

# PIONEERS

IN THE CAPE HEALTH TECH INDUSTRY

A CITY  
LEADING  
THE WAY

CAPE TOWN AND THE  
WESTERN CAPE IS THE  
HEALTH TECH HUB OF AFRICA

LEADERS  
INNOVATORS  
TRAILBLAZERS

27

GROUNDBREAKING  
HEALTH TECH COMPANIES

EDITION 3

CAPE TOWN  
AFRICA'S TECH CAPITAL

# Preface

In this edition of *Pioneers*, we celebrate the leaders, the innovators and the trailblazers in the health tech industry operating in Cape Town and the Western Cape.

From world-class digital health companies to businesses delivering cutting-edge medical devices, we profile some of the very best in the sector in this magazine.

This is a timely edition, with the global spotlight firmly on the health tech industry after it moved to the front line of the fight against the COVID-19 pandemic. The local industry was – and still is – heavily involved in this fight, both locally and abroad. In fact, companies based in Cape Town and the Western Cape have shown incredible resolve in the face of the crisis. The rapid development of more effective PPEs, crucial support in the development of a vaccine, solutions to transport and store it at ultracold temperatures in an African climate, and the development of drive-through testing sites are just some of the work spearheaded by local companies.

Rather than fold in the face of this global crisis, the local health tech economy continues to show its mettle and commitment to growth, with many companies profiled in this magazine, speaking to positive results and an industry that is agile and resilient due to a wide range of skill sets and a commitment to providing exceptional healthcare through health tech solutions.

The Western Cape health technology sector currently contributes an estimated R1,7 billion to the Western Cape economy and creates approximately 2 500 full-time jobs. The Western Cape has spent more than R6 billion on healthcare capital infrastructure in the last 10 years. The province boasts some of the best health outcomes of South Africa's nine provinces.

The province benefits greatly from its four world-class universities, two academic hospitals, the South African Medical Research Council, as well as the Centre for Proteomic and Genomic Research (CPGR), providing state-of-the-art services to the life science and biotech communities in South Africa.

The Western Cape also hosts one of the highest concentrations of medical device and healthcare companies, research institutes and research groups in the country. South Africa is the only SADC member country that meets the World Health Organization's Good Manufacturing Practice standards.

Annually, R58 billion is spent on research and development (R&D) within the South African university sector, R3,1 billion of which is spent in the Western Cape. Health tech R&D accounts for the largest portion of that spend.

South Africa is the third most biodiverse country in the world, and its inhabitants have for centuries employed the help of indigenous medicinal plants. Small wonder, then, that indigenous medicine is also well represented in the Western Cape. The South African Herbal Science & Medicine Institute at the University of the Western Cape is considered a world-class research institution, focused on scientifically and clinically unlocking the value of traditional medicines in the service of humanity.

The Western Cape can also boast a fast-developing market for quality-assured medicinal cannabis, grown locally for the manufacturing of suitable pharmaceutical products. It is an exciting space and one that shows real signs of future growth.

These are just some of the reasons why the Western Cape is considered to be the health tech hub of Africa. This edition of *Pioneers* aims to highlight the successes and the groundbreaking work being done by the companies that drive the local sector.

Want to be featured in *Pioneers*? Email Wesgro's Head of Marketing at [Jean@wesgro.co.za](mailto:Jean@wesgro.co.za).



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# Strait Access Technologies



## About

Strait Access Technologies (SAT) is a development-stage medical device business specialising in innovative devices for the heart, with a specific focus on replacement heart valves.

## Positively contributing to the Cape Health Innovation movement

SAT has demonstrated that the skills to develop specialist medical devices exist in the Western Cape. We are concrete proof that the ecosystem to start hi-tech businesses on the southern tip of Africa is alive and well.

*Strait Access Technologies is a medical device business specialising in innovative devices for the heart.*

## Leadership in the health tech ecosystem

We have developed a number of patented technologies that offer innovative solutions to complex heart diseases that we believe are groundbreaking on a global scale.

## Showcasing success stories

We have developed a spring-shaped inflatable microballoon that expands a heart valve constricted by calcium deposits and

allows the placement of a new heart valve without the need to stop the heart. We have also developed replacement heart valves that we believe will be more durable than any other similar product on the market.

Our replacement heart valves are designed to be affordable in both emerging and developed economies, whereas the existing products on the market are targeted only at wealthy nations.

## The future of your business

Our next phase is to prove the safety and efficacy of our products through human clinical trials, which are due to commence at Groote Schuur Hospital.

## Why Cape Town and the Western Cape is perfect for your business

The access to skilled staff in the province, particularly those with engineering and medical qualifications.

## How the province has facilitated the success of your business

Wesgro is an active partner, continually asking how they can facilitate the growth of our industry.

# Vula Mobile

## About

Vula Mobile gives all health workers access to specialist advice. It is the brainchild of Dr William Mapham, who conceived the idea for the app while working at the Vula Emehlo Eye Clinic in rural Swaziland. He experienced first-hand the difficulties faced by rural health workers when they need specialist advice. While initially conceived to be only for ophthalmology referrals, it quickly became clear that the functionality provided by Vula was widely needed. Specialists from several different fields donated their time to work with the Vula team to design functionality for their own specialities. Vula added cardiology, orthopaedics and burns in April 2016. This redesign enabled the app to include referral forms for a number of specialities. The aim of the app is to give health workers, and particularly those in remote rural areas, a tool that helps to get patients quick and efficient specialist care.

## Positively contributing to the Cape Health Innovation movement

Vula Mobile is an award-winning health tech company, based in the Western Cape. After launching in the Western Cape in 2014, the impact Vula had in the province has led to Vula being used in five more provinces so far.

## Leadership in the health tech ecosystem

Vula Mobile has routinely been recognised nationally, most recently winning the MTN Health App of the Year Award in 2019. It has also been well received by health professionals, such as Dr Yogan Pillay of the National Department of Health, who said: "We would like to see the system grow to offer full national coverage. Moving towards the goals of Universal Health Insurance, it is important that the private and public sectors collaborate. Vula is already used in both sectors as well as for

referrals between the sectors, paving the way for collaboration and coordination."

The app has been applauded for its innovation and the support it provides health professionals operating in the sector.

*The aim of the app is to give health workers, and particularly those in remote rural areas, a tool that helps to get patients quick and efficient specialist care.*

## The future of your business

We are aiming to grow to full national coverage and meet the demands to use Vula outside South Africa.

## Why Cape Town and the Western Cape is perfect for your business

The Department of Health in the Western Cape has a focus on innovation, particularly with regard to digital innovations that improve healthcare. So this is a great environment for health tech companies like Vula Mobile.

The Western Cape has two academic hospitals and two medical schools, all of which look for innovative interventions and also have the capacity to research the impact of the innovations.



# Wagner Systems



## About

Wagner Systems is a Cape Town-based ISO 9001:2015-certified contract manufacturer specialising in the development and production of fine mechanics components and assemblies. The company, established in 1965, has been involved in the medical devices field since 1994 and supplies customers in various industries worldwide, including those operating in aerospace, defence, radio-astronomy, laboratory equipment and general industry.

## Positively contributing to the Cape Health Innovation movement

Wagner Systems' contribution towards health innovation lies in its core ability to help develop and ultimately produce high-precision fine mechanics components and assemblies for machinery and equipment.

Higher-precision and ultraprecision practices have become the norm in today's medical industry. This, together with a growing requirement for less invasive procedures in the treatment of patients, has led to an increasing demand for medical components and equipment to become smaller and more complex. Wagner Systems-produced fine mechanics components and assemblies are used on their own (for example, as dental implants) or can be found in specialised medical devices in the fields of audiology, endomicroscopy and cardiovascular health, to mention a few. We also produce the specialised instrumentation required for and during implant procedures.

## Leadership in the health tech ecosystem

The fine mechanics industry is positioned in a demanding environment with tough customer and regulatory requirements, complicated production procedures, and diverse challenges in each production order. Wagner Systems have built a reputation over more than 50 years of being able to produce and deliver what, at first, sometimes may seem impossible to achieve. We're able to do this as we have proficient technical and production staff, made up of experienced individuals with hands-on know-how, a keenness to take on new challenges, and a particular aptitude to make things work.

*Wagner Systems produces high-precision fine mechanics components and assemblies for machinery and equipment.*

## Showcasing success stories

Being a specialised component supplier and usually an unseen contributor, Wagner Systems' success stories are mostly enveloped in our customers' achievements within their specialised fields of operation. Our ability to turn exacting customer requirements into workable solutions often provides the breakthrough for those who require fine mechanics input during their product development programmes.



The company's ability to produce to tight specifications within short turnaround times (and, in this case, crucial for human life support during the medical treatment of COVID-19 patients) is illustrated by the fact that Wagner Systems had been contracted to produce components for South Africa's National Ventilator Project during the early stages of the Level 5 COVID-19 lockdown in 2020. Initial involvement in the project entailed producing a number of pre-production sampling components for CPAP ventilators, followed by an order in mid-July 2020 to deliver production quantities of seven types of CPAP ventilator components by the end of August 2020. The order consisted of two parts: production, assembly and cleaning of new components, and the cleaning of certain components produced by other suppliers. Component materials consisted of POM, stainless steel and hypodermic tubing.

### **The future of your business**

At Wagner Systems, our immediate focus is to further enhance our capability to respond with flexibility to customer requirements and orders, while remaining competitive. We're doing this via continuous productivity improvement to advance our competitiveness and ultimately, sustainability. This ongoing programme extends across all segments of the business and aims to improve manufacturing processes and the reduction of variables to increase production output. Our success is illustrated by Wagner Systems having been awarded

Productivity SA's prestigious National Productivity Award 2019 in the Emerging Business Sector category. Furthermore, we are systematically replacing outdated production equipment with modern technology and machinery to further improve production capability and turnaround time. Wagner Systems is a member of the Production Technologies Association of South Africa and actively participates in its programmes.

### **Why Cape Town and the Western Cape is perfect for your business**

We are of the opinion that the increase in the number of start-ups in the health tech industry (especially in the biomedical arena) in the Western Cape may lead to further growth in this field and an increased interest in investing in the medical industry in this province. We are available in close proximity to be of service to them.

### **How the province has facilitated the success of your business**

Our overseas customers attach a certain intrinsic value to our business being based in Cape Town. Although it might not be the only reason, we believe that industry in the Western Cape directly and indirectly benefits from the City of Cape Town and the Western Cape Government's economic growth initiatives and the favourable image that this has created of industry in this region.



# LocumBase

*LocumBase.com is the first full-service, independent online platform in South Africa that simplifies the booking process for both locums and practices.*



## About

LocumBase.com is the first full-service, independent online platform in South Africa that simplifies the locum booking process for both locums and practices, ensuring verified service, fair rates and secure record-keeping. The freelance economy is growing, and those in the medical space are recognising the benefits of growing their practice by booking locums as the need arises. Individual practitioners are realising that the flexibility of practising as a locum provides an attractive work-life balance. The team at LocumBase handles all the security checks, admin and paperwork so that you can source a locum for your practice with a click of a button. As a locum, you can rest assured that we have your back when it comes to securing payments and earning your worth, with no hassles (or high fees), as is often experienced with traditional methods of sourcing a locum or locum assignment.

## Positively contributing to the Cape Health Innovation movement

Kicking off in the Western Cape provided LocumBase with the ideal springboard, with support in the tech start-up environment, to build a bespoke solution for the primary healthcare space. More and more businesses, such as medical practices, are realising that technological innovation brings about a higher level of productivity, efficacy and quality of service and care. As software-as-a-service (SaaS) products become more accessible in the market, we expect to see medical practice optimisation as we reach scale, ultimately creating the work opportunities where medical care is needed most.

## Leadership in the health tech ecosystem

LocumBase.com is the first SaaS marketplace platform in the country that empowers both medical practices and medical practitioners, from optometrists and pharmacists to GPs and nurses, to take control of their earning potential. The vision is to build a supportive ecosystem, along with industry and government partners, providing continuing professional development training and support in order to provide quality care to patients when the primary practitioner, often the practice owner, is unable to be there. Your practice as a business keeps caring for your patients while you take that much-needed break or attend that conference you're looking forward to, knowing that a qualified, registered and up-to-date practitioner, whom you selected to fit in with your practice, is representing you in your absence.

## Showcasing success stories

With the focus on empowering medical professionals, primary practitioners and practice owners to do their best work in an

environment of flexibility and taking the time they need to revive and recharge, LocumBase.com has helped practice owners and locums in various ways. Recently, an optometry practice owner was in a state of panic as she desperately required a locum to take care of her practice while she focused on her traditional and modern wedding ceremonies and honeymoon for two weeks. She had been building her practice for over two years without taking any time off and definitely deserved a break. She selected a locum via the LocumBase.com platform, knowing that she could enjoy this very special time of her life without worry.

The medical space is all about people, and helping medical professionals live their best lives means better care can be provided. With approximately 4 000 locums and over 600 practices on board and ready for the locum revolution at this early stage, the demand is there to work smarter with tools of the trade that weren't available only a few short years ago. With the events in healthcare over the last year, we have seen the demand for continuous access to flexible healthcare rise. LocumBase.com is positioned to meet this need with tools that empower both medical professionals and practices through the supportive ecosystem that brings various elements in the healthcare industry together.

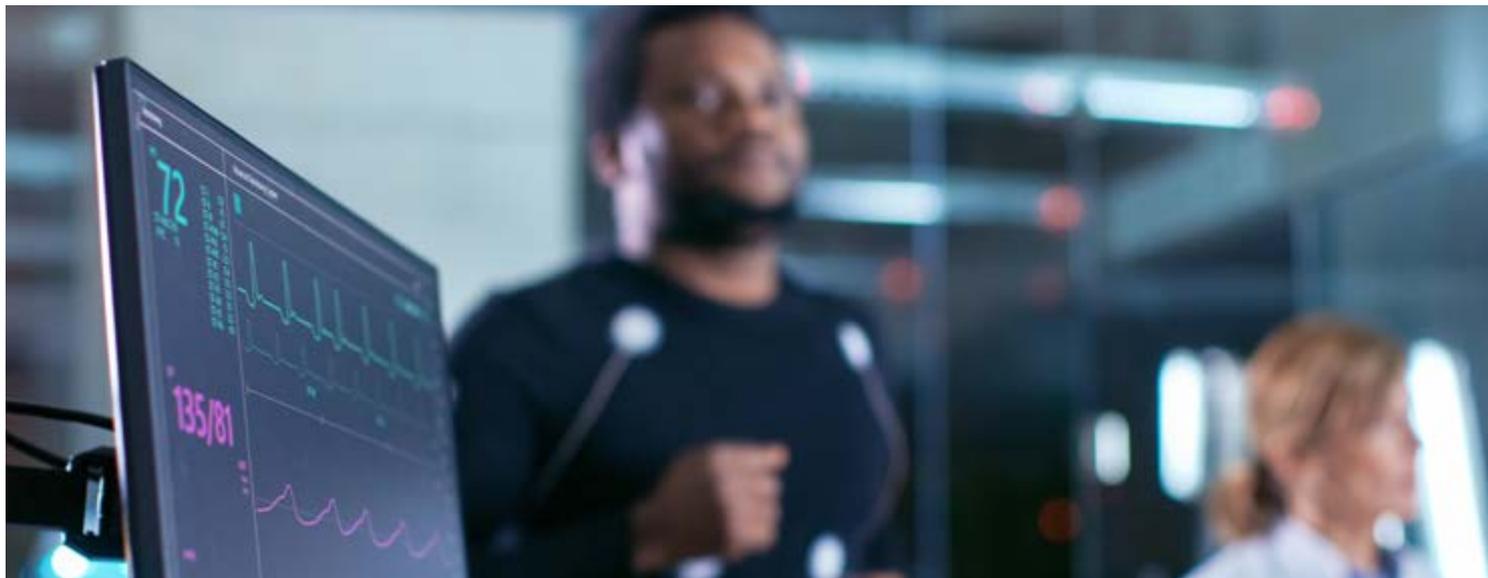
## The future of your business

The future looks bright, with LocumBase.com continually improving the processes that provide simplicity, ease and security in the booking of medical professionals and locum assignments. Exciting partnerships are on the cards that will bring unique e-learning modules, value-added services and innovative products directly to the medical professionals who want and need greater support in order to provide the highest level of quality care.

## Why Cape Town and the Western Cape is perfect for your business

Our founder is a Johannesburg native, but knew early on that the people and support that are needed to build an effective platform that empowers our country's medical professionals would be found in Cape Town. The tech space and start-up culture in Cape Town are conducive to innovative thinking, trying new things, taking chances in the name of growth, and the development of quality tech products. Not to mention the beauty, the mountains, the forests and the ocean that provide space for creative problem-solving of the country's toughest challenges.

# Vekta Innovations



## About

A comprehensive technology approach sets us apart in health data acquisition. Vekta Innovations has developed efficient process tools for efficient physical health management. We provide an IoT product for comprehensive feedback on muscular strength and the delivery of high-resolution data reports – an “automated biokineticist” for physical condition assessment. Vekta specialises in cloud-based software and dedicated hardware for use by occupational therapists, biokineticists, rehabilitation specialists and health and safety practitioners. This substantially increases the efficiency of their service through integrating their specialist inputs. Our focus is on improving the quality of data drawn from physical equipment necessary for prescribed exercise performance, where hardware resistance profiles are used to establish muscular condition as a preventative approach to physical health for staff or patients.

## Positively contributing to the Cape Health Innovation movement

Vekta Innovations is orientated towards exceptional cloud-based machine function software and portable hardware, in a market dominated by exercise machines with limited activity-reporting capabilities. We have received an exceptional response from biokineticists and ergonomists, with them seeing the value of a distributed system that allows for remote machine instruction and viewing a client’s performance results.

## Leadership in the health tech ecosystem

We are leading the way in the empirical exercise data field. The efficiency of multiple muscle group testing on our single KineDek platform adds the necessary time-saving for a company’s health and safety staff. The routines are stipulated by biokineticists, and the machines automatically run through the relevant exercise sequence. In the case of strength assessments, the software takes you through a one-rep max sequence to establish strength profiles and left-right strength symmetry.

## Showcasing success stories

At VW in Uitenhage, we’ve successfully completed sample testing and will follow on with a pilot within their work reintegration programme. Our product will better equip them to keep track of their 4 000 staff, assisting in pre-employment tests, job rotation and injury disputes on medical claims. The portable aspect of our KineDek hardware and cloud-based control software allows for the product’s use within all the relevant health market sectors and for it to be serviced by industry professionals, irrespective of the placement or location of machines. This allows the system to be implemented on mines, offshore rigs and manufacturing plants. The serviceable sectors include sport performance and the homecare treatment of patients with limited mobility.

*We provide an IoT product for comprehensive feedback on muscular strength – an “automated biokineticist” for physical condition assessment.*

## The future of your business

The future of our business technology is best placed where it increases efficiency without displacing industry participants. The immediate call is from companies with large staff numbers that require a capacity for keeping track of their physical condition in order to prevent physical breakdown of their employees. This is done through pre-employment assessment, physical strength standards aligned with job suitability, return-to-work evaluations post-injury recovery, and three-monthly condition updates. Vekta provides rented KineDek units, with usage payments based on automatic activity report provision. User notifications and automatic billing are integral to the system.

# Jembi Health Systems

## About

We are a non-profit ICT development company that develops appropriate technology to enable sustainable health solutions in low-resource settings. Considered thought leaders in digital health, Jembi collaborates with both local and international partners in industry, research, tertiary institutes and public health ministries to provide appropriate technologies to service public health needs. Jembi currently has a presence in South Africa (Cape Town and Durban), Mozambique, Malawi, Kenya, Uganda, Cameroon and Rwanda.

## Positively contributing to the Cape Health Innovation movement

With headquarters in Cape Town, Jembi is the designated partner of the South African Medical Research Council (SAMRC) and jointly established the SAMRC/Jembi Collaborating Centre for Digital Health Innovation (CCDHI) in March 2018. The objective of the centre is to foster collaboration in digital health across the industry, assist in developing skilled capacity, and ultimately provide support to the National Department of Health, where possible. We support local innovation and entrepreneurs with intern programmes, provide access to technology platforms, as well as hold workshops and seminars for delegates from other African countries in Cape Town, where possible.

## Leadership in the health tech ecosystem

Besides presenting at conferences locally and around the world, the work we are doing in the local public health sector

is groundbreaking and innovative. With support from donors, which include the Department of Science and Innovation, Jembi has built the very first bespoke mobile app store for public health. The app store provides a platform for the national and provincial departments of health to curate appropriate apps developed by third parties that can now be deployed to health providers with mobile devices. This app store is accessible to registered health providers at no data costs. It further provides shared health registries and secure electronic patient record storage that can be used by innovators and entrepreneurs to develop pilot projects at a considerably reduced cost and risk and seamlessly scale up when ready. Other core technologies developed by Jembi include the OpenHIM, an interoperability layer that ensures robust information exchange across different providers, a patient registry, as well as electronic health record systems that are FHIR (Fast Healthcare Interoperability Resources) standards-based health protocol. These innovations have been deployed in other African countries and are now being implemented locally.

## Showcasing success stories

MOASIS, or [Mozambican Open Architecture Standards and Information Systems](#), is one of Jembi's largest programmes, working within Mozambique with technical teams based in seven provinces across the country. Since 2009, Jembi has been a strategic partner of the government of Mozambique in the field of information systems for the health, social welfare and justice sectors.



Journey is a premium-branded and patient-centred [digital immunisation solution](#) that places the patient squarely at the centre of the journey. Journey is tailored to operate fully in offline environments. The solution provides the patient with an electronic version of the immunisation record on a credit card-sized Journey card that keeps the patient's identity completely anonymous. These cards are accessible by all Journey-enabled facilities and kept up to date after each vaccination event for continuity of care in offline environments. The technology is deployed in four clinics in the Tororo region in Uganda and in Kenya and has been working flawlessly for the past 16 months with an impressive implementation of over 30 000 patient cards to date. Together with the health ministries, this project offers a cost-effective and appropriate regional solution to tracking immunisation.

Jembi's [Blood Safety Programme](#) focuses on the development and implementation of BSIS (Blood Safety Information System), an open-source information management system designed for low-resource blood services. BSIS supports the AfSBT

(African Society for Blood Transfusion) Step-Wise Accreditation Programme, enforcing standardised workflows. These workflows facilitate blood safety good practice by providing information that is accurate, timely and complete. Supporting quality assurance practices and management decision-making, BSIS has been successfully implemented and is in operational use in blood centres in Lesotho, Ghana, Zambia, Cameroon and Ethiopia.

### The future of your business

Digital health is an emerging and enabling technology that can seamlessly combine mobile, artificial intelligence, machine learning, blockchain, Internet of Things and other cutting-edge technologies to leapfrog current solutions and solve long-standing challenges within public health. By pursuing a strategy of innovation and research, Jembi will continue to use these and other fledgling technologies and collaborate with appropriate local and global partners to unpack opportunities.

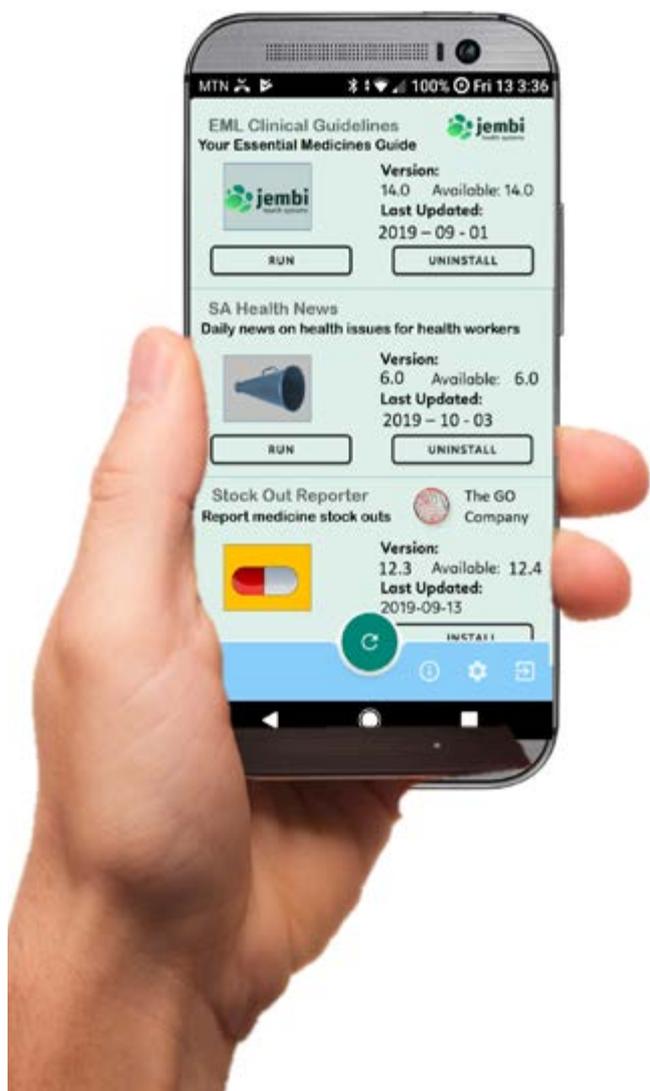
*Jembi provides appropriate technologies to service public health needs in low-resource settings.*

### Why Cape Town and the Western Cape is perfect for your business

If one reason had to be chosen, it would have to be the food and coffee culture as the most important ingredient of our existence for innovation! However, the presence of and close proximity to top academic and research institutes, innovative and agile technology development houses as well as progressive healthcare professionals open to new ideas certainly also help. In addition, the support, mentorship and guidance from the Western Cape Department of Health, Wesgro and SAMRC actively nurture an ecosystem for digital health innovation in the Western Cape.

We are also able to attract top-quality developers, engineers and other professionals through collaboration with the academic institutes in the region, and tap into public health and ICT experts within the Western Cape Department of Health who provide guidance on our technology development that ensures suitability for implementation and sustainability. This is an extremely important aspect that provides governance in scaling solutions.

And finally, the Western Cape provides a space that is somehow conducive to creative thinking and a balanced lifestyle without compromising hard work. There must be something in the water.



# Skeg Product Development

## About

Skeg is not a typical engineering consulting firm. Having been in operation for 15 years and boasting more than 3 000 projects from multiple industries, we are doing the things others talk – and dream – about. Skeg assists businesses and entrepreneurs by converting product ideas into fully resolved, market-ready products. This is done by first-hand industry experience, diverse business knowledge, technical design skills and an unrivalled culture of learning.

## Positively contributing to the Cape Health Innovation movement

Product development is inherently challenging, but highly rewarding, provided it is approached correctly. Our proprietary value-driven development process is geared to ensure the highest possible success rate. We accomplish this objective by discovering and anchoring the product-market fit of each project as a critical step before progressing to a conservative and structured implementation plan.

## Leadership in the health tech ecosystem

Skeg understands the importance of a “stable” technology ecosystem within which innovation can flourish. As such, we assist in coordinating the relevant stakeholders to ensure an alignment of motivations. We take the stance that all stakeholders should submit to the project. Additionally, our broad portfolio of applications gives us a unique perspective on problem-solving leveraging synergetic thinking (cross-industry and multidisciplinary).

## Showcasing success stories

An ongoing project demonstrating our value-driven approach to development entails a post-operation rehabilitation product. We realised that the opportunity lies beyond reducing the cost of the physical equipment. The decisive advantage in this case was to enable the rehabilitation to occur at home without professional assistance. A 20x reduction in rehabilitation cost could be achieved through this innovation.

With the advent of COVID-19 in South Africa, we saw a wave of

opportunistic development requests. Our focus turned to the patient and healthcare professional, who have a fundamental need to feel safe and operate safely. Skeg joined forces with a local academic institution and hospital to develop a product to enhance safety within the ICU environment. A direct outcome of the project was the potential to reduce the effective PPE burn rate.

## The future of your business

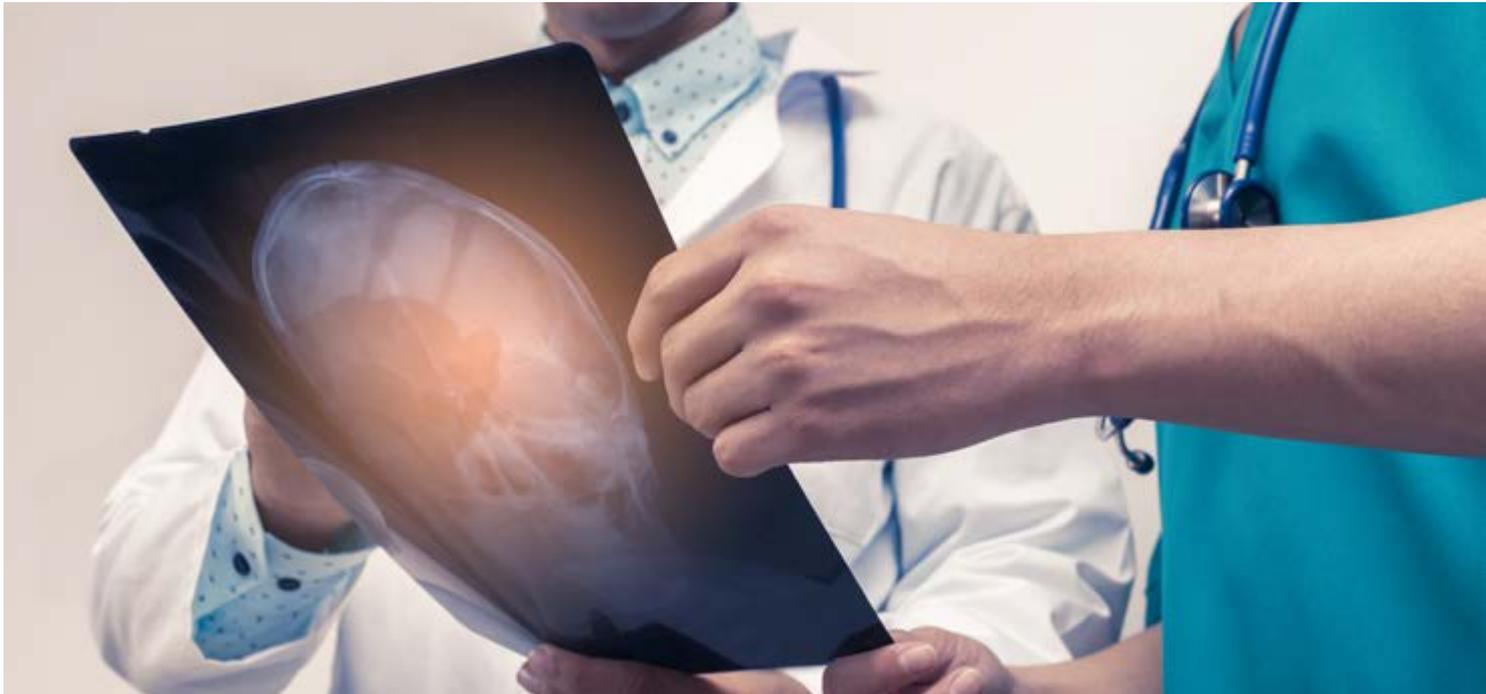
The healthcare sector is very conservative as pertaining to technology regulation and certification (and rightfully so). With the fourth industrial revolution gaining momentum, Skeg has adopted the mindset to build technology-generating “data sets of integrity” to allow us to move confidently into the sphere of diagnostics. We are actively partnering with institutions and healthcare experts in this development drive. Skeg is also aggressively launching its Collab Initiative. Often, we see start-ups building team capacity instead of focusing the necessary effort on actually developing value-driven products. The Skeg Collab Initiative is geared to support these start-ups through advisory and development services as well as technical co-investment. You can literally have a “Skeg Lab” surrounded by a culture of innovation and, more importantly – active implementation.

## Why Cape Town and the Western Cape is perfect for your business

In our opinion, the Western Cape is still the most mature innovation space in the whole of Africa, with a history of small business activity dating back to the 50s and 60s. Today, it is truly a hub for entrepreneurial activity and the inventor mindset.

*Skeg assists businesses and entrepreneurs by converting product ideas into fully resolved, market-ready products.*





## About

Craniotech specialises in patient-specific solutions. We combine the latest technology in medical imaging and titanium 3D printing with our moulding expertise to bring you the most cost-effective patient-specific implants. Key technologies of Craniotech include digital scan data conversions, virtual surgical planning (VSP), 3D anatomical models and patient-specific implant production.

## Positively contributing to the Cape Health Innovation movement

The products provided by Craniotech are produced locally in South Africa. Where possible, Craniotech mostly makes use of suppliers based in the Cape Town area.

## Leadership in the health tech ecosystem

We make use of FDA-approved, market-leading design software to develop the custom implants. First-world quality products are designed and manufactured locally, which reduces their cost by as much as half, making this a viable option.

## Showcasing success stories

Recently, a cancer patient required the replacement of the complete left side of her jaw. We were able to provide an implant that replaced her temporomandibular joint. The implant also had a tray section that allowed morselised bone to be collected to reconstruct the left side of the jaw.

A female patient required a maxilla reconstruction with a free fibula flap. Craniotech provided a patient-specific surgical guide to quickly and accurately create the necessary fibula resections.

Additionally, a custom 3D-printed titanium plate was used to retain the fibula sections in the planned positions in the maxilla.

The cranial vault of a 10-month old baby boy had to be remodelled due to a case of trigonocephaly. This was successfully achieved with the help of 3D-printed anatomical models, virtual surgical planning and surgical guides provided by Craniotech.

*We combine the latest technology in medical imaging and titanium 3D printing with our moulding expertise to bring you patient-specific implants.*

## The future of your business

We believe that patient-specific solutions will become the norm in almost any reconstructive surgery, replacing standard/stock implants being used. This creates the opportunity for patient-specific implants to be used in any part of the body.

## Why Cape Town and the Western Cape is perfect for your business

Local is lekker! Close collaboration with academic government institutions, such as Tygerberg and Groote Schuur hospitals, enables the development of new concepts and solutions. Surgeons at these institutions spearhead this type of development.

# BioTech Africa



## About

BioTech Africa is a biotechnology company focused on the provision of superior reagents for the diagnosis of infectious diseases. Our product range is comprised of highly purified recombinant proteins that are used in the manufacturing of immunoassay-based diagnostic test kits, such as ELISA, microarrays and lateral flow immunoassays for point-of-care use. All activities are performed as per our ISO 13485-accreditation.

## Positively contributing to the Cape Health Innovation movement

We currently supply several local diagnostics companies with purified antigens, particularly those manufacturing and developing products for the diagnosis of HIV and COVID-19 rapid antibody tests. Being a locally based company, we see huge benefits to our local customers in terms of their reduced shipping charges, no currency exchange price fluctuations, and expedited delivery lead times by avoiding customs clearance delays.

## Leadership in the health tech ecosystem

Biosynthesis is a manufacturing approach for the production of complex molecules within micro-organisms and has been utilised for the production of a number of approved pharmaceutical products, such as insulin. We are the only company in South Africa biosynthesising recombinant proteins of both extremely high purity and activity for the diagnostics industry. We are passionate about empowering individuals to be able to take control of their own healthcare, with a focus on the development of next-generation diagnostic devices.

With the onset of the COVID-19 pandemic, we have set up a high-throughput COVID-19 RT-PCR testing facility. Capable of testing 50 000 samples per day at a reduced cost, we are NHLS- and DoH-approved, and are operating under ISO 15189 standards.

## Showcasing success stories

We have an extensive range of products that supply an expanding customer base of in vitro diagnostics (IVD) manufacturing companies, both locally and internationally. We have numerous customers who have CE-marked and WHO-prequalified products containing our recombinant proteins.

We have collaborated with companies in Europe and the USA to streamline our [BioSmart™ COVID-19 testing facility](#).

We are registered by the NHLS and DoH as a COVID-19 testing laboratory with SAHPRA-approved anterior nasal sampling kits to facilitate self-sampling. Having established five drive-through sampling sites in the Western Cape, we are expanding our testing capacity nationally by partnering with pharmacy groups and Aramex.

It is estimated that over 170 million people are infected with the hepatitis C virus. Antiviral treatments can cure 90% of infections, but access to diagnosis and treatment is low. Our HCV antigens can be used to manufacture highly specific and sensitive HCV diagnostic tests. We plan to submit our own BioSmart™ HCV rapid test to the FDA for regulatory approval in 2021. This will extend our market to the USA, where HCV is regarded as one of the top five killers in the country.

## The future of your business

We are developing new products for human infectious disease diagnostics, including the development of a generic platform for producing paired antibody fragments in a bacterial expression system. The production of a single antibody de novo is a time-consuming and expensive process, and often involves ethically questionable procedures on laboratory animals. Our method of producing synthetic forms of antibodies using bacterial cell culture overcomes these limitations and, provided the antibody sequence is known, provides an ethical and cost-effective alternative to conventional antibody production protocols.

## Why Cape Town and the Western Cape is perfect for your business

BioTech Africa was founded in 2014 after securing private venture capital funding. Our early successes were attributed to the incredible support and mentoring of our financial backer, as well as being incubated within Kapa Biosystems in Cape Town. This allowed us to establish an initial customer base, perform sales and marketing activities, develop and manufacture products, while avoiding an initial massive overhead of equipping our own purpose-built facility. Bolstered by being in an environment with more than 20 PhD scientists, we benefitted from outstanding mentorship and advice. Kapa was acquired by Roche in 2017,

and undoubtedly the biggest success story of a biotech start-up in the southern hemisphere.

We now occupy our own purpose-built state-of-the-art facility in the city bowl. Cape Town provides us with a supply of high-calibre university graduates, as well as access to a rapidly developing healthcare industry with close proximity to key customers, suppliers and service providers.

*BioTech Africa is a biotechnology company that provides superior reagents for the diagnosis of infectious diseases.*

## How the province has facilitated the success of your business

The bulk of our products are lyophilised (or freeze-dried), which means that they have a very long shelf life and can be shipped globally at ambient temperature, but we could not survive without access to the highest calibre of graduates, and highly responsive suppliers and service providers.





## About

eHealth Group (EHG) is an innovative company that specialises in advanced medical technologies, including telehealth, digital health, medical devices, and infection prevention and control. Through our partnership with InTouch Health, we are a proven leader in telehealth, enabling more than 30 different service lines through our cloud-based telehealth network. This single network has more than 6 500 specialists and more than 15 000 clinical users. Our network and services solutions are integrated into everyday patient care in over 3 600 care sites in over 40 countries globally. Deploying a telehealth programme is much more than just an equipment acquisition; clinical workflow, integration of clinical software with EMRs and peripheral medical devices, access to patient imaging, service and support are all pillars of a clinically impactful telehealth programme. The ability to scale and deploy quickly, coupled with real-time business intelligence, has allowed our partners to achieve their clinical and financial goals.

We are also in partnership with swyMed to deploy a telemedicine software solution for lower-resourced settings which excels in connectivity-challenged geographies and on congested networks. This advanced telemedicine platform enables diverse integration with medical devices, EHRs, PACS platforms and other medical applications. Due to our patent on how we transfer data, we are able to provide quality video encounters where other platforms cannot connect.

Through extensive work in both the public and private health sectors, we have experience deploying and project-managing leading global telehealth and digital health technologies in primary to acute environments in the Southern African market.

## Positively contributing to the Cape Health Innovation movement

The Western Cape has various challenges due to the size and geography of the province, with various hospitals and clinics in remote areas. This creates vast challenges to delivering quality care and access to specialists in various facilities within the region. After identifying the vast disparities between the public and private sectors, we made it our mission to find solutions to improve access to healthcare. With medical innovation and digital transformation, this requires a collaboration between various stakeholders in the healthcare ecosystem. EHG has positively contributed to the Cape Health Innovation movement by partnering with universities and various hospitals through piloting and running proofs of concept and research projects to understand and unlock the vast value that telemedicine has to offer the country. We are currently working on some groundbreaking projects with the ambition to scale across the Western Cape.

## Leadership in the health tech ecosystem

EHG has been a pioneer and game changer in the fourth industrial revolution and healthcare, deploying telemedicine as early as 2015 in South Africa. We have been key proponents and prominent visionaries in the advancement of telemedicine in the country. Despite local regulatory challenges and misunderstanding of the value of telemedicine usage in South Africa, EHG has consistently partnered with and strategically engaged stakeholders across sectors with the key goal to bring telemedicine to the forefront. Ranked the 2019 Best in KLAS Virtual Care Platform, our platform supports more than 3 600 care locations around the world, including many of the top 20 US health systems.

Our Solo™ platform is the industry's first fully integrated enterprise virtual care platform, designed with the practicality

required to provide high-quality, patient-centric virtual care for every use case and any clinical setting. Our platform can be layered onto existing EHRs, devices, and other systems to close workflow gaps and create a telehealth solution that works for any health system or provider. We are leading in telemedicine in the high-acuity setting, with our portfolio of FDA- and CE-cleared remote monitoring medical devices combined with an advanced global telehealth network infrastructure. As leaders in telemedicine, we have solutions that can be leveraged across the continuum of care, ranging from home and primary care facilities to high-acuity clinical cases.

Our swyMed solution is perfect for developing markets with challenged medical and communication infrastructures and lower budgets for telemedicine. We have cut our teeth in India deploying our technology for an infant and maternal mortality programme and discovered that the medical access we can provide to geographies like South Africa saves lives and increases the efficiency of the existing healthcare resources. We stretch the reach of physicians and specialists, which, in turn, improves patient outcomes and costs and reduces long-term complications and mortality rates.

### Showcasing success stories

eHealth Group has successfully deployed and project-managed various telemedicine proofs of concept, pilots and research projects in acute settings in various public and private hospitals in South Africa. We are currently in the process of a large-scale telemedicine network roll-out of our technology across the country.



Mayo Clinic has secured InTouch Health as their sole telehealth provider for their network of 45 hospitals across nine states. Mayo Clinic has seen great success leveraging our platform in their teleneonatology programme with remarkable results, including: one-third of the babies are able to remain with families in the community hospitals, large reductions in unnecessary patient transfers, a substantial improvement in the quality of high-risk newborn resuscitations, and a positive impact on patient transfers and referrals.

Through a partnership with Global Surgery, a division of the University of Cape Town, we are looking for ways to implement projects across the African continent.

eHealth Group was selected by the International Finance Corporation and World Bank from over 415 tech companies from 50 countries for the 2020 TechEmerge Health East Africa Innovation Summit to pitch to industry leaders in the health sector.

One of our devices was also used to enable a top NHS clinical medical doctor to present on a Western Cape public-private health forum via our telemedicine platform to the HOD and a variety of healthcare leaders in the province.

### The future of your business

We foresee endless possibilities and value in the utilisation and adoption of telemedicine in Africa. One of our key drivers and ambitions is to grow the business into a digital health leader on the continent. We are currently expanding our portfolio and strategic position in the market with more patient data-driven software, integrated with AI and IoT. eHealth Group is exploring diversifying the business into a full telehealth service provider, merging our digital health technologies with a network of certified clinicians and specialists in the greater African healthcare market.

### Why Cape Town and the Western Cape is perfect for your business

Through working on various projects in South Africa, it became clear to us that the challenges of implementation and lack of required infrastructure and medical capacity in the country are major barriers to entry. The interest in innovation and research in the province became very evident after meeting with various key stakeholders. We have had various positive meetings and support from Wesgro to explore expanding our business interests over the years.

After completing various proofs of concept and engaging with various clinicians and leading academics, we determined that the Western Cape is the most advanced region in the country for digital health transformation. The current healthcare ICT infrastructure is far more advanced than most health systems on the continent, and the hospitals are equipped with the latest diagnostics and medical devices. The combination of a digital blood registry and electronic medical record system makes sustainable and effective remote monitoring and decision-making of patients possible and scalable.

### How the province has facilitated the success of your business

We have been fortunate enough to experience great support and facilitation to explore opportunities in the Western Cape with Wesgro and other key stakeholders. Although there have been challenges in entering the market, we are working collaboratively to achieve our goals. Our experience with role-players in every tier in the Western Cape has been exceptional. Working in the province, we have found the desire to explore new ideas and solve problems with an open mind as a common goal to improve healthcare and add value to the Cape Health Innovation movement.

# Biomedhelix

## About

With its biobanking and mobile laboratory expertise, Biomedhelix is perfectly positioned to advise on and provide vaccine logistics. Biomedhelix specialises in ultracold chain transport and storage. Our director has been instrumental in the transfer of some of Europe's largest biobanks.

Biomedhelix designs mobile laboratories and clinics, tailor-made for the client's needs. Recently, Biomedhelix designed and oversaw the production of the state-of-the-art health mobile for The Heart and Stroke Foundation, South Africa.

Biomedhelix works closely with a network of local manufacturers, and in consultation with international advisors, to ensure we advise our clients on the latest available technologies. We have decades of experience and market knowledge.

## Positively contributing to the Cape Health Innovation movement

Throughout the COVID-19 pandemic, Biomedhelix has advised researchers, stakeholders in the private and public sector and decision-makers on solutions to transport and store the vaccine at ultracold temperatures.

The cold chain and ice crystallisation of biological cell samples is one of the most critical aspects of biobanking. Biomedhelix assists research and other institutions in tailor-making the best solutions to process their samples.

*Biomedhelix advises on and provides vaccine logistics, specialising in ultracold chain transport and storage.*

## Leadership in the health tech ecosystem

Biomedhelix is the official South African distributor for manufacturers of cryostorage equipment, vetted as the best suppliers in the market worldwide.

## Showcasing success stories

Several biobanks across the country were installed and are maintained by Biomedhelix. One is a biobank at the Biovac Institute in Pinelands, Cape Town, and another, at the Stellenbosch University Faculty of Medicine and Health Sciences, Division of Medical Virology, stores patients' virus samples for research development. A similar biobank was installed at the University of Pretoria in 2019.

The world's first BSL-3 mobile laboratory is stationed at the Veterinary Laboratory Services site of the Department of Agriculture, where it is used for research and diagnostics of animal diseases such as bird flu. Biomedhelix is responsible for the ongoing maintenance and service of the laboratory.

## The future of your business

Biomedhelix partners with key role-players in the medical and biomedical sectors to innovate workable solutions to transport and store vaccines, establish biobanks and roll out state-of-the-art mobile laboratories and clinics. We believe it is crucial to keep abreast of the latest solutions worldwide and implement them in mobiles in a manner that will serve communities in the long run.

## Why Cape Town and the Western Cape is perfect for your business

Cape Town and the Western Cape is considered the laboratory where overseas markets test the appetite for new products. It is from here that they decide to launch into African markets.



# Thoclor Labs

## About

Thoclor Labs develops and produces the world's most advanced skin aftercare treatments and revolutionary skin rejuvenation products. Our GF Skin Series and Trifectiv Plus Wound & Burn Care range harness the power of hypochlorous acid (HOCl) – our body's own immune molecule. Backed by over a decade of extensive research, we have perfected a proprietary manufacturing method that produces a medically pure HOCl solution that is stable for two years. This pharmaceutical-grade HOCl solution strongly supports a user's natural immunity and overall health. Our aesthetic and wound care products are exported to the UK, Europe and Turkey.

## Positively contributing to the Cape Health Innovation movement

Proudly supporting local, Thoclor Labs employs a small team at its state-of-the-art, medically-certified (SAHPRA) manufacturing facility in Stellenbosch. We also outsource many functions to local businesses, from legal, accounting and logistics to marketing and PR. Through our international export and research network, we are proudly promoting the exciting innovation that is coming out of South Africa as a worthwhile sector to invest in.

*Thoclor Labs develops and produces the world's most advanced skin aftercare treatments and revolutionary skin rejuvenation products.*

## Leadership in the health tech ecosystem

Our pharmaceutically pure solution of HOCl is completely safe to use orally and topically, for all ages. To our knowledge, this is a world-first. Thoclor Labs is championing the use of HOCl in aftercare of aesthetic procedures and as a skin rejuvenation and anti-ageing product. Tremendous strides have also been made using HOCl for chronic wound care. In countries like SA and the UK, that have a burgeoning problem with diabetes, this

has been an absolute lifeline for patients who become reclusive because of offensive wounds. We have seen some truly life-changing cases where the use of our HOCl sprays has helped patients regain their dignity.

## Showcasing success stories

In a 2020 study by an independent US laboratory, Thoclor Labs GF2 was shown to completely eliminate the human coronavirus in under two minutes, with no negative or damaging impact on healthy human tissue.

Hypochlorous acid, like that found in our GF2 product, has been scientifically proven by a Stanford University study to reverse inflammation and "switch" off the genes responsible for inflammation, ageing and disease.

Our Trifective Plus "first-aid in a bottle" product has shown faster and more cost-effective resolution of chronic wounds, e.g. diabetic and venous ulcers and bedsores.

## The future of your business

Thoclor Labs is investing in ongoing research and development. We are currently engaged with Wits University, looking at innovative ways to use HOCl for optimal health. In addition, there has been research into a number of further pharmaceutical applications with HOCl, with very positive initial outcomes and exciting international possibilities

## Why Cape Town and the Western Cape is perfect for your business

With its world-class training institutions and healthcare facilities, impressive start-up culture and industry-leading expertise, the Western Cape makes up an impressive hub of healthcare innovation in Africa. It's the perfect location for us to grow our biotechnology company. We have recently moved our facilities to Stellenbosch as this is an excellent central location for our manufacturing and logistics requirements. Between Stellenbosch and Cape Town, we have major centres of excellence, from our world-class hospitals to the local university that trains the country's top doctors.



# Polymorph



## About

Polymorph provides innovative and scalable software and IoT solutions for large to medium enterprises. We understand the unique requirements of innovation in healthcare and medical technology in order for our partners to focus on the bigger picture. At Polymorph, we establish the necessary building blocks to develop quality scalable healthcare IoT solutions that can collect, analyse and utilise massive amounts of data while remaining focused on patient outcomes. Our solutions can predict failure and improve clinical performance and outcomes.

## Positively contributing to the Cape Health Innovation movement

We have partnered with companies to develop innovative end-to-end solutions using the latest trends in healthcare technology as our benchmark to develop data dashboards and mobile and web apps. These solutions include daily and/or scheduled reporting to management to facilitate informed decision-making and reduce risk at distributed locations, as well as consumer-focused mobile apps that alert patients of abnormalities.

## Leadership in the health tech ecosystem

At Polymorph, we understand the challenges that healthcare in South Africa faces. Technology in healthcare is furthermore substantially changing how healthcare professionals and healthcare facilities can manage patient records, oversee operations, control inventory and monitor and provide preventative care. This disruptive technology is certainly significant considering that other tech advancements have

been made possible through this. Polymorph develops end-to-end solutions that are focused on patient outcomes and results while simultaneously enabling visibility and security of all your connected medical devices. Our goal is to develop quality scalable healthcare solutions that deliver business value through operational efficiency or new revenue streams.

## Showcasing success stories

[Developing the LifeQ mobile app using bio-mathematical models](#): Polymorph developed the LifeQ app, which is the leading independent provider of biometrics and health information derived from wearable devices, used in world-leading health management solutions. LifeQ translates your body's biometric readings into readable information using the LifeQ Lens. The app uses bio-mathematical models to improve health and fitness.

[Developing a mobile app that connects to an electronic stethoscope](#): Our client wanted a smartphone app component to complete their planned product offering. We connected the stethoscope to a mobile app that records and displays the data. It stores the data for later retrieval and playback in a HIPAA-compliant cloud database. Cardiosleeve is an electronic stethoscope that measures heart sound as well as ECG signals.

[Algotec smart medical device mobile app](#): Algotec needed a user-friendly interface that could provide real-time feedback for their Algostim device. Polymorph built the software control

system and interface of the smart device, allowing full control and real-time feedback of the treatment sessions.

### The future of your business

Polymorph understands the unique conditions that medical devices must meet so you can focus on the bigger picture. In this regard, automating and enhancing healthcare systems, for example emergency notifications, remote monitoring and early diagnosis, with wireless connectivity and sensors can monitor and visualise the entire IoMT process with the aim of ultimately making autonomous decisions. This process of automation is based on five layers to create business value, namely connected sensors, centralised data, actionable insights, workflow automation and predictable events.

### Why Cape Town and the Western Cape is perfect for your business

The Western Cape has some of the most advanced healthcare facilities and healthcare professionals in South Africa. Our mission is to partner with innovative leaders in the medical and healthcare sectors and contribute to healthcare technology and innovation in order to impact the lives of not only patients, but

all medical professionals and stakeholders. Combined, these two factors will aid healthcare facilities to benefit from trends to make quick and efficient decisions, which will save lives.

### How the province has facilitated the success of your business

Since the Western Cape has a thriving health tech industry and is also the medical innovation and tech hub of South Africa, Polymorph's network of partners in the Western Cape can deliver end-to-end solutions ranging from specialised electronics and virtual reality to machine learning, artificial intelligence.

*Polymorph provides scalable software and IoT solutions that can predict failure and improve clinical performance and outcomes.*



# Releaf Pharmaceuticals

## About

We've responded to a growing need in the market for trusted alternative health solutions, underpinned by scientifically rigorous protocols. Releaf Pharmaceuticals is a thought-leading, South African-based pharmaceutical company in the complementary and alternative medicines (CAMs) category of products, focused on creating and sharing scientifically backed, best-in-class products and solutions, which exceed the CAM/SAHPRA requirements within the CAMs product categories. Releaf Pharmaceuticals creates and shares primarily herbal and health supplements that are scientifically backed. Our solutions talk to the needs of a conscious, informed, health-focused community, people who proactively cultivate a healthy lifestyle and believe implicitly in preventative health, who also expect their doctor or pharmacist to offer them trusted alternatives. Our products help you to gain insight into conditions and how to manage them with world-class alternative health solutions.

## Positively contributing to the Cape Health Innovation movement

Releaf Pharmaceuticals aims to continuously launch first-to-market health and complementary products of natural origin, which grows and contributes positively to the health innovation movement in South Africa. Our aim is to provide South African consumers with safe, natural alternatives to enhance and improve quality of life.

## Leadership in the health tech ecosystem

Releaf Pharmaceuticals launched a number of first-to-market innovations with active pharmaceutical ingredients backed by clinical studies. These products address several health concerns, ranging from digestive health, emotional wellbeing and mood and stress to memory and cognitive function. Releaf Pharmaceuticals also has a range of Releaf CBD broad-spectrum products, which is endorsed by the Cannabis Research Institute (CRI). Flagship brands include Releaf CBD, Releaf Theanine, Releaf Probiotics, Doctor Daycare, Emozac, Memrise and Artigest IBS.

## Showcasing success stories

**Releaf CBD:** This broad-spectrum CBD range is endorsed by the Cannabis Research Institute (CRI) and includes daily oils and capsules, as well as combination capsules to address pain, stress, mood, sleep and immune health.

**Doctor Daycare:** This is a first-to-market kids' range of tooth-friendly syrups, offering consumers convenient, great-tasting, off-the-shelf solutions for immune support, cognitive function, calming, allergies, and nausea and vomiting.

**Memrise:** This first-to-market product, formulated with Memophenol™, is a patent-pending formula combining French grape and blueberry extracts rich in essential polyphenols for cognitive function, clinically tested for short- and long-term memory and learning.

## The future of your business

Releaf Pharmaceuticals aims to further entrench ourselves as thought leaders in the medical CBD category with further first-to-market CBD product launches. We will also further drive innovation in key categories within the health and wellness market. Accessibility of our products is also a key focus area for the business, therefore Releaf Pharmaceuticals is driving a couple of initiatives to ensure our products are readily available in the changing healthcare landscape.

## Why Cape Town and the Western Cape is perfect for your business

Cape Town is one of our strongest business regions and consists of a demographic with an early-adopter mindset, aligning with our strategy of launching first-to-market innovation. It also assists the business with daily operations, as we are in close proximity to our manufacturing and distribution partners. The increasing trend towards leading proactive, healthy lifestyles, combined with the need for products of natural origin, provides the perfect platform for Releaf Pharmaceuticals products.



*Releaf Pharmaceuticals offers world-class herbal and health supplements that are underpinned by scientifically rigorous protocols.*

# Rethink Wellness



## About

Rethink Wellness has an innovative offering of CBD-based products for consumers across South Africa. Rethink CBD offers the first CRI-endorsed range of CBD (cannabidiol) products, guaranteeing an extensive range of best-in-class CBD products in a variety of dosages and formats, all scientifically formulated using the purest quality CBD isolate. When selecting Rethink CBD, seed-to-shelf integrity is assured. The brand offers world-class innovation aimed at improving your life, with everyday lifestyle solutions for enhanced health management regimes and relief of minor symptoms. The range consists of daily oils and capsules, combinations oils infused with botanicals, convenient 50 ml shots, as well as a range of teas containing rooibos and botanicals.

## Positively contributing to the Cape Health Innovation movement

Rethink CBD was the first CRI-endorsed product range to be listed and distributed through major pharmacies, health stores and supermarkets across the country, making CBD an accessible solution to the majority of South African consumers. Rethink Wellness' head office is in Cape Town, and all our products are manufactured locally.

## Leadership in the health tech ecosystem

Rethink Wellness was the first company with a range of CBD products that is endorsed by the CRI. With its broad and ever-growing product offering, Rethink CBD has established itself as the market leader across the pharmaceutical and wellness retail sector. Our policy has always been "safety and quality first". All Rethink CBD products are manufactured at a GMP-certified manufacturer in Paarl, Western Cape, where the CBD is tested and screened for over 300 pesticides, mycotoxins, etc. Each batch released has a corresponding COA (Certificate of Analysis) showing that it meets the applicable quality control and assurance standards (within spec) and also exactly what is in the product. For example, the legal requirements in South Africa include that CBD products may not contain more than 0,001% THC (tetrahydrocannabinol), and every COA confirms that each batch meets these specifications.

## Showcasing success stories

Our product range was the first CRI-endorsed CBD range to be launched in South Africa. The national product launch included educating pharmacists and other healthcare professionals in six major cities.

Sean Willard, our national trainer, pharmacist and qualified cannabis practitioner, has pioneered the way in CBD education, sharing all things CBD on TV and radio and more recently on the panel of the Business Day webinar.

*Rethink CBD offers an extensive range of best-in-class CBD products that are scientifically formulated using the purest quality CBD isolate.*

## The future of your business

We will continue to launch thought-leading, innovative products across a variety of categories and dosage formats within the CBD field to ensure we meet any current and future CBD consumer needs. Our focus remains on bringing health-enhancing lifestyle solutions to the South African health and wellness market.

## Why Cape Town and the Western Cape is perfect for your business

The Western Cape is a key region for Rethink Wellness, providing easy access to future home-grown ingredients. It is also in close proximity to our contract manufacturer, who is leading the way in GMP manufacturing, including stringent safety protocols and procedures. The location of our business enables us to deliver top-class service and maintain close collaborative relationships with our entire supply chain, ensuring we provide a quick and efficient service to all parties involved.

# Cannabis Research Institute

## About

Established in 2018, the Cannabis Research Institute (CRI) of South Africa is the first Centre of Excellence in the field of cannabis and cannabinoid therapy management in Africa. The Institute is well positioned as the only dedicated cannabis research institution in Southern Africa, taking the lead in keeping South Africa at the forefront of innovation.

## Positively contributing to the Cape Health Innovation movement

The CRI has an extensive basket of services focusing on developing the medicinal cannabis capability in South Africa, including drug development in the cannabis medicinal, veterinary and complementary fields. This is done using a multidisciplinary approach, integrating novel research, newly developed cutting-edge methodology and state-of-the-art equipment and technology.

We further strive to destigmatise and legitimise cannabis use through the proliferation of substantiated clinical research, and by engaging with the public on several platforms, including webinars and conferences.

*The Institute is the first Centre of Excellence in the field of cannabis and cannabinoid therapy management in Africa.*

## Leadership in the health tech ecosystem

We are involved in various research projects, which are not only centred on expanding the knowledge base around cannabis and cannabinoid therapy, but also enhancing the medicinal product offering in South Africa, for both the African and international markets. It is crucial that the government regulate and limit the quantities of cultivated and manufactured cannabis products in South Africa to ensure that the International Narcotics Control Board (INCB) quotas are maintained and that excess unregulated products and by-products do not filter into the world market. The CRI has therefore positioned itself as a self-regulating body intent on lending assistance in this effort.

## Showcasing success stories

The Institute is involved in a variety of novel research projects, including research towards improved delivery systems, either for enhanced bioavailability or novel applications. We are further investigating improved methods of obtaining CBD (directly from plant material or through other processes), examining South African cannabis strains and exploring potential innovative uses of cannabis materials.



The CRI evaluates applicant cannabis products and if these meet the industry standards, they are awarded the CRI endorsement. This provides consumers with a reliable way of knowing which products they can safely trust. Taking this a step further, the Institute is also proud to be one of the contributors to the establishment of The Medical Standard™.

To meet local and international regulatory standards, the CRI has taken particular care and pride in selecting our cannabis laboratory. This is an integral part of establishing the quality and evolution of the cultivated cannabis to the final, reliable, reproducible, quality medicinal product. To this end, the Afriplex Cannabis Laboratory was nominated as the laboratory of choice by the Institute. Afriplex is not only SAHPRA GMP-certified, but also the first licensed cannabis processor in South Africa, making them an ideal partner to the Institute.

## The future of your business

Apart from continually working on the aforementioned research, there is also a focus on human resource development in the industry, as well as the improvement of the tools, process equipment and technology involved in the cannabis industry. In essence, our eventual aim is to guide the optimisation of every step of the process, including cannabis cultivation, harvest, extraction, final product development and manufacturing, all the way to the consumer.

## Why Cape Town and the Western Cape is perfect for your business

Cape Town and the Western Cape is fast becoming the hub of the country's cannabis industry, making it the ideal location for the CRI and its different endeavours in the industry.

## How the province has facilitated the success of your business

The Western Cape is an ideal location for partnering with the top academic and other research institutions located here. This enables us to be at the centre of the action, so to speak.

## About

Caanu is a proudly South African-based company specialising in cannabis extraction with an extensive and successful history in the extraction of a broad range of African botanicals. The Caanu proprietary cannabis extraction process has been developed leveraging 20 years' experience in the botanic industry, allowing for optimised processing that is safe, efficient, consistent, and cost-effective.

*Caanu processes premium medical cannabis into novel ingredients for the pharmaceutical, veterinary, cosmetic, and food and beverage industries.*

## Positively contributing to the Cape Health Innovation movement

Caanu processes premium, locally grown medical cannabis into novel cannabis ingredients for the pharmaceutical, veterinary, cosmetic, and food and beverage industries in the South African and international markets. Caanu collaborates with the Cannabis Research Institute (CRI) of South Africa, the first Centre of Excellence in the field of cannabis and cannabinoid therapy management in Africa, and Afriplex, a SAHPRA GMP-certified facility staffed by more than 250 well-trained personnel. The Afriplex pharmaceutical site is also the first licensed cannabis processing facility in South Africa.

## Leadership in the health tech ecosystem

Caanu uses state-of-the-art on-site laboratories, standard operating procedure and in-house stability chambers to guarantee the quality of our products. Our standard operating procedures are coupled with modern enterprise resource planning (ERP) and a track-and-trace system for complete traceability throughout the manufacturing process.

## Showcasing success stories

Caanu developed the first CRI-endorsed process in South Africa to legally manufacture active pharmaceutical ingredients from locally grown medical cannabis.

The comprehensive Caanu range includes water-soluble cannabis, which has been successfully used in cosmetic, pharmaceutical, and food and beverage products.

Caanu offers cannabis in self-emulsifying drug delivery systems (SEDDS) to improve bioavailability, thereby easing cannabis absorption by the body for quicker effect.

## The future of your business

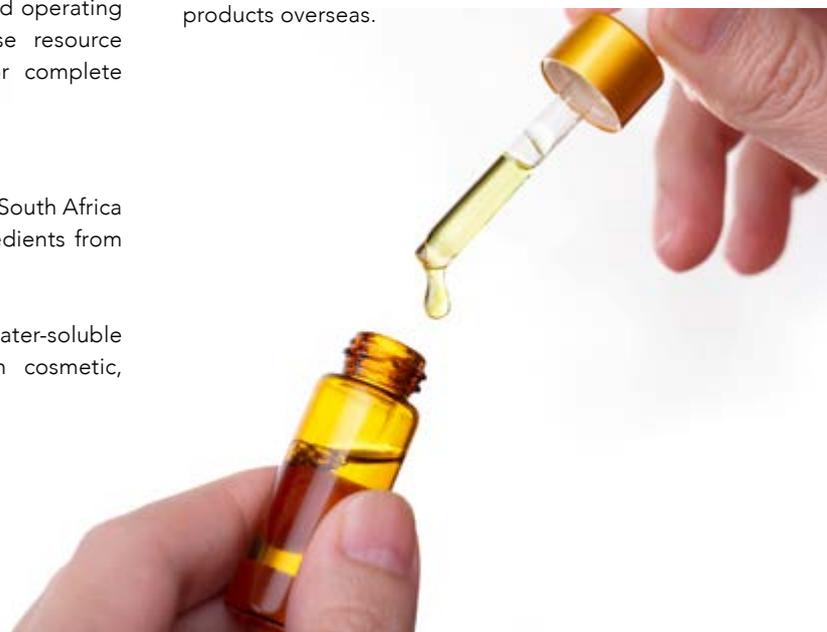
Once the commercial viability of cannabis extraction in South Africa has been established, Caanu aims to offer the service of designing and the construction of turnkey cannabis processing facilities based on locally developed processing technologies. Caanu strives to establish South Africa as a major player in the international cannabis market through continuous collaboration with the CRI, cultivators, and manufacturers. Through collaboration, sophisticated technologies and cutting-edge methodology can be applied to further advance cannabis drug development.

## Why Cape Town and the Western Cape is perfect for your business

Cape Town and the Western Cape is home to world-class academic institutions that support research and development, the Western Cape's agriculture sector is built on corporate expertise and modern technology, Cape Town's primary and advanced medical centres are well established, and the natural beauty of Cape Town prompts Caanu to grow in the new sector that is cannabis.

## How the province has facilitated the success of your business

Service delivery in the Western Cape is of the best in the country and has been pivotal to the success of Caanu's operations. The Western Cape's climate and established agriculture industry provide a favourable supply of raw material for manufacturing. In addition, Caanu benefits from having its production facility within close proximity to the Cape Town harbour to easily export products overseas.





## About

Synexa is a world-class contract research organisation (CRO) providing biomarker development and bioanalysis services to the global pharmaceutical and biotech industry. For nearly 20 years, we have supported our partners across the globe to achieve their clinical development milestones. As experts in the field of immunology, we provide bespoke end-to-end biomarker and bioanalytical solutions that give insight into a drug's efficacy and safety, mechanism of action, suitable therapeutic target and similar investigative endpoints.

## Positively contributing to the Cape Health Innovation movement

Synexa was founded in 2003 in Cape Town, as an early pioneer in the emerging field of biomarker science. During the last 18 years, the company has earned a reputation as a global leader in the field of biomarker and bioanalytical clinical research services, giving the City of Cape Town global recognition as a hub of clinical research expertise in the field of immunology and biomarker science – a tribute to the exceptional training and scientific capability of our South African-trained scientists.

Synexa has been one of the few local companies able to provide employment to young science graduates as this industry is limited in South Africa. Well-trained graduates are very often lost to the international market in the so-called brain drain. Synexa provides excellent opportunities for these aspiring scientists to participate in and contribute to scientific innovations, both locally and internationally, in one of our laboratories in Europe.

## Leadership in the health tech ecosystem

Synexa is an internationally recognised leader in the field of biomarker and bioanalytical science, particularly in the area of immunology, and has played a pivotal role in the development of novel therapeutics in key disease groups for a wide selection of high-profile clients.

Synexa has also developed a proprietary human in vitro translational immunology platform called ProtoTrials™ to bridge the divide between the preclinical and clinical stages of drug development trials. ProtoTrials™ provides a wide array of in-depth insights not attainable through other platforms. The platform is well recognised and a favourable alternative to current preclinical models, particularly where regulatory approval is of importance, or novel methods are required.

## Showcasing success stories

Synexa successfully met the challenges of the COVID-19 pandemic as one of the few laboratories in South Africa to develop and validate methods in-house to measure the immune response of subjects recovering from the infection (convalescence), or to confirm infection in cases where subjects suspect they may have been infected, but never had themselves tested. These methods are currently in use to determine the response of volunteers to candidate vaccines.

Synexa also initiated the testing of determining the status of the microbiome, the bacterial population in people's digestive system. The role of the microbiome in prevention of

disease and its impact on chronic disease are well published. Synexa was the first company in South Africa to offer these microbiome-related diagnostic services to the general public.

Synexa manufactures a whole blood quality control product used in flow cytometry, a technique used extensively in research and diagnostic labs, particularly for HIV monitoring. This product is produced under GMP-accreditation and is sold worldwide as a quality control product used for instrument calibration and staff competency checks.

*Synexa is a global leader in the field of biomarker and bioanalytical clinical research services.*

#### **The future of your business**

Synexa will be expanding further, with exciting high-profile collaborations in the pipeline. Following our success in Europe, we are currently finalising agreements with a US-based laboratory in order to expand our footprint into the US market.

In addition, our scientific capabilities are consistently expanding with new technologies and techniques, including, in the near

future, expanded co-culture systems, extracellular vesicle profiling, and the application of integrated immunological insight technology.

#### **Why Cape Town and the Western Cape is perfect for your business**

The company was founded in Cape Town, where the founding members were medical graduates of local universities. Synexa has grown considerably since being founded, which is a tribute to the excellent scientific expertise of locally trained young science graduates and the incredible work done within Cape Town in the biotech and health science industries.

#### **How the province has facilitated the success of your business**

Cape Town, and indeed, South Africa as a whole, has a wide pool of highly trained and motivated scientists, therefore Synexa's scientific output is of high quality and up to international standard. Further to this, Cape Town has an extensive network of clinical research clinicians, hospitals and investigators, making this an ideal location for conducting clinical trials. Additionally, South Africa has a high prevalence of notable diseases under international investigation, again making this an ideal location for international pharmaceuticals to conduct clinical trials.



# VIVA Medical

## About

VIVA Medical manufactures world-class needleless IV therapy products that substitute costly imported devices. VIVA Medical is a 50% female-owned private company that was started by Marisa and Lindsay John Curran back in 2014. They have 30 years of clinical and 35 years of engineering experience respectively. Through this experience, they have identified the need for locally manufactured bespoke products for the critical-care market in South Africa.

## Positively contributing to the Cape Health Innovation movement

Research conducted in 2014 by Deloitte, funded by the DTI, indicated that over 40% of medical device manufacturing takes place in the Western Cape. Based on this, and the planned Cape Health Technology Park, we decided to invest in a manufacturing facility in Somerset West with full cleanroom facilities, while outsourcing our EtO sterilisation to Sinapi Biomedical in Stellenbosch. We collaborated with the Stellenbosch University Faculty of Biomedical Engineering to assist us with product design, development and validation. Our products were then trademarked as VIVALine and subsequently tested by SABS to meet the 1775-1:2011 specifications.

In addition, VIVA Medical is one of the founding members of the Western Cape Medical Devices Cluster. This Wesgro and DTI initiative has been instrumental in assisting VIVA Medical with our ISO 13485 Medical Devices certification.

## Leadership in the health tech ecosystem

Hospital-acquired infections (HAIs) are one of the greatest healthcare challenges that we face today. Studies show that you have a 14% chance of contracting an HAI in South Africa. This equates to 1,1 million South Africans annually getting an HAI during a hospital stay, which could increase hospital stays by 5 – 30 days. There is also a 29,3% excess mortality rate, and the cost to the private healthcare sector in 2015 was R14,4 billion. Needlestick injuries are one of the greatest contributors. These injuries result in nursing personnel absenteeism, cross-contamination and -infection, and massive cost implications. VIVA Medical only manufactures safety IV devices which incorporate needleless IV injection ports on all of our products. Together with Stellenbosch University, we have developed the first working prototype needleless injection ports in South Africa.

## Showcasing success stories

VIVALine intravenous lines have been purchased by all the academic hospitals in the country. We have sold over one million of our specialised safety IV administration sets in four years. Our product range has been extended to include products for the delivery of clear fluids, chemotherapy, TPN, blood transfusions and anaesthetic agents. We also manufacture a needleless

range of J-loop bifurcated and trifurcated extension sets, which are extensively used in critical care, neonatology and anaesthesiology.

## The future of your business

VIVA Medical is actively represented in all SADC countries and on the islands of Mauritius, Madagascar and St. Helena. Following validation of our products by a leading medical supplier, we have received numerous enquiries from the Middle East and Europe. We plan to take advantage of these opportunities once we have obtained our CE Mark.

## Why Cape Town and the Western Cape is perfect for your business

The number of similar medical devices in the Western Cape and the willingness to collaborate with each other make Cape Town the perfect place to do business. For example, we have our DEHP-free medical-grade tubing made by Akacia Medical in Milnerton and outsource our sterilisation to Sinapi Biomedical in Stellenbosch.

*VIVA Medical manufactures world-class needleless IV therapy products that substitute costly imported devices.*



# Akacia Medical and Healthcare Group



*Akacia Medical is a leading manufacturer and distributor of medical and surgical devices.*

## Showcasing success stories

With the onset of COVID-19, there was a substantial and inevitable surge in the demand for ventilators. The government assembled a National Ventilator Project team to produce life-saving equipment. In an unprecedented four weeks, a team of talented scientists and engineers developed the non-invasive device for supplying high-volume air to patients suffering from the effects of COVID-19. This saw Akacia Medical being appointed as the group to assemble the mixer device and incumbent breathing circuit equipment from our lines in our Cape Town factory. Streamlined and efficient production processes resulted in the successful delivery of 10 000 new devices to alleviate COVID-19 sufferers' ailments.

## About

Akacia Medical and Healthcare Group (AMHG), a fully compliant B-BBEE level 2 contributor, is a leading manufacturer and distributor of medical and surgical devices, providing value-based healthcare and diagnostic services to the healthcare sector in the SADC region and 21 export markets globally.

Our extensive medical and healthcare products and services to clinics, hospitals, laboratories, wholesalers and pharmacies are designed to improve access to affordable quality services and products. Our head offices are in Johannesburg, our manufacturing and distribution centres in Cape Town and Port Elizabeth, and our sales offices in Durban, giving us truly wide coverage and reach of the market.

## Positively contributing to the Cape Health Innovation movement

Akacia Medical and Healthcare Group is committed to being involved in innovative projects that will positively impact the broader communities within which we operate. Our Cape Town factory with its skilled staff and experts in streamlining production processes has been commissioned to be the assembler and key role-player in the National Ventilator Project by producing non-invasive breathing ventilators for South Africa in the fight against the COVID-19 pandemic.

## Leadership in the health tech ecosystem

We are becoming a low-cost, high-efficiency manufacturer and assembler of medical devices with constant production innovation and strong alliances with our stakeholders in the public and private sectors.

## The future of your business

We will be increasing localisation of the supply and value chain. As a country, we have extensive and reliable manufacturing talent and capacity, which we plan to explore and bring focus to, to position ourselves as a front runner in local manufacturing and distribution.

## Why Cape Town and the Western Cape is perfect for your business

We have access to high-quality supporting industries, and skilled labour, with our Cape Town plant having the highest staff complement across the business with 241 employees from the community. We also have a prime location in the industrial business park, which provides us access to a modern, automated manufacturing facility where we can produce high-quality products.

# Converge Solutions

## About

Converge Solutions delivers a range of IT solutions and services that address the unique needs and challenges of our focus industries, being healthcare, consumer products, banking, financial insurance and medical insurance.

In the healthcare industry, we offer a suite of products and services that comprehensively digitalise and optimise the entire patient journey. Through the healthcare value chain, we deliver solutions that address challenges such as incident management, patient engagement, form digitalisation and hospital management. We also offer a comprehensive IoT portfolio that can track and monitor everything from equipment to people.

In the banking, financial insurance and medical insurance industries, we offer a comprehensive fraud, waste and abuse platform (Themis) that leverages artificial intelligence, machine learning and neural networks to improve accuracy, compliance and productivity. We cover topics such as KYC (know your customer), enhanced due diligence, third-party verification, AML (anti-money laundering), syndication and Ponzi schemes, in one, integrated platform.

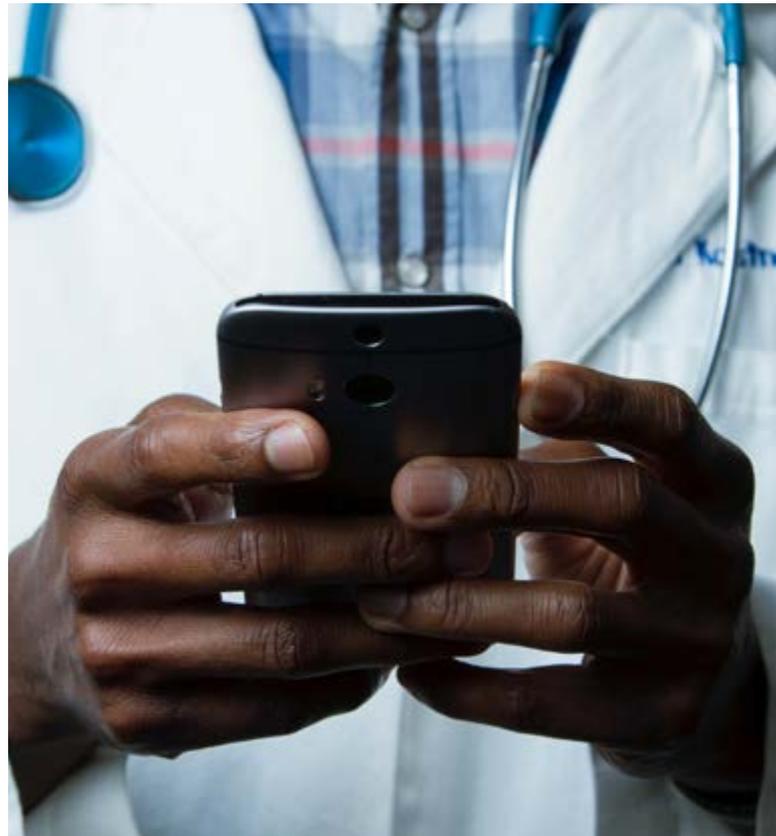
In the consumer products industry, we offer an analytical solution (LULA) that helps manufacturers and sales and merchandising companies better manage their operational challenges, such as OSA (on-shelf availability), stock management, sales and distribution gaps. With changing consumer baskets and fluctuating demands, LULA alleviates much of the burden from manufacturers, helping them gain actionable, immediate operational insight to improve overall performance.

In addition, we offer a comprehensive IoT suite. We offer and integrate with more than 330 sensors, and cover various industries and use cases, from healthcare to transport and logistics, refrigeration, building automation and agriculture, where we cover the full farm-to-fork value chain.

## Positively contributing to the Cape Health Innovation movement

Our clients play a pivotal role in the transformation of the African continent and beyond and are typically those organisations that embrace the adoption of technology to augment their business operations. Everything we do is constantly evaluated against our purpose: "Imagine a world. Now make it so." It is evident, with a mission such as this, that innovation is at the core of everything we do.

In the context of the Cape Health Innovation movement, we have a strong partnership ethos. We don't try to be all things to all people; instead, we surround ourselves with organisations that share our value system and complement/augment our own solutions and services to offer clients a comprehensive



experience, without having multiple accounts or contracts to manage.

The entrepreneurial landscape – even more so in the Western Cape – is exceptional. We are convinced that South Africans have – perhaps through our environment and circumstances – the foundation from which to lead digital innovation, not just in Africa, but across the globe. We have frequent interactions with companies across Europe, North America and APAC, and nine times out of ten, they are completely overwhelmed by the breathtaking innovation originating from South Africa.

## Leadership in the health tech ecosystem

At Converge, we appoint passionate, visionary people who are constantly challenging the status quo and pushing the boundaries of "the art of the possible".

On paper, we don't present like a typical IT company. In fact, only about 50% of our employees would actually pass as technologists. The other 50% comprise experts from the various industries we serve. This includes healthcare professionals, forensic experts, actuaries and even mathematicians. This allows us to build solutions and shape services that are designed with active inputs from the very industries we serve.

That being said, healthcare (as an example) is a complex ecosystem and we recognise the need to collaborate with best-in-expertise partners across a number of domains to complement the experience of our own teams. In

addition to the IT solutions and services offered directly by Converge, our strategic partnerships allow healthcare entities to receive a wide range of services from one point of accountability. Partners include SAP, Cerner, Elsevier, Duxbury Networking, UC-Wireless, iSphere and MobileLab.

I would argue our leadership, therefore, is through three key dimensions:

1. We listen.
2. We collaborate.
3. We work relentlessly at incorporating modern technologies and methods into what we do, as a joint effort between our industry experts and technologists.

*Converge Solutions offers a unique range of IT solutions and services to the healthcare, consumer products, banking, financial insurance and medical insurance industries.*

### Showcasing success stories

In roughly 30 months, Converge has established teams across Cape Town, Gauteng and KwaZulu-Natal. Globally, we are represented in the UAE, UK, East Africa, Hungary and the Sunshine Coast.

In 2020, StartUp City awarded us the accolade of being one of the top 10 tech start-ups in Africa. We were also a category winner of a start-up bootcamp hosted by the UK-South Africa Tech Hub.

These accolades are great, but in the end, they are dwarfed by two topics that I view as much more important: We managed to retain 100% of our employees during really tough global conditions, and the entire Converge team remain as dedicated and excited about Converge as on Day 1. We retained and grew our client base, and are extremely grateful for the overwhelming positive client feedback that continues to validate what we're doing, and how we're doing it. All the accolades in the world don't matter if your clients are not happy with your services.

To elaborate on some recent customer-centric successes: We deployed our SAP Healthcare Information System across 67 clinics in South Africa, Namibia, Botswana and Swaziland. A number of acute and sub-acute hospitals, psychiatric hospitals and even age care facilities have deployed our Clinical Incident Management Platform (Impi). Our Patient Survey and Intervention Platform (PatientMyth (being rebranded as CX Insights)) and our Acuity-based Nursing & Shift Planning Solution (Triton) are also making positive changes to the way in which hospitals think and operate. We have also displaced a global, tier-1 solution in the health insurance space with Themis.

These are just some of our successes, and we are grateful to every client giving us an opportunity to join them on their own journey.

### The future of your business

As with most other organisations, 2020 did not quite pan out as we imagined it would. Several opportunities, including contracted projects, were put on the back burner by organisations that turned inward. However, I think Helen Keller sums it up perfectly when she says: "Life is either a daring adventure or nothing at all." Fortunately, several of those projects are now starting to surface again. In addition, we are working on a number of very exciting initiatives. One such initiative is a derivative of Themis that we call Brutus. Brutus offers a similar scope, but in the context of blockchain. Another is a complete transformation in the IoT domain, where limited battery life (being an inhibitor of practical application in certain use cases) will become something of the past.

As recently as January 2021, we've established a partnership with [Ideal Middle East](#) (Ideal is the UK's leading digital health professional service organisation) that we expect will speed up our impact on the region.

### Why Cape Town and the Western Cape is perfect for your business

Businesses that operate in the Western Cape will already know the answer to this question. In short, the Western Cape simply works. There is less red tape, more collaboration between the private and public sectors, more support from local government, and a real desire from various entities (Wesgro being one of them) to invest back into the local ecosystem. There is diversity, energy and passion, and importantly, infrastructure and a platform (case in point, this publication) from which to grow and thrive. Of course, our clients are global, and our teams are scaling as is required to meet this global demand, but there is an unmistakable resonance between our own vision and "the Cape of Good Hope".

### How the province has facilitated the success of your business

Local government, and entities such as Wesgro, take a proactive stance on collaboration, enablement and empowerment. I have attended numerous sessions that create a platform for entrepreneurs to collaborate, meet stakeholders, understand legislation, simplify compliance and generally obtain assistance that – outside of these platforms – would have demanded an incredible amount of time. Time, of course, is the rarest of commodities, so as a business owner, having this platform from which we can springboard interaction and engagement means I have more time, more insight and more facts to work with. This is, in one word, invaluable. Wesgro specifically, in partnership with the local government, went above and beyond to support businesses during these peculiar times in the form of grants and other means of financial and operational support.

# Afrigen Biologics and Vaccines

## About

Afrigen Biologics and Vaccines is a Cape Town-based biotechnology company. It was founded in 2014 by the Infectious Disease Research Institute (IDRI) in Seattle, USA. Afrigen drives a business strategy focusing on product development, bulk adjuvant manufacturing, and the supply and distribution of key biologicals to address unmet healthcare needs.

Afrigen has established the first-ever adjuvant production and formulation technology centre on the African continent. This centre focuses on next-generation vaccine adjuvants, which are geared at preventing disease and confer added potency and durability to vaccines. More recently, Afrigen has entered the novel CAMs space with its first of its pipeline – a high bioavailable, water-soluble Nanozomal CBD.

## Positively contributing to the Cape Health Innovation movement

The research facility in Montague Gardens is the first and only one of its kind on the African continent, and it brings an international research, testing and production capability to the province, South Africa, our neighbours and the international medical technical fraternity. In addition, with a massive agriculture sector, Afrigen technology is well poised to add value to local producers with its liposomal and nanosomal technology, which will enable them to add technologically superior, internationally competitive product offerings such as CBD-infused water, wines and other beverages.

## Leadership in the health tech ecosystem

Our adjuvant technology is world-class, and the deep research, experience and capability have successfully been transferred into the novel complementary medicine space, enabling enhanced efficacy, quality and bioavailability to a range of botanicals, vitamins and minerals for the first time ever in Africa.

## Showcasing success stories

Our first proof of concept launch, the Nanozomal CBD range of products, has been extremely well received and sets entirely new standards for efficacy, quality and bioavailability in the cannabinoid market space. Testing of our bulk water-soluble, high bioavailable nanosomal CBD for infusion in beverages is also complete and ready for launch.

## The future of your business

While we are currently focused on reaching the water, wine and other beverage producers with our high-tech water-soluble CBD products, with our highly qualified team of PhDs and our state-of-the-art facility, we will expand our technology reach into a range of suitable molecules, including vitamin C, iron and selenium. We will also establish a SAHPRA-approved cGMP facility, as well as make our laboratory and compounding services available at a commercial level.

## Why Cape Town and the Western Cape is perfect for your business

With our technology set to capitalise on the massive growth expected in the international consumer CBD markets, proximity to the Western Cape wine, fruit, vegetable and water producers is essential. In addition, the Western Cape services infrastructure, availability of world-class talent, access to local tertiary institutions, as well as Cape Town's reputation as one of the world's leading and most beautiful destinations, make the city an ideal location from which to reach the South African market, and the ideal springboard to enter the global stage.

*Afrigen is a biotechnology company focusing on bulk adjuvant manufacturing and the supply of key biologicals.*





## About

Our vision is to create a thriving biotechnology industry in Africa and to produce world-class biotech companies, leveraging Africa's unique potential. To this end, BioCiTi provides a platform for biotech entrepreneurs to turn their ideas into creative solutions before taking it to market. We offer world-class lab facilities, as well as access to a range of business specialists, such as marketing, operations and finance specialists. Furthermore, we connect the entrepreneurs to investors, pharma, big business, and other major role-players in the industry. Entrepreneurs also have access to peer support through the use of our shared lab facilities and co-work space. Our mission is to catalyse scientific innovations from ideation to commercialisation for the benefit of society and the environment by fostering collaboration, both locally and internationally. See more about the [BioCiTi lab based in Woodstock Exchange](#).

## Positively contributing to the Cape Health Innovation movement

At BioCiTi, we facilitate the creation of industries of the future in South Africa and Africa by creating a bridge between research and the commercialisation of ideas based on the application of technology to broad biological sciences.

## Leadership in the health tech ecosystem

BioCiTi offers a cost-effective entry point for entrepreneurs to access lab facilities, incubation and experienced business mentorship and support. With the focus on "Tech for Good", BioCiTi produces industries of the future in a meaningful and sustainable manner that will positively impact the lives of people living in Africa.

## The future of your business

BioCiTi will increase innovation activity in the biotech space,

further promoted by the coronavirus pandemic. We will partner with big business and pharma and other promoters of a thriving early-stage biotech ecosystem. We also concentrate on in-depth business support required by scientist entrepreneurs who tend to be less business-savvy in comparison to founders in other industries. There is also more competitive pressure on companies to launch quickly due to high innovation activity in the sector.

*BioCiTi offers biotech entrepreneurs world-class lab facilities and access to business specialists to turn their ideas into creative solutions.*

## Why Cape Town and the Western Cape is perfect for your business

Cape Town is not only known as the Tech Capital of Africa, but is also uniquely placed with four excellent universities in a radius of 50 km, an active venture capital ecosystem, and a strong biotech community that offers opportunity for collaboration and community-building to researchers, academia, innovators, entrepreneurs, start-ups, ideators and established biotech CEOs.

The Western Cape is rich in biodiversity and the start-up destination of choice. With the support of the province and the biotech ecosystem, BioCiTi aims to become the premier partner for biotechnology incubation and acceleration in Africa.



**WE DON'T  
MAKE DRUGS,  
WE MAKE  
MEMORIES.**

THAT'S HUMANCARE. **Cipla**



**WE DON'T  
HAVE  
CONSUMERS,  
WE HAVE  
PHUMI AND  
JOHAN.**

THAT'S HUMANCARE. **Cipla**

## About

Cipla, established in 1935, is a global pharmaceutical company focused on agile and sustainable growth, complex generics, and deepening our portfolio in our home markets of India, South Africa and North America, and key regulated and emerging markets. Cipla South Africa is one of the largest pharmaceutical companies in South Africa by volume and third largest by value.

Our strengths in the respiratory, antiretroviral, urology, cardiology, anti-infective and CNS segments are well known, while we are trusted by healthcare professionals and patients across the world. Over the last 86 years, we have strengthened our leadership in the pharmaceutical industry and fortified our promise of "Caring for Life".

As a responsible corporate citizen, Cipla's humanitarian approach to healthcare in pursuit of its purpose of Caring for Life and deep-rooted community links wherever it is present make it a partner of choice to global health bodies, peers and all stakeholders.

## Positively contributing to the Cape Health Innovation movement

We make people better and we save lives. For over eight decades, making a difference to patients has inspired every aspect of Cipla's work. Our paradigm-changing offer of a triple antiretroviral therapy for HIV/AIDS at less than a dollar a day in Africa in 2001 is widely acknowledged as having contributed to bringing inclusiveness, accessibility and affordability to the centre of the HIV movement.

## Leadership in the health tech ecosystem

We are not sellers of drugs. Not mere manufacturers of medication. What we make are memories. Memories that may not have been there, had a life not been lived.

## Showcasing success stories

We want people to live a long and healthy life. For over two decades, we have been committed to the cause of HIV/AIDS. In 2001, we introduced the world's first-ever recommended 3-in-1 fixed-dose combination (stavudine + lamivudine + nevirapine) to fight AIDS. It was made available at less than one dollar per day, compared to over \$12 000 per patient per year prevailing in most countries throughout the world. It lifted the death sentence from millions across the developing world.

We have also done pioneering work in paediatric HIV and addressed the needs of every kind of HIV patient, from pregnant

mothers to babies, and from children to adults. It's not surprising that millions of patients in the world are on our antiretrovirals, and with regular therapy they can live for years and lead a near-normal life.

Good news in the realm of blood cancer treatment is that Cipla recently received regulatory approval for lenalidomide, a medication used to treat multiple myeloma (MM) and myelodysplastic syndromes (MDS). It is a life-saving immunomodulatory drug that activates and increases the number of immune system cells that identify and attack cancer cells.<sup>1</sup>

*We are a global pharmaceutical company focused on complex generics. We make people better and we save lives.*

Previously, the cost of this essential drug has been prohibitive in South Africa, ranging between R60 000 and more than R100 000 per month. Many medical aids did not cover the cost in full, leaving patients to pay out of pocket, making the medication entirely unaffordable for many.<sup>2</sup> One of the saddest facts revealed in our research was that family members of patients would often travel to India to purchase the same medication, where it was available at a fraction of the cost. Now, Cipla is proud to offer this treatment locally in South Africa at an average of 75% less than the current price of the originator.<sup>3</sup>

Cipla South Africa has entered into an exclusive partnership with innovative biopharmaceutical company Alvotech to bring key biosimilars to the country. Two biosimilars for oncology and three for treating auto-immune diseases will now be available from Cipla South Africa as part of our efforts to broaden the range of medical options available. Due to the complex production processes, the cost of biologics is often higher than that of chemical drugs.<sup>4</sup> But in the long term, biosimilars will help to reduce the cost of medication in the same way that generics do – making them a key priority area for Cipla.

## The future of your business

We see a future where good health is expected. Not for the few, but for the many. We will continue to focus on equitable access to healthcare and holistic patient care.

<sup>1</sup>Kotla, V., Goel, S. et al. Mechanism of action of lenalidomide in hematological malignancies. *J. Hematol. Oncol.* 2, 1–10 (2009)

<sup>2</sup>Meyer, S. & Rutter, L. Activists call on South African government to ensure access to cancer medicine that WHO now considers "essential". *Health Gap* 1–6 <https://healthgap.org/press/activists-call-on-south-african-government-to-ensure-access-to-cancer-medicine-that-who-now-considers-essential/> (2019)

<sup>3</sup>NDOH Pricing Schedule effective 30 November 2020

<sup>4</sup>Blackstone, E. A. & Fuhr, J. P. The economics of biosimilars. *Am. Heal. Drug Benefits* 6, 469–477 (2013)

# Afrobodies



## About

Afrobodies is a biotech business that specialises in the production of high-value biological products called recombinant alpaca antibodies, more commonly known as nanobodies. Our products are used in a variety of markets that include life science research, agriculture and immunodiagnostics. The nanobodies we make enable quick and easy measurement of microscopic substances such as chemicals in water or viruses in patient samples. In the life science research sector, our nanobodies are helping scientists to make exciting new discoveries that relate to human health and disease.

## Positively contributing to the Cape Health Innovation movement

Our company is providing key resources to scientists in the region and globally to make new discoveries into human and animal health.

## Leadership in the health tech ecosystem

We are the only company on the African continent that develops nanobodies.

*Afrobodies is a biotech company specialising in the production of nanobodies.*

## Showcasing success stories

Our company has developed potent neutralisation nanobodies against SARS-CoV-2, the causative agent of COVID-19. We are now working on getting these nanobodies to the clinic so that they can be provided to patients and hopefully save lives.

## The future of your business

Having increased sales of our products globally.

## Why Cape Town and the Western Cape is perfect for your business

There is a good concentration of scientists in the region who we can work with on a variety of different topics that are of interest to our business.

# Mzansi Meat Co.



## About

Founded in March 2020, South Africa-based Mzansi Meat Co. is the first cell-based food tech company to arrive on the continent. Using cellular agriculture technology, the company hopes to produce cruelty-free cell-cultured protein products, including products that are specifically tailored for the traditional braai and shisa nyama.

Jay van der Walt and Brett Thompson founded Mzansi Meat Co. because they believe that there is a global shift to find alternative sources of protein that are healthier and more sustainable and cause less harm to animals. Cultivated meat has the potential to contribute to this shift. We wanted to work on this because none of the global players were focusing on Africa, and as Africans, we feel like we understand the market. We have seen a shift in South Africa with more growth in alternative proteins in retail, with greater shelf space being given to these products.

## Positively contributing to the Cape Health Innovation movement

Mzansi Meat Co. offers a potential solution by making meat with a smaller impact on the environment. Less impact on natural habitats and a focus on "one health" are components of future-proofing our food systems by reducing the prevalence of zoonotic diseases. Cultivated meat also offers an opportunity to create protein that could be healthier with less fat and improve the accessibility of quality meat to more people in South Africa and on the African continent as a whole.

## Leadership in the health tech ecosystem

Our team has extensive experience with alternative protein and foods service within Africa. This will allow us to truly understand the cultural ties associated with meat in South Africa and across the continent to help drive consumers to buy into our product. In terms of R&D and product development, we understand that local market knowledge is key to developing cultivated meat

products that are favoured in traditional dishes, and that while novel scaffolds and state-of-the-art techniques such as 3D printing might be newsworthy and exciting, it is imperative that low cost, maintaining familiar textures, and food safety are the main considerations for bioengineering scale-up.

*Mzansi Meat Co. uses cellular agriculture technology to cultivate meat for the benefit of the environment and our health.*

Being first means the responsibility is on us to bring about public awareness about a new technology in a manner that informs and inspires. Through our partnerships in media, government, agriculture, and the culinary industry we will be propagating positive conversations with thought leaders in order to lay the groundwork for cellular agriculture to thrive.

## Showcasing success stories

We managed to garner the attention of one of the most successful and renowned angel investors in the international biotechnology field, who became our first external investor.

Our cell-harvesting methods are cruelty-free, and by using exclusively serum-free culture medium and growth factors, our products will be both fast-growing and sustainable. We're testing a wide combination of animal-free biomaterials, hydrogels, plant cellulose and yeast cultures in order to engineer the optimal scaffolds and develop the traditional tastes and textures that consumers know and love.

## The future of your business

Over the next two years, our key focus is bovine (beef) cell culture with our goal of being the first company in Africa to bring a cultivated beef burger to market. Early engagement has already started with retailers, chefs, and regulators. Our R&D focus will then shift onto chicken and pork with plans to move product into the rest of Africa and hopefully drive down our price through scale.

## Why Cape Town and the Western Cape is perfect for your business

Biotech is increasingly seen as a solution for global challenges in health, food, agriculture, and the environment, as well as a driver of economic development and diversification. Falling costs of performing life sciences research mean that biotechnology is no longer reserved for large corporations, universities and government organisations. We recognised BioCiTi, situated in Cape Town, as a specialised biotech incubator that provides African entrepreneurs with a platform where science, business and investment can come together, and this was the appeal for us to help pioneer life sciences in the Western Cape.

# Stellenbosch Nanofiber Company



## About

At SNC, we strive to apply the creative spirit of our team and the power of the SNC BEST® high-throughput electrospinning technology platform to turn great nanofiber concepts into commercial realities. We currently develop and manufacture nanofiber materials for advanced wound care, regenerative medicine applications, personal care and reusable medical masks, and the company continues to expand on its technology portfolio into other areas. Through these actions, we are working to create a better world by unlocking the potential of electrospun fibers.

## Positively contributing to the Cape Health Innovation movement

Since its launch in 2011, SNC has been building international collaborative relationships in diverse areas of tissue engineering, advanced wound care, and nanofiber materials science. These collaborations and related activities led to the development of many novel health science products and concepts, directly contributing to the building of local capacity in medical product development, manufacture, quality assurance and infrastructure.

## Leadership in the health tech ecosystem

We lead the way in our field by combining the creativity and skill of our highly talented team with the power of our patented SNC BEST® high-throughput electrospinning technology platform. This enables us to innovate at lightning speed. We then build collaborative partnerships with market leaders in the industries we engage to create long-term sustainable value chains for our products.

## Showcasing success stories

In collaboration with the National Eye Institute of the NIH in the USA, we developed FiberScaff-RPE®, a resorbable tissue engineering scaffold used in the culture of retinal pigment epithelium for the treatment of various eye diseases, including age-related macular degeneration. Our scaffolds form part of a therapy that is currently undergoing [Phase 1 clinical trials on humans in the USA](#).

In 2018, SNC started developing products for skincare applications. One of the first products that we developed was a 3-in-1 oil cleanser, foam cleanser, exfoliant scrub. This product was launched in 2019 in the US by the brand Artis (byartis.com) as Phantom Cleansing Silks. This product was awarded one of [TIME magazine's 100 Best Inventions of 2019](#).

In 2020, as the pandemic was creating a global shortage of PPE, we decided to refocus our efforts on helping to solve this problem locally. We developed the [Rethink Face Mask Filter](#), a removable and reusable nanofiber medical mask filter that offers a more sustainable alternative to single-use medical masks. The removable nanofiber filters can be used 10 times and are disinfected with boiling hot water between uses. Rethink Face Mask Filters meet the stringent European Standard EN 14683.

We supplied 1,5 million of these filters to the [Masked Heroes campaign](#), an initiative to provide community health workers with PPE. These filters provided them with 15 million mask days while eliminating 13,5 million single-use masks from landfills and the oceans.

### The future of your business

The development of the Rethink Face Mask Filter has helped us to see another way in which we can create a better world with nanofibers. The reusability of our masks simultaneously leads to lower cost of use, significantly lower logistics volumes (up to 86%), and massive reductions in the impact on the environment (90% less waste). We will therefore continue to build our relationships with health networks in Africa, and globally, to protect our community health workers and their communities in a more sustainable way.

Furthermore, SNC will continue to build on our collaborations in advanced wound care, tissue engineering and personal care, while pursuing new opportunities in other application areas, like aerospace, energy and pharmaceuticals.

### Why Cape Town and the Western Cape is perfect for your business

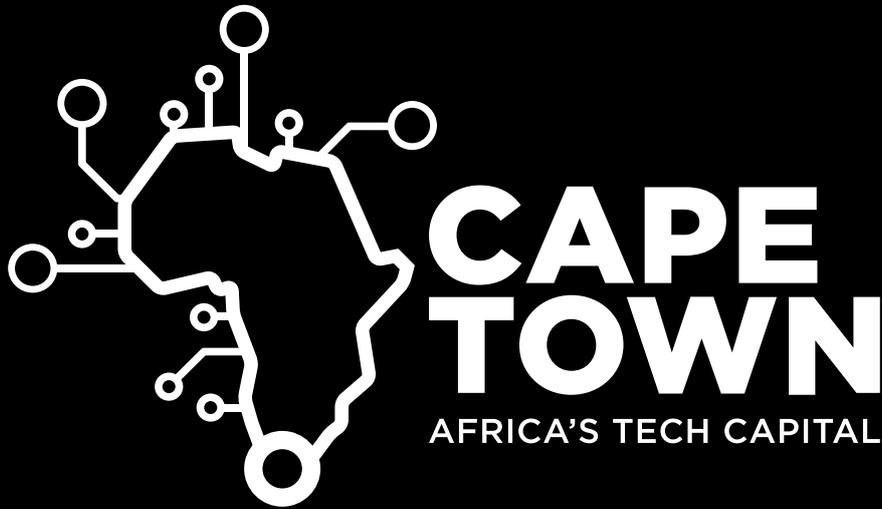
SNC started as a spin-out from Stellenbosch University with the goal of commercialising proprietary high-throughput nanofiber production and processing technologies developed there. The Western Cape was a natural choice for location, since there is a great pool of talented scientists and other required resources available locally.

### How the province has facilitated the success of your business

Cape Town is well known internationally and is seen as a credible hub of competence in technology development. Many of our international collaborators welcome the opportunity to visit Cape Town and, of course, the Cape Winelands.

*We turn great nanofiber concepts into commercial realities by combining the creativity of our highly talented team with the power of our patented high-throughput electrospinning technology platform.*





Western Cape  
Government

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