, with access to specialised resources and skills with QMS experience to assist your business. Leverage these world-class resources and platform for the automation of your business.





Apply Theory Of Constraints To Increase Profit Without Increasing Investment

OpsLogik Solutions is South Africa’s leading, certified Theory of Constraints practitioner. The goal of a business is to make money, now and in the future. By applying the internationally renowned Theory of Constraints business methodology, we increase the flow of a business. The result is increased profit without increasing investment.

Your greatest business opportunity may be the very thing blocking your path to success. We assist companies to identify and leverage this opportunity, to create an ever-flourishing company. If you have the courage to take the steps to create an even more profitable business, we will support your journey to success. Our simple, easily implementable, systematic tools increase the flow of saleable items or services through your business, resulting in virtually unlimited, yet stable, bottom line results.

What If Now Is The Perfect Time To Drive Your Success?

In business, very few believe that BIG IMPROVEMENTS or SIGNIFICANT BREAKTHROUGHS are possible. We do. OpsLogik Solutions has delivered direct, hands-on transformation to companies across South Africa for over fifteen years. Niche, industry or size of the company is unimportant when it comes to deploying Theory Of Constraints into organisations. Our team of Theory of Constraints experts ensure that all business functions work together to achieve your goals.

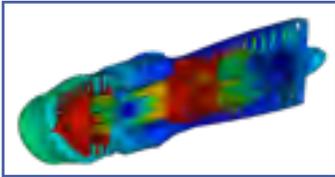
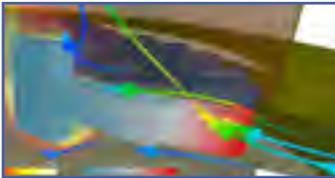
Aim High: Could You Double Your B2B Sales Growth Goals In Just 6 Months?

We have produced significant results for both small and large companies. Companies that embrace our Flocution Sales Solution experience meaningful change to their Sales Team productivity and a resultant improvement in making money. We support your team to create your own breakthrough Sales Solution based on tried-and-tested Theory of Constraints principles. Very few of us have experienced the power of a persistent and results-driven sales process that really leverages the right parts of our business. We create the opportunity for your company to do just that.

If you’re serious about business success, even in a tough market, turn to South Africa’s leading TOC practitioners for expert guidance and implementation.



Tel: +27 21 843 3103
 Email: info@opslogik.com
 www.opslogik.com

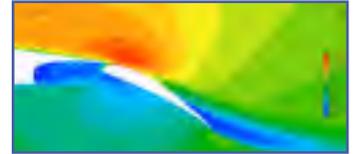
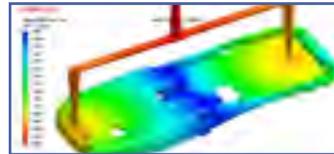
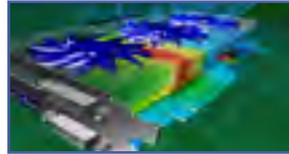


SIMTEQ Engineering specialises in Computer Aided Engineering (CAE) Simulation technology and is the sub-Saharan business partner for Hexagon | MSC Software. Previously known as ESTEQ Engineering, the company also represents the High Performance Cloud (HPC) solution provider Rescale, as well as the injection moulding manufacturing software, Moldex3D.

Celebrating 25 years of excellence in South Africa, SIMTEQ Engineering was the first company to bring commercial Finite Element Analysis (FEA) to the shores of South Africa in 1995, known as MSC-Africa back then. Speaking of pioneering activities, MSC Software were also one of the original 10 software companies, and assisted NASA's space race efforts in the early 1960's with its structural analysis solver, MSC Nastran. Their portfolio of simulation technologies and CAE tools has grown and expanded ever since, including solutions like Computational Fluid Dynamics (CFD), Multibody Dynamics (MBD), manufacturing, acoustics, Machine Learning (ML) and Artificial Intelligence (AI) solutions.

SIMTEQ Engineering assist clients and businesses to dynamically design, develop and manufacture quality products through sales, training and support of these highly specialised technologies. Our technologies provide engineers and manufacturers with valuable insights into design and engineering challenges, eliminate unnecessary trial-and-error costs to optimise business profitability in a sustainable way.

Inspiring smart manufacturing, we are your partner in simulation technology!





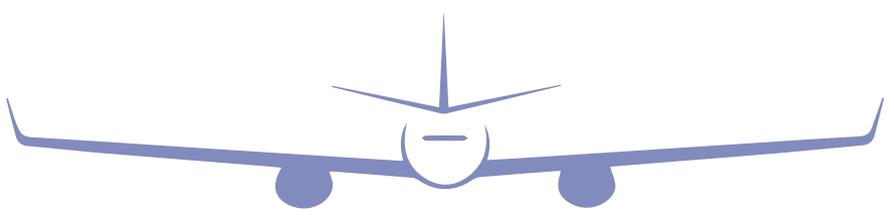
Bradley Aviation Technologies (Pty) Ltd was established in 2017 and is structured as a Technology Business Incubator (TBI) and a 'Centre of Excellence'. Our purpose is to design and develop technology business ventures within the aviation industry, facilitate the supportive capital to finance the financial start-up requirements and manage these projects over time and at a sustainable profit.

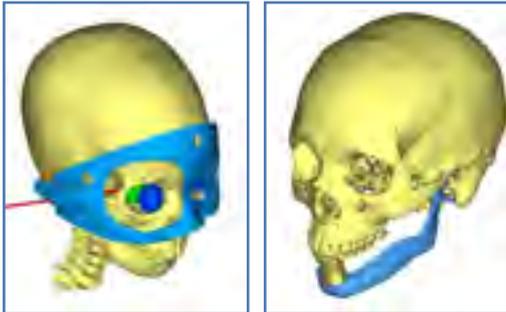


We create and develop technology driven 'Centres of Excellence' that includes distinct academic and business divisions exclusively related to innovative technologies and applied sciences in the aviation industry. The two core business activities will be:

- i. Consultancy services offering high-level management expertise to aviation-related industries.
- ii. A profitable education and training centre whose purpose is to respond to training needs in the aviation industry.

Our strategic business units, i.e. 'Centres of Excellence' includes Bradley Aviation Academy, the Innovation Hangar and Bradley Aviation Certification and Manufacturing - in joint venture with AeroStruct. The joint venture introduced the Lucy Trainer aircraft – an aircraft concept which differentiates itself from international competition through combining this high-tech aircraft that out-performs its competition in technology and aviation performance. This sets new standards as value added providers that meet the current and emerging needs of the industry and in addition, gives a new and dynamic direction to the global aviation industry.





Centre for Rapid Prototyping and Manufacturing

The Centre for Rapid Prototyping and Manufacturing (CRPM) of the Central University of Technology (CUT) offers Additive Manufacturing (AM), generally known as 3D Printing, services and innovation expertise to industry, academia, researchers and students. Since its establishment in 1997 the Centre has extended its offering of Rapid Prototyping and Rapid Tooling for product development and is now also producing customised medical implants in titanium alloy. Reduced theatre time through using these AM implants, as well as cutting/drilling guides, jigs and pre-operative planning models, not only translates into cost saving, but also results in reduced trauma and faster recovery of patients. These products are all manufactured under an internationally certified ISO 13485:2016 quality management system. Based on continuing research, development and innovation, CRPM is now positioning itself to produce components in Ti6Al4V, maraging steel, platinum and flame retardant polymer for the aviation industry.

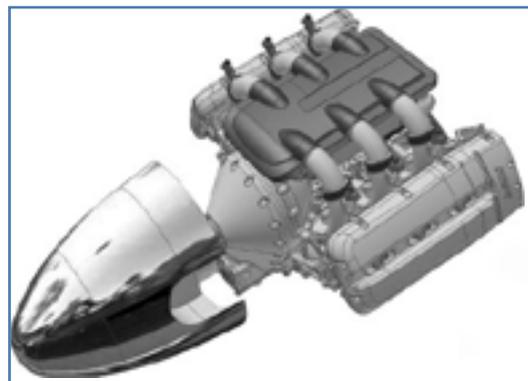
Regarding design and product development CRPM works closely with the Product Development Technology Station (PDTs) of CUT.

We serve the following industries:

- Medical implants and devices
- Aerospace
- Automotive
- Defence
- Consumer products
- Agriculture
- Mining
- Research and innovation

The sky is the limit

The CRPM has a team ready to turn your aviation dreams into reality - we are a "CUT" above the rest.



We acknowledge the ongoing financial support of the Carl and Emily Fuchs Foundation, the NRF SARChI Chair in Medical Product Development through Additive Manufacturing and the Department of Science and Technology through the Collaborative Program in Additive Manufacturing.



emergence

HUMAN CAPITAL

Emergence Human Capital is a specialist Human Capital, Reward and Learning solutions provider. We specialise in enabling greater performance by assisting organisations to better attract, reward, engage, develop and retain highly talented people. We base our solutions design on a deep set of research and IP within various areas of expertise. Strengthened by a network of offices across Africa and underpinned by appropriate skills, tools, technology and resources, we offer lasting solutions for your most complex and pressing problems.

We understand the importance of getting the right people in the right place at the right time – a critical part of our success is matching the skills of our consultants to the requirements of each client, for each component of work, in every project.





The National Aerospace Centre (NAC) is a national support mechanism hosted by the University of the Witwatersrand, that addresses the skills and research needs of the South African aeronautics and space industries.



In order to achieve this, the NAC provides mechanisms to:

- Develop new or more competitive technologies and products,
- Generate new indigenous knowledge,
- Develop skilled human resources for industry,
- Ensure technology transfer into industry,
- Support Greenfield industrial development, and
- Create industrial partnerships with international OEMs such as Airbus and Boeing.



The NAC operates through specific programs and thematic areas as follows:

- Bursaries and scholarships support programme
- Industrial R&D support programme
- Co-ordination, awareness and outreach programme
- Thematic research areas
 - o Aerospace manufacturing processes and materials
 - o Aeronautical dynamics and control
 - o Aeronautical design
 - o Firm level competitiveness
 - o Space engineering and propulsion
 - o System engineering





PARTNERS FOR POSSIBILITY

Putting school at the centre of community

Quality Education by 2025

Partners for Possibility (PFP) is a trailblazing, proudly South African, nation building programme that partners school principals and business leaders on a leadership journey to create a better future for South Africa’s children. The programme is underpinned by research which shows that investing in leadership development at school level has a positive effect on communities.

The Process

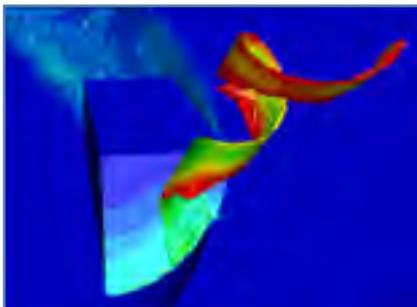
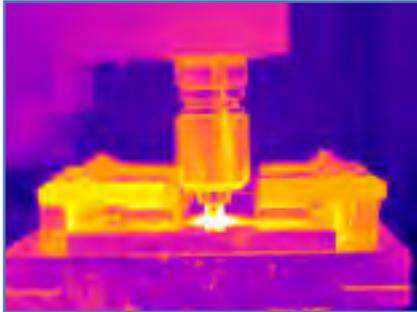
This rewarding programme partners principals from under-resourced schools with business leaders and on a year-long, structured and supported leadership development journey which is facilitated by a professional coach. During this period, both partners use their increasingly honed leadership skills to develop and implement a school improvement plan which addresses the unique challenges that their school faces.

Successes to Date

More than 1000 principals and business leaders have said YES and have created tangible, lasting change in participating schools. Partnering with a principal to share and strengthen leadership isn’t a hand-out - it’s an investment in the future of ALL South Africans through sustainable improvement to our education system. PFP’s innovative concept of capacitating principals through partnerships with business leaders has attracted wide acclaim since the programme’s launch in 2010. Among the most recent was the announcement of the PFP programme as one of the 2018 winners of the prestigious World Innovation Summit for Education (WISE) Award.



Our bold & audacious vision:
Quality education for all children in South Africa by 2025
 (ie significantly improved education outcomes by 2025)

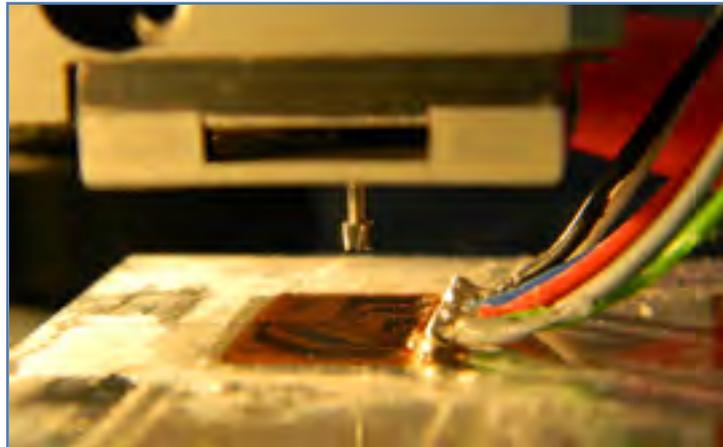


The School of Mechanical, Industrial and Aeronautical Engineering has well-developed capabilities ranging from experimental to simulation, computational and multi-objective optimisation of traditional manufacturing methods, as well as emerging technologies in additive manufacturing such as Cold Gas Dynamic Spraying and 3D Printing.

We are continent leaders in highly specialised manufacturing technologies such as titanium machining, Minimum Quantity Lubrication, and Laser Shock Peening for stress relieving. We also have capability in associated techniques for residual stress testing in conventional and composite materials.

We offer postgraduate short courses and degrees with specialised topics in composite materials, fatigue, fracture mechanics, Finite Element Analysis and systems engineering, amongst others, and can develop tailored short courses for internal development, all of which can contribute to Continuous Professional Development.

Our in-house workshop allows us to develop bespoke apparatus for consultation and postgraduate experimentation in real-time force and temperature process monitoring. As an established NRF, DSI, the dtic, TIA and THRIP partner, we can also offer access to international collaborators in the aerospace industry.





We sincerely appreciate the support of our main funders – the Department of Science and Technology, the Department of Trade and Industry, the Technology Innovation Agency, the National Tooling Initiative Programme, and collaborators – SA Academic Institutions, Fraunhofer Institutes - Germany, industrial partners such as Aerosud Aviation, Denel, Polyoak Packaging.

The Stellenbosch Technology Centre - Laboratory for Advanced Manufacturing (STC-LAM) is part of the Stellenbosch University's Department of Industrial Engineering. The centre is founded upon three focus areas, namely Research and Development, Innovation Action Projects, and Education and Training. Our mission is simple: to deliver novel research, resource efficient solutions, and to support high quality training and education. State-of-the-art equipment for both subtractive (3- and 5-axis CNC HSC Machining Centres, wire- and die sinking EDM) and additive manufacturing (laser beam melting) is utilised towards maintaining the high quality outputs already established. This includes extensive technology transfer to industry, as well as intensive national and international collaboration. We offer services regarding reverse engineering and product design, prototyping and process chain development, additive and subtractive manufacturing solutions, as well as metrology for part inspection.

The roots of the STC stem from 1997 in the form of the Global Competitiveness Centre in Engineering (GCC); since then we have been assisting industry to meet the challenges of global competitiveness. Over the years, we developed a large customer base including partners from the tooling, automotive and medical industries. We work closely with our partners in the aerospace industry to develop, benchmark and improve process chains for high added-value titanium components.

The primary name Stellenbosch Technology Centre (STC) represents the affiliation and the domain of the facilities: "Stellenbosch" indicates the affiliation of the unit to the 'alma mater' Stellenbosch University "Technology Centre" emphasises the focus on the industrial relevance of the facility – identification, acquisition, mastering, multiplication and transfer of advanced technologies to industry through training, demonstration, and dissemination of the acquired and accumulated knowledge via short courses, conferences, seminars, workshops and limited services to local industry.

The secondary name – Laboratory for Advanced Manufacturing (LAM) – symbolizes the research component and academic relevance:

- State-of-the-art technology base for manufacturing engineering research
- Attractive and reliable partner for collaborative projects on national and international level
- Incorporating the Institute for Advanced Tooling into an integrated research domain.





VUT Southern Gauteng Science and Technology Park

Our unique value offering

VUT Science Park operates a unique world class Advanced Manufacturing Precinct to assist entrepreneurs to develop product prototypes and employs engineers, scientists, designers and Additive Manufacturing specialists. The university owns 172 hectares of land with infrastructure such as large auditoriums, office space and incubation facilities, it is located within a community of Sebokeng and surrounded by major industrial partners such as Arcelor Mittal and Sasol. We also have easy access to road and rail services.

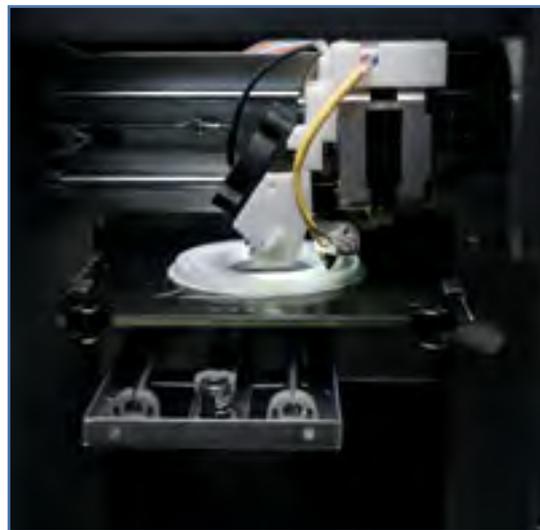
Strategic Focus Areas

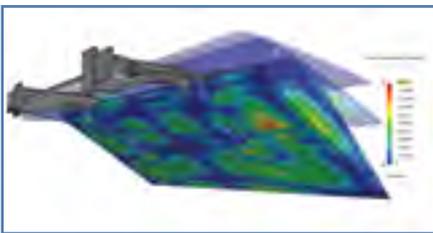
We align with government priorities and with our competitive advantage, we service clients in various sectors such as fashion, hospitality and tourism and Information and Communication Technology (ICT). Some of our strategic focus areas are:

- Advanced Manufacturing Precinct, incorporating one of South Africa's largest manufacturing facility;
- Technology Station – including Product Design and Development, Robotic Milling, Tooling and Finishing Departments
- Energy Optimisation Unit

Strategic Goals

- To support enterprise and regional industrial development
- To foster research, innovation and technology development
- To foster partnerships and communicate impact
- To develop an efficient and financially sustainable organization



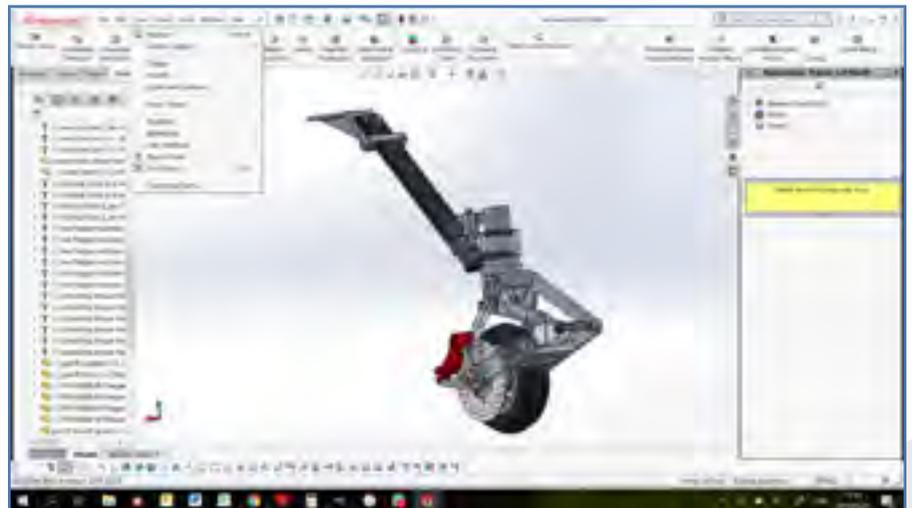


The Association of Aviation Design Organisations was founded to protect the interest of the South African Approved Design Organisations and provide a unified representation from Industry to the SACAA. The Association is highly technical with membership limited to those organisations with a CAR Part 147 approval as well as those in the process of obtaining such approval. This keeps membership current and at high standards.

The main objectives of the Association are:

1. to serve, promote, advance and mutually protect the interests of persons making it their business to design aircraft, their components and/or accessories or design modifications thereto;
2. to act as a link between members and governmental authorities;
3. to make representations on behalf of its members to any authority on proposed legislative or other measure affecting member's interests;
4. to represent its members in any hearing which may be held affecting member's rights or interests;
5. to encourage its members to set high standards of workmanship;

The Association aims to build a relationship with the industry by providing advice and consulting to other industry players. Growth in the field is also encouraged through seeking partnerships with Universities and Technical Institutions ensuring our future is a bright one.





With South Africa taking over the Chairmanship of BRICS in 2018 and with it the Chairmanship responsibilities of the various Working Groups, CAMASA will actively participate, promote its offerings and foster new partnerships in the Aviation Working Group.

The BRICS Business Council was established during the fifth BRICS Summit held on March 2013 in Durban, South Africa. The objective of creating the council was to constitute a platform which will:

- Promote and strengthen business, trade, and investment ties amongst the business communities of the five BRICS countries;
- Ensure that there is regular dialogue between the business communities of the BRICS nations and the Governments of the BRICS countries; and
- Identify problems and bottlenecks to ensure greater economic, trade and investment ties amongst the BRICS countries and recommend solutions accordingly.

6 Working Groups were initially established namely:

- Agribusiness
- Energy and Green economy
- Financial Services
- Manufacturing
- Infrastructure
- Skills Development

A 7th Working Group, the Aviation working Group was established on Brazil's initiative in September 2017.



The main objectives of the Working Groups are to facilitate interaction amongst businesses with a view to better understand the market opportunities, to build synergies based on their respective competitive strength and to promote manufacturing and job creation. These Working Groups are where investment, trade collaboration and opportunities are established and encouraged to create opportunity and growth amongst the BRICS nations and the Governments of the BRICS countries.

Although the Aviation Working Group is new and in the process to fully establish itself, it holds huge promise as it will cut across the complete aviation value chain i.e. design, manufacture, MRO, operators, regulators etc.

Embraer Commercial Aviation company CEO Paulo Cesar said on the sidelines of the September 2017 BRICS Business Forum that Brazil was ready to be involved in developing the internal aviation working group, as it was crucial for BRICS nations.

President of the Russian Chamber of Commerce and Industry (CCI) Sergey Katyrin commented: "..... we have established a working group on internal aviation, as this is a crucial issue for all BRICS nations, all the five countries are large, with a poor transport infrastructure... I think this group is also promising,"





The Commercial Aviation Association of Southern Africa – (CAASA)

CAASA represents the Commercial General Aviation on local, national and regional level. It will serve, promote, watch-over, advance and collaborate with all stakeholders to advance and protect the interests of all players in the aviation sector. CAASA is the vital link between the industry, the South African Government and international bodies.

Membership is open to companies in the aviation industry.

CAASA is the umbrella organisation for eight associations, namely;

- Airports and Aerodromes Association of Southern Africa
- Association of Aviation Training Organisations of Southern Africa
- Association of Aviation Maintenance Organisation of Southern Africa
- The Association of Southern African Aerospace Traders and Allied Industries
- The Helicopter Association of Southern Africa
- Association of Non-scheduled Operators
- The Commercial Unmanned Aircraft Association of SA
- The Association of Aviation Design Organisations

CAASA, your Aviation portal.



Tel: +27 63 717 3460
 Email: sam@caasa.co.za
 Web: www.caasa.co.za



Centurion Aerospace Village



The Centurion Aerospace Village (CAV) is the mandated implementation arm of the Department of Trade and Industry (the dti) with a mandate to develop a sustainable Hi-Tech Industrial Park to strengthen South Africa's Aerospace, Defence and Advanced Manufacturing Industries' value chains to participate and compete globally.

The CAV is an intended Advanced Manufacturing Cluster aimed at attracting and retaining both foreign and local manufacturers and service providers specialising in Commercial, General and Recreational Aviation Aircraft, Defence Systems and Unmanned Systems excluding Ballistics. The aerospace and defence industries are important contributors to the South African economy.

Benefits To Investors / Tenants

A comprehensive shared services model will be developed to support these industries by benefiting from economies of scale and agglomeration, improved processes, increased productivity and cost competitiveness of local manufacturers. These services are not exhaustive and include:

- Central Shared Logistics Centre with a Bonded Facility and other contract logistics options are planned;
- Shared services such as canteen, medical, conference facilities, security and landscaping, etc., will be provided from the Central Hub;
- Infrastructure and facilities maintenance services will be available;
- Access to a state-of-the-art ICT infrastructure;
- "One-Stop-Shop" services related to all regulatory and government requirements; and
- Market access support services where provided by government as part of international trade missions.

Cluster Programmes

The CAV will offer Cluster Programmes such as:

- A SMME Multi-Tenant Facility;
- A Skills Development and Training Programme;
- Small Medium and Micro Enterprise (SMME) Development through an Incubation Programme; as well as
- A Shared Logistics Centre.

Strategic Objectives

The CAV will support the further development of the South African Aerospace and Defence Industries and stimulate economic growth through the formation of a Hi-Tech Industrial Park that business will prefer to locate in, in order to gain a competitive and cost effective advantage from;

- Support to further develop a sustainable supplier base;
- Attraction and retention of key industry players as anchor tenants and service providers;
- Promotion of Broad-Based Black Economic Empowerment (B-BBEE) and mentoring SMMEs & to create opportunities for new entrants to the Industry;
- Provision of facilities and services to complement high levels of technical competency;
- Stimulation of Hi-Tech Innovation, Research & Development including promotion of 4IR; and
- Creation of economies of scale & agglomeration to develop and sustain these clustering effects.

CAV Landside Information

- Consist of 13.6 ha located outside the eastern boundary wall of the Waterkloof Air force Base in Centurion within the City of Tshwane Municipality;
- Focused on tenants and owners of facilities that do not require runway access and/or hanger space;
- Available Funding Options:
 - Build-to-Suit (Design-Build);
 - Build-Operate-Transfer; and
- SMME Multi-Tenant Facility for smaller companies sharing in common infrastructure such as offices and meeting rooms.



Established in 2008 as a corporate association of manufacturers, the Manufacturing Circle is the voice of South African manufacturing. We conduct research and engage with key stakeholders to promote the benefits of manufacturing growth for the broader economy, influence policy, and highlight opportunities and key priorities, enabling the sector as the growth engine of the South African economy.

To achieve these objectives, we have prioritised three clear goals:
 Achieve a competitive manufacturing environment
 Attain a supportive international trade position
 Advance the production of South African manufactured products



Implementation of these goals will assist manufacturing in attaining its rightful place in our economy where the current 13% contribution to GDP could be at least double for our stage of economic development, and in so doing could create 1 million jobs.

Advanced manufacturing is a critical component. The use of new technology, improved process and management methods improves the way in which we manufacture products enhancing our ability to supply locally and compete globally. The Manufacturing Circle is committed to supporting advanced manufacturing in our efforts to achieve a competitive-manufacturing environment. For economic growth. For job creation. For the sake of a better life for all South Africans.





Production Technologies Association of South Africa has the mission of promoting, protecting and supporting the collective interests of the Tool, Die, Mould and Special Machining Industries of South Africa (TDM Industry) in continual support of the growth and development of all manufacturing sectors.

- PtSA is the only Association which focusses exclusively on the TDM Industry in South Africa
- PtSA has the INTSIMBI partnership agreement with government to support the TDM Industry

PtSA offers:

- **Connectivity**

Network of TDM companies.

- **PtSA is the collective voice of the TDM industry**

PtSA facilitates dialogue between the TDM industry and government.

- **Improvement of competitiveness of PtSA members**

PtSA offers an international benchmarking process.

- **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 qualifications
- The programmes are offered in four QCTO accredited state-of-the-art PtSA Centres of Excellence across South Africa.

- **Networking, matchmaking and information programmes**

PtSA offers regular Networking meetings and information programmes for its members.

- **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



think
supply chain
 think SAPICS

- Professional Designations
- Professional Development
- Local Education
- International Certifications
- Annual Conference
- Membership
- Events
- Networking

Supply Chain Management is key to developing and maintaining a sound and sustainable economy. As the Professional Body for supply chain management in Africa, SAPICS is committed to the development of a vibrant community of educated supply chain professionals.

SAPICS has access to superior, world class education with outstanding internationally recognised certifications from global partner associations with whom it is exceptionally proud to be associated. SAPICS is constantly evolving and ensuring that the profession has access to events, activities and education interactions through which SAPICS is able to provide individuals and organisations with improved knowledge, industry leading content and best practices pertaining to the Supply Chain Management Profession – Think supply chain think SAPICS.

The **body**
professionalising
 supply chain
 management
 in Africa





Aerospace Industry Support Initiative

an initiative of **the dtic**



The Aerospace Industry Support Initiative (AISI) is an initiative of the Department of Trade, Industry and Competition (**the dtic**). The AISI derives its strategic direction from government objectives such as the industrialisation of technologies, job creation and industry transformation. These objectives are as contained in government documents and policies such the Aerospace and Defence Masterplan and the South African Economic Reconstruction and Recovery Plan.

Technology Advancement



The aerospace industry is a technology driven industry and as such the AISI assists Integrators, Sub-system suppliers and SMMEs with technology development related to advanced manufacturing in the sector. Through the initiative, industry participants receive support for industrialisation of technologies to the advancement of niche South African capabilities and value propositions to ensure they integrate into the global aerospace value chains.

The AISI also provides industry (especially SMMES) with access to technology roadmapping as well as techno-economic assessment expertise to assist with technology planning and roll out.



To ensure the competitiveness and sustainability of the local aerospace industry, the AISI executes its mandate through the following programmes:

- Technology Based Supplier Development
 - Technology Enhancement (including Technology Roadmapping)
 - Standards and Accreditations
 - Supply Chain Optimisation
- Industry Development and Technology Support
- Marine Manufacturing, Maintenance & Repairs, and Associated Services Development Programme
- Sector Strategic Support Initiatives
- Coordination, Promotion and Awareness



An initiative of the Department of Trade, Industry and Competition, managed and hosted by the CSIR



the dtic

Department:
Trade, Industry and Competition
REPUBLIC OF SOUTH AFRICA



CSIR
Touching lives through innovation



The South African Civil Aviation Authority - Celebrating 20 years of Keeping You Safe in the Sky

The South African Civil Aviation Authority (SACAA) is a Schedule 3A public entity and an agency of the Department of Transport. The SACAA is mandated with regulating, enforcing and continuously improving the levels of aviation safety and security throughout the civil aviation industry, while promoting industry growth and minimising the harmful environmental footprint of aviation.

Compliance to the Standards and Recommended Practices of the International Civil Aviation Organization (ICAO) is key to achieving this mandate. In 2017 the SACAA illustrated its success in achieving this mandate by the outcome of the ICAO Universal Safety Oversight Audit Programme (USOAP) Continuous Monitoring Approach (CMA) safety audit of the country. South Africa aced the audit, thereby elevating the country's rating from 83, 83% in 2013 to 87,37% in 2017, placing South Africa first in Africa and 30th globally.

The benefits of the SACAA's assistance towards regulatory compliance are evident in South Africa's impeccable zero percent fatal accident record in relation to scheduled commercial operations; and the prominence of the country in chairing top structures of forums advancing civil aviation, such as ICAO's strategic Aviation Security Panel.

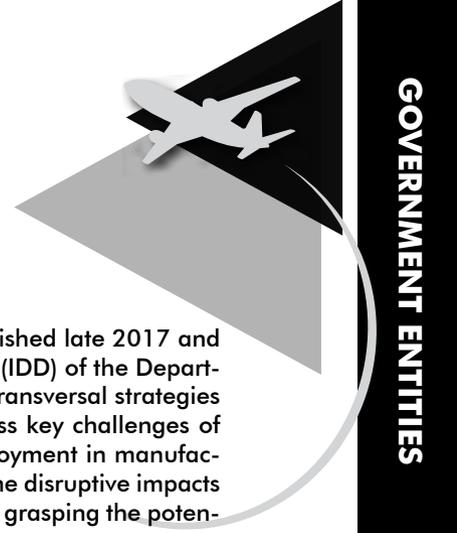
In recent years, the SACAA has adopted a client-centric approach, which gives greater effect to one of its mandates, which is to help develop the aviation industry. In this regard, the SACAA has introduced a process that ensures that the development of civil aviation regulations takes into account the financial implications of compliance for licence-holders.





the dti

Department:
Trade and Industry
REPUBLIC OF SOUTH AFRICA



What is new at the Department of Trade and Industry?

The Future Industrial Production & Technologies (FIP&T) unit was established late 2017 and functions as a business unit within the Industrial Development Division (IDD) of the Department of Trade and Industry (the dti). This unit is mandated to develop transversal strategies and policies aligned to the Fourth Industrial Revolution (4IR) to address key challenges of inclusive economic and industrial growth, and raise the share of employment in manufacturing in South Africa. This means the unpacking and identifying of all the disruptive impacts of the 4IR on existing value chains, the employment landscape and also grasping the potential technological and innovation opportunities for the local economy.

On-going participation in international research ensures that the unit is updated with all the realities associated with the 4IR. In particular, the FIP&T unit is involved in the World Economic Forum's (WEF) Shaping the Future of Production Systems initiative. Two focus areas include the Country Readiness for the Future of Production programme which analyses how well countries are positioned today to shape and benefit from the changing nature of production in the future; and the Employment and Skills for the Future of Production programme which aims to understand the length and depth of the adjustment period of employment and re-skilling requirements, in the context of regional and global value chains.

Early South African areas of response

- Aggressive technology acquisition, transfer and diffusion;
- Securing inward investment from global
- OEMs in key strategic value chains to build global competitive capabilities [e.g. Mining and mining capital equipment; fuel cells; aerospace and defence]

- Stepped up research and development and commercialisation efforts, led by the DST and its institutions, in close collaboration with **the dti**



- A much stronger institutional architecture to support technology transfer - building on excellent examples like the Technology Localisation Implementation Unit at the CSIR

- Strong institutional arrangements and programmes to support innovation: tax incentives to encourage acquisition and innovation in production capabilities, new systems, processes, products and exports.



GAUTENG PROVINCE

ECONOMIC DEVELOPMENT
REPUBLIC OF SOUTH AFRICA



The aim of the Gauteng Department of Economic Development (GDED) was established to lead, facilitate, and manage sustainable job creation and inclusive economic growth and development in the Gauteng province. The Department's mission is to be an activist, interventionist and developmentally-focused department contributing to an inclusive and growing economy in Gauteng by providing thought leadership to inform the economic development agenda; mobilising stakeholders to partner with for economic growth and development; creating an enabling regulatory environment and stimulating business practices that promote inclusive economic growth; enhancing the competitive advantage of key sectors of the economy; promoting and attracting trade and investment to the economy; directing investment into strategic economic infrastructure; and proactively linking communities to economic opportunities.

To achieve this mission the department has adopted the Growing Gauteng Together 2030 (GGT2030), the plan sets out the vision for the Gauteng of 2030, it extends on the principles and priorities contained in the NDP for the Gauteng province

Ten high-growth sectors as per GGT2030

- Energy, with a focus on new technologies and a diverse energy mix
- Transportation and logistics
- ICT and digital services with a focus on the gig economy
- Tourism and Hospitality
- Food, Beverages, Agro-processing, and agribusiness
- Construction and Infrastructure
- Automotive, Aerospace and Defense
- Financial services
- Cultural and creative services
- Cannabis industries



Tshepo 1 Million provides hope to young people in Gauteng who are unemployed and looking for a way to access the skills and learning that will prepare them for the world of work.

Opportunities That Are Available Through Tshepo 1 Million:

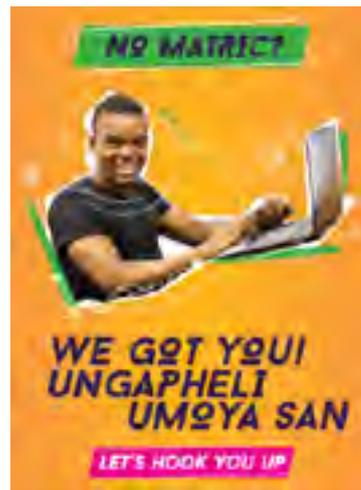
- Formal employment in companies of all sizes.
- Public works programmes.
- Micro enterprise opportunities.
- Work experience and volunteering opportunities to build your CV.
- Learning opportunities.

Who Is Eligible For Tshepo 1 Million:

- Unemployed residents of Gauteng
- Aged between 18 - 34 years old
- With at least a Grade 10
- First time work seeker - no more than 12 months work experience

Who is eligible for Tshepo 1 Million?

- Unemployed residents of Gauteng
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Industrial Development Corporation

Your partner in development finance

IDC profile

The Industrial Development Corporation (IDC) was established in 1940 by an act of Parliament and is fully owned by the South African government. It was established to spearhead the development of domestic industrial capacity, especially in light of the shortages of manufactured goods experienced as a result of the disruption of trade between Europe and South Africa.

For more than 70 years, the IDC has been instrumental in implementing South Africa's industrial policy, establishing some of the industries that have since become the cornerstones of the country's manufacturing sector. These include the petrol-chemicals and minerals beneficiation industries. Apart from large industrial projects in these industries, the IDC has been instrumental in the establishment of other industries including fabricated metals, agro-industries and textiles.

In recent years, IDC's priorities have aligned with government's policy direction as set out in the National Development Plan (NDP), Industrial Policy Action Plan (IPAP) and the Agriculture Policy Action Plan (APAP). The Corporation has also focussed on the need to maximise development impact through job-rich industrialisation while contributing to an inclusive economy by funding black industrialists, women and youth-owned enterprises.





Aftercare Services

- Advice on recruitment, talent and skills
- Advice on lifestyle amenities, e.g. location of housing, schools, etc.
- Policy advocacy
- Investor surveys
- Business forums
- Retention and expansion services

InvestSA is mandated by the IMC on Investment and Presidency to champion the establishment of the One Stop-Shops. Specifically then this will be implemented through the establishment of the National One Stop Shop and roll out to all provinces over the next three years.

The One Stop Shops (OSS) will be the focal point of contact in government for all investors to coordinate and facilitate the relevant government departments involved in regulatory, registration, permits and licensing. The OSS will significantly shorten and simplify administrative procedures and guidelines for the issuance of business approvals, permits and licences and thereby remove bottlenecks faced

InvestSA is a division of the South African Department of Trade and Industry (the dti), providing a One-Stop-Shop service to investors. It provides investment promotion, facilitation and aftercare, which is geared at fast-tracking projects and reducing government redtape. InvestSA facilitates the increase in the quality and quantity of foreign and domestic direct investment by providing an investment recruitment, problem-solving and information service to retain and expand investment in South Africa and into Africa.

InvestSA actively markets, promotes and facilitates investment in key high-yielding growth sectors of the South African economy.

What services do we offer?

Investment Information

We offer specialist advisory services in the following areas:

- Economic environment
- Regulatory environment
- Legal environment and compliance
- Industrial development and financial support
- Investment guides

Investment Facilitation

- Inter-Governmental coordination and facilitation
- Company registration and CIPC services
- Business permits and Visa Facilitation Service
- Facilitation with UIF and Compensation Fund
- Environmental Impact Assessment
- Facilitation with SARS and Customs
- Facilitation with Mining Permits
- Facilitation with NRCS, ITAC and SABS
- Municipal facilitation
- Facilitation with SOEs
- Incentive facilitation
- Facilitation with Land Zoning and transfers
- Location analysis and facilitation
- Critical infrastructure and utilities
- Broad-Based Black Economic Empowerment (B-BBEE)
- Introduction to financial institutions and funding opportunities
- Priority sectors, designation and localisation
- Site visits and business-to-business programmes
- Partnerships with stakeholders
- Enterprise development and supplier development
- Introduction to raw material suppliers
- Advice on customs clearing and logistics
- Investment promotion and international investment missions
- Facilitation by the dti representatives stationed worldwide

About Seda

The Small Enterprise Development Agency (Seda) is an agency of the Department of Small Business Development. Seda was established in December 2004, through the National Small Business Amendment Act, of 2004.

It is mandated to implement government's small business strategy; design and implement a standard and common national delivery network for small enterprise development; and integrate government-funded small enterprise support agencies across all tiers of government.

Seda's mission is to develop, support and promote small enterprises throughout the country, ensuring their growth and sustainability in co-ordination and partnership with various role players, including global partners, who make international best practices available to local entrepreneurs.

Seda Offerings

Seda branches provide offerings that assist businesses in various phases of their life cycle.

Seda Business Build – Offerings focusing on clients who want skills to sustain and strengthen their businesses.

Assistance Provided: Capacity Building Systems Mentorship Tender Advice/Procurement Export Readiness Franchising

Seda Business Grow – Offerings focusing on clients who want to grow their businesses and expand nationally and internationally.

Assistance Provided: Business Systems Development Cooperative Support Growth Strategies

Seda Business Talk - Offerings focusing on clients who want information on starting a business.

Assistance Provided: Business Advice and Information Small Enterprise Training Business Registration

Seda Business Start – Provides tools and techniques for clients who are ready to start a business and want assistance and direction.

Assistance Provided: Business Planning Business Counselling Facilitation of Access to Finance Business Support





About Tshwane Economic Development Agency (TEDA)

TEDA was established with the primary objective of cultivating an environment within which the City of Tshwane (CoT) can grow its human capital and the economy through the facilitation, implementation and management of developments with a specific focus on economic development and investment attraction into the greater Tshwane.

Services offered



1. Investment promotion & aftercare
2. Export development and promotion
3. Project management and development facilitation

What we do



1. Investment promotion and aftercare

We promote the City of Tshwane as a leading investment destination for South African and international investors. Our priority sectors include: Aerospace and Defence, Automotive and components, Business Process Outsourced services, Agro-processing and other manufacturing and services sectors. We facilitate investments into the City of Tshwane with aim of making the investment process as seamless as possible. We provide aftercare support for investors in the City of Tshwane to ensure long and sustainable operations in their chosen location.

2. Export promotion and development

TEDA provides export development and promotion services to existing and emerging companies located in Tshwane to assist them gain access to international markets. TEDA provides market entry information including undertaking inward & outbound trade missions as well as facilitating export finance, export insurance and export incentives.

3. Project management and development facilitation

Identify, design, facilitate and manage development projects with strategic economic and social benefits for the greater Tshwane community. This is realised through project management and development facilitation of City of Tshwane projects, implementation of City of Tshwane Development strategies, private sector processes and project which TEDA conceptualises itself.





Western Cape Government
Economic Development and Tourism

BETTER TOGETHER.



Air Access stakeholders signing an Memorandum Of Understanding to start the Cape Town Air Access operations.

From left to right: Deon Cloete (General Manager, Cape Town International Airport), MEC Alan Winde (Western Cape Minister of Economic Opportunities), Patricia De Lille (Executive Mayor, The City of Cape Town), Tim Harris (CEO, Wesgro), Enver Mally (Chairperson, Cape Town Tourism).



Direct routes also open up relationships between countries that enable the exchange of not just visitors, but they promote trade. And more trade and investment means a stronger economy, with the capacity to create more jobs. By solving our flying problem, we'll be solving a lot of our province's problems too.

It's been 115 years since the Wright brothers solved what they called "the flying problem", thereby opening up the skies to endless possibilities.

In the intervening years we've seen new innovations ranging from supersonic flight to the creation of low-cost airlines which have made the power of flight available to the masses.

A few years ago, the Western Cape decided to tackle its own flying problem: a lack of direct flights into Cape Town International Airport. In 2015, the Air Access project was born. The project is a partnership between the Western Cape Government, the City of Cape Town, Wesgro, Airports Company South Africa, Cape Town Tourism, South African Tourism and the private sector. It's primary aim is to secure direct flying routes into Cape Town but it forms part of a much bigger strategy, called Project Khulisa which is aimed at growing the Western Cape economy, and creating jobs by focusing on tourism, agri-processing and the oil and gas sectors.

Since its inception, Air Access has increased the number of inbound seats into Cape Town by nearly 800 000, and negotiated over a dozen new routes and a further 17 route expansions. We have opened up new routes in Africa, Europe and Asia. In a major move, Cathay Pacific will launch a seasonal, three times per week non-stop flight between Hong Kong and Cape Town later this year.

And as I write this, we are celebrating the news that Air Access and the Cape Town International Airport have just received three awards at the Routes Africa Marketing Awards, picking up the overall winner, destination marketing and Cape Town International won for best airport in the category servicing between 4 and 20 million passengers.

International terminal passenger growth grew by 20% in 2017, while international cargo growth of 52% was recorded as a result of the added freight capabilities.

A study commissioned by the Air Access team and conducted by Grant Thornton anticipates that the addition of a new flight like the Cathay Pacific flight, could create an additional 1 000 jobs in the Western Cape economy. Naturally, many of these will be in the tourism sector but the opportunities extend far beyond this. More planes in Cape Town means a need for aviation skills such as aircraft mechanics, air traffic controllers and many more technical skills.

This is where our apprenticeship game changer comes in. As a province, we recognize the need for the kinds of technical skills that helped the Wright brothers solve their flying problem. Apprenticeships enable on-the-job training for young people to develop these key skills.

Our data as at the end of December 2017 shows that in the province a total of 6 782 learners had registered on work place-based learning programmes, such as apprenticeships, since April 2016 when we set our targets. We aim to achieve at least 13 221 such learners by 31 March 2019. However, what is more gratifying is that these learners are not in just any programme, they are registered on sixty two (62) of the ninety one (91) specific occupations linked to the five priority economic sectors of the Western Cape.

AED



CLUSTER PORTUGAL

AERONAUTICS, SPACE AND DEFENCE



AED Cluster Portugal (AEDCP) is the Portuguese Cluster of the Aeronautics, Space and Defence Industries and was created in 2016 as a private non-for-profit organization, inheriting the track record of three previous sectorial associations for Aeronautics (PEMAS), Space (PROESPAÇO) and Defence (DANOTEC).

AED Cluster Portugal mission is to provide a one-stop-shop and entry point in Portugal for national and international stakeholders of the three sectors, providing an effective hub and cluster networking environment for cooperation, growth and competitiveness of the Portuguese industrial, scientific and technological communities.

AED Cluster Portugal objectives include disseminating relevant information, increasing the visibility of its members at national and international level, organizing courses, congresses and workshops, supporting grants and prizes or developing projects for internationalization and capacity building of its members.

AEDCP has 60 associates, from industry companies to R&D centres and universities, and gathers the main stakeholders from the three sectors, taking advantage of the added value raised by the increase in critical mass and trans-sectorial synergies.





Sales of Civil Aircraft



General Aviation Service



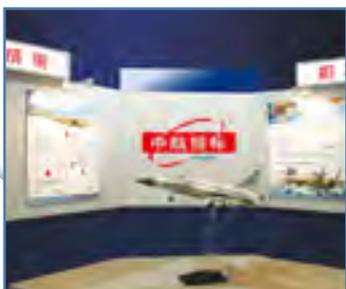
Industry Cooperation and Maintenance Service



Aviation Business Cooperation



Flight Training



Flight Training

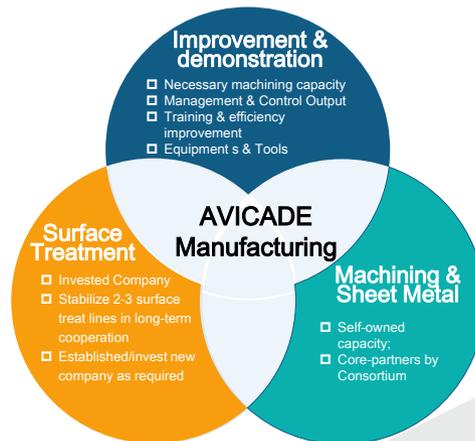


AVIC International Holding Corporation (AVIC INTERNATIONAL) is a global holding enterprise, under the control of Aviation Industry Corporation of China Ltd. (AVIC). Our business involves four segments: aviation, electronic information, international business, and modern services. The corporation owns 9 domestic and foreign listed companies, and has established over 120 branches in more than 60 countries and regions. Our clients spread in over 180 countries and regions.

With aviation business at the core, AVIC INTERNATIONAL focuses on the global aviation industry chain and the business ecosystem, particularly the development of aviation supply chain integrated services system, aviation manufacturing services and aviation operations services. The business covers international aviation technology cooperation, aviation logistics, the integrated supply services for aviation standard parts, subcontract production and aviation component manufacturing, the purchasing and integration services for aviation manufacturing equipment, general aviation engine manufacturing and services, civil and general-purpose aircraft sales and aftersales services, flight training, aviation maintenance, and bidding business.

AVICADE supply chain management

- AVICADE company is focusing on the aviation products supply chain management with certifications of AS9100 and AS9120, and also established the Consortium in Dec. 2014 to pool and utilize resources of Small & Medium Enterprises (SMEs).
- The Consortium now has grown to a more than 50 SMEs combination from 19 SMEs at the very beginning, including members and observers.
- AVICADE provides good products to customers, while provides services of supplier management/development, quality & manufacturing engineering, technical surveillance & engineering liaison support, supplier surveillance & program management, logistic & Customs solutions, etc.



PIEMONTE

ITALY

THE PLACE TO INVEST



Piemonte, North Western Italian region, has **the highest concentration of Italian aerospace companies**. The region offers **a complete pipeline of skills and qualifications**, high-level manufacturing, processes and service companies, cooperation with universities and the R&D network, unique products and engineering know-how, educational & training system and an organised supply chain. The Piemonte aerospace scenario is further enriched by the presence of Piemonte Aerospace District Association, the Italian Institute of Technology (IIT), the Centre for Space Human Robotics (CSHR) - a spin-off from the Politecnico of Torino - and by the core of Italy's Space industry together with some international key players.

Piemonte is home to **Aerospace & Defense Meetings** (www.aerospacemeetings.com), the only international business convention for the aerospace & defense industry organized in Italy to be host **in Torino on 26-27 November**. It is a global and cross-sectorial event that offers to the international aerospace community the possibility in 2 days only to meet and build up targeted business relations, develop innovative projects, get updated on the latest solutions, processes, technological achievements, trends and international Primes' purchasing policies and supply chain management. For big players this is a unique occasion to optimize time in the research of new suppliers, innovations and solutions.

The event is organized within the framework of **Piemonte Aerospace**, a special project promoted by *Regione Piemonte* (Regional Government) co-financed by the European Regional Development Fund 2014-2020 and managed by *Piemonte Agency*, providing **a free and supply chain focused assistance to international players** to meet and start business with top class aerospace selected enterprises based in Piemonte. Aerospace & Defense Meetings is organised by ABE-BCI Aerospace in collaboration with Piemonte Agency. Regione Piemonte and the *Torino Chamber of Commerce* are its host sponsors.

PIEMONTE, A LEADING GLOBAL HUB FOR AEROSPACE

- 280 SMEs
- 14,800 employees
- € 3.9 bn turnover
- 17% of national exports
- International key players
- **Innovation as a driving force**
- 200 private and public R&D centers
- 4 Science & Technology Parks
- 7 Innovation Hubs
- 4 Universities
- 3 University business incubators
- 1st Italian region in terms of private investment in R&D
- 3rd Italian region for hi-tech patents.



Managed by

 CENTRO ESTERO INTERNAZIONALIZZAZIONE
 PIEMONTE Agency for Investments, Export and Services
Approved by Regione Piemonte and Chamber of Commerce

 UNIONE EUROPEA



 REGIONE PIEMONTE

Regional policy for smart, sustainable and inclusive growth

INTEGRATED SUPPLY CHAIN PROJECTS ARE CO-FINANCED WITH EUROPEAN REGIONAL DEVELOPMENT FUND

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aerospace@centroestero.org
www.piemontetheplacetoinvest.it



Established in 2013, the South African Portuguese Chamber of Commerce (SAPCC) aims to serve one of the largest Portuguese communities outside Portugal.

Based in South Africa, the largest economy and the country with the best infrastructure in Africa, the SAPCC has, as its most important goal, the organising and representing the business and professional interest of all Portuguese entrepreneurs and professionals in the region, as well as of their descendants.

Additionally, we also aim to deliver on the following :

- Maintaining that largest business database of Portuguese owned, operated or managed businesses and practises.
- Stimulate and grow business as well as professional exchange.
- Maintain and further enhance the image and professional standing of our members.
- Organise networking and other events of interest to our members.
- To gather and disseminate information of relevance.





Company information

CAMASA is a non-profit company established by the Commercial Aerospace Manufacturing sector in 2016
Registration No: 2016/360027/08

Registered address: 520 van Ryneveld Avenue
Pierre van Ryneveld Centurion
0045

Postal Address: PO Box 60531
Pierre van Ryneveld
Centurion
0045

Tel: +27 (0) 12 662 5000/5010
E-mail: marketing@camasa.co.za
Website: www.camasa.co.za

Board of Directors:

Themba September Representing: fly Adept



Themba graduated cum laude, at Masters level, in Law and Economics at the University of Bern, Switzerland. His career spans the services sector – in particular Banking, academia, and management consulting – with a penchant for turnaround management and work-outs. In SA, he co-founded the Development of Southern Africa, simultaneously turned around 4 subsidiaries of a foreign multinational located in neighboring BLSN countries, was Executive Chairman of Ingerop South Africa – a subsidiary of the Ingerop Group, consulted on SME development to the APDF – an IFC subsidiary.

Passionate about wealth preservation, Themba was the founding Chairman of ABASA – the pre-cursor to the SA Turnaround Management Association, and the organization behind the motivation of Chapter 6 in the Companies Act dealing with the business rescue. Themba possesses substantial general management experience at both corporate and operating divisional levels and enjoys mentoring and transferring skills to high-potential budding talent.

He is currently CEO of ADEPT – a GA propulsion development and manufacturing company domiciled in KZN.

Website: <https://flyadept.co.za/>
Facebook: FlyAdep



Johan Steyn Representing: Aerosud

B.Eng (Mechanical) in 1984 at University of Pretoria, later completed his B.Eng (Hons) and then added various Program management courses and Continuous Improvement strategies such as LEAN and Theory of Constraint and Logical Thinking courses. He registered as a professional engineer (Aeronautical) at ECSA in 1990, and later served on the Aerospace Professional Advisory Committee for more than 10 years. During his engineering career, he worked as a structural analysis engineer on Rooivalk, later became the Chief System engineer for the Mirage-Engine upgrade with Mikoyan and Klimov, and participated in diverse aviation projects in the 1990's as part of the Aerosud diversification journey.

He played a key role in industrialising the first production contract and technology transfer from the Boeing company in 2000.

He is currently the Managing Director of Aerosud Aviation (Pty) Ltd and a Director of Aerosud Holdings (Pty) Lt and ANDTc (Pty) Ltd, and a Director on the Board of CAMASA.

Aerosud Aviation employs over 500 people in Commercial Aircraft parts Design and Manufacture for the likes of Boeing and Airbus. The company is an AS9100 revD certified organisation, with limited EASA approval as well as several NADCAP approvals. Aerosud has been an exporter to global OEM's since 2000. Locally, the company was recognized as the Manufacturer of the Year and Exporter of the year in the Annual Premier Business Awards of 2016 and 2017 respectively. The Company is involved directly in Industry 4.0 technology applications and collaborations, expanding into a new business offering.

He is passionate about what Aerosud stands for and what they have achieved over the years by introducing leading technologies in manufacturing and integrated business systems. He is equally excited about the future and especially the rise and acceptance of Industry 4.0 solutions in the sector. Their relationship with large international groups, such as Airbus, Boeing, Safran, and Spirit AeroSystems is testimony to the SA private aerospace industry's fundamental competitiveness and world-class capability.

He believes that Aerosud and the South African Aerospace sector can thrive if we can create stronger networks through collaboration and partnerships – between private industry and public sector, to significantly grow the export opportunities for this sector.

This is one of the main reasons why he played a key role in the formation of CAMASA in 2016.

Website: <https://www.aerosud.co.za/>
Facebook: AerosudAviation

JC Pina

Representing: Aerotechnic Pty Ltd

Born and bred in Africa, JC completed a Mechanical Engineering degree at the University of Cape Town, and after 5 years in the Hydraulics Engineering and Manufacturing industries, identified a niche market to support the African Airlines with spare parts and services. Jointly with JP Guyeu, in 1994, Aerotechnic was established in South Africa to fulfill the identified need.

Since then, in close co-operation with his partners, the Aerotechnic group of companies today has a global footprint, which also incorporates Harmony Aerospace France (Toulouse), covering the European market, software development company AMS (France), and more recently AeroNet of Things (South Africa).

This development of the group of companies has culminated in the establishment of the Stavia Group (France).

Website: www.aerotechnic-sa.com



Rowland Chute

Representing: Daliff Precision Engineering (Pty) Ltd

Rowland A Chute (born 1953) is Chairman of Daliff Precision Engineering, and has executive responsibility for the development of the Company's long-term strategy and marketing.

Rowland graduated from the University of South Africa with a B.Com and MBL degree, and a Post Graduate Diploma in Law from the University of Cape Town.

He spent 35 years with Old Mutual including being a director of Old Mutual Asset Managers, during which time he held a number of JSE listed company directorships.

Website: <https://www.daliff.co.za/>



Louis Bruwer

Representing: Incomar Aerospace And Defence Systems

Louis Bruwer has spent all his career in various roles within aviation and takes pleasure in sharing a working life of experience to promote aviation safety and standards through innovative engineering, wherever he serves.

His alma mater was in Stellenbosch, both High School and University where he received a Bachelor's in Mechanical Engineering. He had a colorful and rewarding career in many respects that started in 1979 in the SAAF, during which time he was also a distinguished engineering graduate at the National Test Pilot School, USA.

He had since worked on various projects in several countries in the positions of Flight Test, Systems Development, and Certification Engineering with companies such as Dornier, BAES, SAAB, Eurocopter, Aerosud and others.

He strongly believes in the potential and capabilities of the South African Aviation Industry, and from his own career he forwards his motto to the follow-up generations of engineers, technicians and aviators to; "embrace aexch and every opportunity to equip yourself with knowledge and skills, and always return exemplary work of only the highest standard!"

Website: www.iadsystems.co.za



Sibongile Sambo

MBA-Manufacturing Candidate at Gibs, Twims
Representing Dynamic Aerotech (Pty) Ltd

Sibongile Sambo is a pioneering businesswoman of South African aerospace with over 18 years of experience in the industry.

She is the founder and Chief Executive Officer of Dynamic Aerotech (Pty) Ltd and Aero Metals (Pty) Ltd, Sibongile is a Businesswoman; Entrepreneur, and Motivational Speaker who is passionate about women's development & empowerment.

Sibongile has been awarded various accolades both locally and abroad. Sibongile holds a Bachelor of Administration, Bachelor of Administration Honours, Advanced Programme in Organisational Development, a Marketing certificate, a Mining Executive Preparation Programme. Sibongile has completed an International Executive Development Programme at GIBS Business Schools (Gordon Institute of Business Science) and Rollins College USA, 2016.

Sibongile holds a postgraduate diploma in general management. Sibongile is completing her MBA at Gordon Institute of Business Science.

Website: www.dynamicaerotech.co.za | www.aerometals.co.za | www.dyondzo.co.za



Benjamin Hlophe

Representing: Kutleng Engineering Technologies

Benjamin Hlophe is director of technology operations at Kutleng Engineering Technologies group of companies. He is passionate about the development of safety and mission-critical systems and applications using FPGA electronic technologies.

Benjamin has over 18 years of working experience using FPGA technology. Through his work at Kutleng he has gained international recognition as a field expert in FPGA technology.

His other interest is in engineering human capital development, where he has trained more than 600 engineers in FPGA technology in Southern Africa.

Website: <http://www.kutleng.co.za/>



Pauline Bullock

MSc Eng(Chemical, UKZN) BComm (Quant Man, UNISA)
Representing: Rapid 3D JV (Pty) LTD

Pauline currently serves as a Director of Rapid 3D and CAMASA and on the committee of RAPDASA.

After lecturing chemical engineering at UKZN, Pauline joined Systems Automation and Management to run the KZN branch. In 2004 Pauline started Rapid 3D, carrying all responsibilities until 2010 was David Bullock joined full time to share responsibilities. Using her knowledge of materials science, her strong management and problem-solving skills, Pauline grew the business, adding a range of high-end 3D printing technologies to the service bureau and expanded to include 3D printing equipment and software sales.

In her spare time, Pauline can be found cycling the trails in the KZN Midlands.

Website: <https://rapid3d.co.za/>
Facebook: <https://lnkd.in/dSqbmjV>
Twitter: <https://lnkd.in/dVPUMK6>



Zak Fourie

Representing: SIMTEQ Engineering (Pty) Ltd

Zak Fourie started his professional career during his post-graduate studies as a Red Bull Student Brand Manager and as a research assistant at the North-West University's Mechanical Engineering department. He was employed by AHRLAC to fulfil the role of a stress engineer but grew into various roles with regard to aircraft design and manufacturing activities. He consulted in the automotive sector for a brief period.



Sharing the aerospace DNA with one of his favourite brands and Computer-Aided Engineering (CAE) suppliers, Hexagon | MSC Software, he pursued a career in simulation technology and business development with their sub-Saharan business partner, SIMTEQ Engineering.

Website: <https://simteq.co.za/>
Instagram: <https://lnkd.in/gVvhKem>

Prof. Dr. Oliver F. R. A. Damm

PrEng, PhD, MEM (Engineering Management) Associate Professor extraordinary
(Stellenbosch University)

Representing: Stellenbosch University

Dr Oliver Damm is a Professional Engineer and holds a PhD in Metallurgy and Materials Engineering as well as a Masters Degree in Engineering Management. He is an Associate Professor extraordinary in the Industrial Engineering Department at the University of Stellenbosch.



He started his career at the Council for Scientific and Industrial Research (CSIR) in South Africa, where he held the position of manager of the National Product Development Centre until 2002.

Between 2002 and 2006 he was the Managing Director of the Southern Africa Stainless Steel Development Association (Sassda), which represents the organized stainless steel industry and is recognized as one of the leading industry development associations in the world.

Since 2007, Oliver is a partner in LHA Management Consultants (Pty) Ltd, a business consulting firm focusing on techno-economics, industry analysis and development, feasibility analysis and business strategy development, business performance benchmarking, and innovation and programme management. He has conducted many assignments for private and listed companies in the technology, automotive, manufacturing, construction, IT, technology, and financial sectors, as well as government departments and public sector institutions.

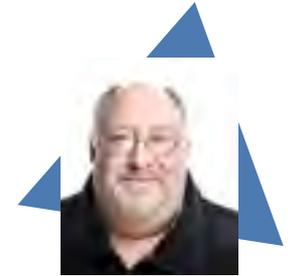
Oliver has significant experience in the development and implementation of major technology and industry development initiatives. He participated actively in the development and implementation of the Advanced Manufacturing Technology Strategy (AMTS), the Advanced Metals Initiative (AMI), and the National Titanium Metals Industry Development Programme of the South African Department of Science and Technology. He was also the founding chairman of the National Foundry Technology Network (NFTN), a dti-sponsored initiative to support the local foundry industry in improving its competitiveness. Oliver has worked extensively with Unido in South Africa, particularly in relation to benchmarking of manufacturing enterprises in the foundry, electrical, and stainless steel industry, as well as supplier development through the Technology Assistance Programme of the DST.

Since April 2014, he is a Senior Advisor in South Africa for the Fraunhofer Gesellschaft, Germany, Europe's largest applied research and technology development organisation.

Website: <https://lnkd.in/dwgEjXts>

Hendrik L van der Merwe

Representing: VUT Southern Gauteng Science & Technology Park at Vaal University of Technology



Born and raised in the rural areas of Eastern Transvaal's Lowveld, today known as Mpumalanga. Hendrik van der Merwe completed his matric at Rob Ferreira High School in 1979. He furthered his education at the University of Pretoria and obtained a degree in Agricultural Engineering. He also finished his MEng in Industrial Engineering at the University of Stellenbosch.

With an exceptional track record and skills in fields such as Business and Engineering, Design and Development, Van der Merwe has established himself in the private sector and Eskom. With ventures like The Secure Airway Clamp, he has built long-lasting relationships in the medical industry including Attorney's Hahn Hahn and CUT.

A true example of a well-rounded and cultured South African, Van der Merwe has traveled the world and took part in many ground-breaking projects such as extensive research regarding the replacement of low dosages of antibiotics with a system applying activated water to piggeries in the UK at the Farm electric Centre at Stone Leigh. Also, The Greenhouse technology with Philips in the Netherlands and The Transformer development and marketing with Thira Thai in Thailand to mention a few.

Mr. Hendrik's experience includes working as Department Head - Agricultural Development from 1987-1988, Sector Manager - Eskom/Agrelek (Megawatt Park) from 1988-1994, General Manager - York Enclosures - ABB (Botshabelo) from 1994 - 1998, Managing Director - Kopanang Convertors (Bloemfontein) from 1998-2013, Operations Manager - VUT TechnologyTransfer Innovation from 2013 till date, where Mr. Hendrik successfully hosted SATN Conference 2015, Italian Summit 2016, RAPDASA Conference 2016 and Tissue Engineering and Regenerative Medicine Conference 2017.

Facebook: <https://lnkd.in/dMTtF5S>

Website: <https://lnkd.in/dvUfeBKa>





CAMASA
Chemical Engineers' Manufacturing Association South Africa

CAMASA's Strategic Partner



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