

# PIONEERS

IN THE CAPE HEALTH TECH INDUSTRY

**THE FUTURE  
IS NOW**

22 companies doing  
the impossible

**ACESO**

The innovation  
that's saving lives

**R700 MILLION**

The business of R&D



*"Afriplex's African Indigenous Botanical Products and API's set us apart in the field of complementary medicine."*

We specialise in product development & research, product manufacturing and dossier compilation. We service the pharmaceutical, health supplement, food & beverage, veterinary and cosmetic industries by providing complementary medicines and botanical ingredients.

### Positively contributing to the Cape Health Innovation movement

Our focus is on these industries: Pharmaceutical, CAMS, Health Supplement, Botanical Extracts Veterinary, Cosmetic, and the Food and Beverage industries, and this contributes positively to the Health Innovation movement in SA.

### Leading the way in the Pharma-tech field

With 20 years of experience in the Botanical Extraction Industry, Afriplex is one of the leading companies in South Africa. We've been able to adapt to the new market in SA: Cannabis cultivation, extraction and R&D. Afriplex is leading the way and working with SAHPRA to ensure this new industry leads the way internationally.

### Inspiring success stories that showcase Afriplex's innovation

1. We've had enormous success with our Active Pharmaceutical Ingredient (API) development, which is a huge value contribution to the business. Afriplex has developed APIs like their Folicin® and GRT®.
2. Afriplex is also excited by our recent strides into the liposomal drug delivery system technology. This know-how is groundbreaking in SA as it will allow conventional drug deliveries to be enhanced and better targeted. This would avoid unnecessary adverse effects whilst still ensuring optimal efficiency of a formulation or ingredient.

### The future of your business?

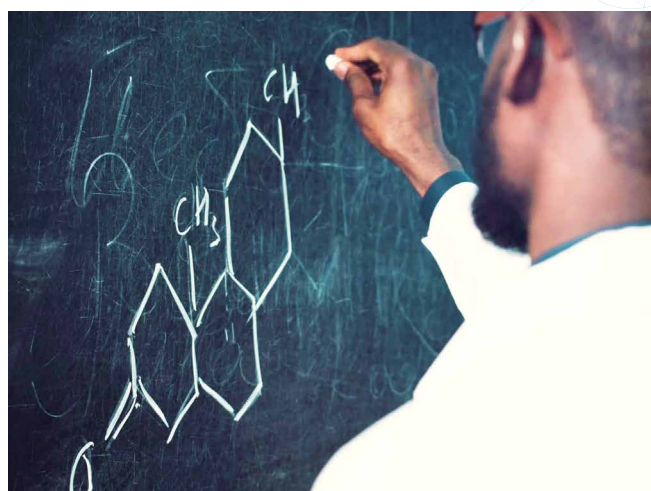
Afriplex's African Indigenous Botanical Products and API's set us apart in the field of complementary medicine. Our reputation is backed by 20 years of scientific research and innovation. This skill set is now evolving into the recently publicised Cannabis Industry, and we have in fact been working on moving into this sector for the last 3 years. Our relationship to the Cannabis Research Institute in South Africa will allow Afriplex to ensure our techniques and offerings to the SA market meet international standards.

Afriplex has also been investing in green technology over the years to match the local governments mandate for a greener tomorrow. We practice the philosophy of using renewable energy with 30-40% of the facility energy requirements and our fully-automated Reverse Osmosis treatment plant also reduces our water waste.

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

Afriplex has been working and investing in the Western Cape for the last two decades. Our investment in this region is due to the favourable local agricultural industry, which is the basis of the 'business' origin. Our close proximity to the Cape Town Harbour has also encouraged many of our customers to export their products to overseas markets. Overall the Western Cape and the local government support has been vital to our success. It has allowed Afriplex to springboard into the rest of the world whilst offering an exceptional service.

The Western Cape government provides the platform of excellent service delivery from which we gain operational advantage. The province is additionally a melting-pot of conventional and entrepreneurial clients that is ever-growing. As an additional contributing factor, the Western Cape's climate is also ideal for the botanical products we focus on and the developments we are eager to expand into.





*“AzarGen is the first private plant-made pharmaceutical company in South Africa.”*

AzarGen is a biotechnology company focused on developing human therapeutic proteins using advanced genetic engineering and synthetic biology techniques in plants. The company's lead therapeutic candidates are a biosimilar version of an anti-cancer monoclonal antibody and a recombinant human surfactant protein targeted for various respiratory disease conditions. AzarGen has developed proprietary synthetic DNA tools (promoters) for various expression platform applications in plant-made pharmaceuticals, synthetic biology and GM-crop improvement.

### **Positively contributing to the Cape Health Innovation movement**

Through our international network, we facilitated collaboration of academic institutions – focusing on health innovation and commercialisation – with key players in the USA. We have also established successful collaborations with institutions in the Western Cape, either as a commercial partner and/or to be part of the advisory board to assist in the facilitation (and training) of entrepreneurs to commercialise health-tech innovation in the Western Cape.

### **Leading the way in the Pharma Tech field**

AzarGen is the first private plant-made pharmaceutical company in South Africa. We have successfully established a technical and business collaboration with the world's largest plant-made

pharmaceutical facility in Texas, USA. Thanks to our SA, US and EU patents (granted for our innovations in health tech) and our successful collaboration with international commercial and academic institutions, we lead the way by sharing our expertise and 'lessons learned' with a new generation of biotech/life science entrepreneurs through training, presentations and collaboration.

### **Inspiring success stories that showcase AzarGen's innovation**

1. We are still in the early R&D phase of drug development (the average time for drug development from discovery to market is around 10-16 years).
2. At this stage, we have patents granted and we have signed an exclusive agreement with the largest plant-made pharmaceutical facility in the world to produce a biosimilar version of the anti-cancer drug, rituximab, for the African continent.

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

AzarGen's vision for plant-based healthcare solutions has the backing of South Africa's Industrial Development Corporation (IDC), with the recent announcement of the IDC's commitment to fund the initial pre-clinical phase of AzarGen's biosimilar candidate. The production and pre-clinical testing of this candidate drug will be conducted in the USA.

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

High-tech entrepreneurship and the start-up culture in the Western Cape, followed by the existence of top academic institutions (all with a strong research and innovation output), leads to attractive prospects for tech-transfer deals in the Western Cape.







*"We have been a respected role-player in the healthcare industry for over 25 years."*

Be Safe Paramedical is a medical equipment developer, manufacturer, importer, distributor and exporter based in Cape Town, Johannesburg and Durban South Africa. We have built up a respectable product portfolio which includes a range of products developed and trademarked by Be Safe Paramedical. Be Safe Paramedical is a BEE Level 2 contributor, employs over 150 staff at 3 branches and is both ISO 9001:2015 and ISO 13485:2016 certified.

### **Positively contributing to the Cape Health Innovation movement**

We have developed and successfully marketed devices that no other company has ever developed in South Africa. Many have been developed to create solutions for emergency conditions that have been synonymously difficult to manage in the pre-hospital setting. We believe that if a product that we have developed is able to stabilise a critical patient long enough to get them to hospital alive, this dramatically increases the potential for a successful patient outcome.

### **Leading the way in the Health Tech field**

We develop and market devices that are highly effective, practical and cost-effective. Cost-effectiveness means that every healthcare service provider will be able to afford them, which ultimately means that our devices will be used on even the poorest of our society. We firmly believe that life-saving devices should be saving all lives and not only those fortunate enough to be able to afford them. One only has to do an online search for "CritiSeal", "CritiJet" or "CritiPack" and "CritiValve" to see how our products and brands are changing lives.

### **Inspiring success stories that showcase Be Safe's innovation**

Our CritiSeal Chest Wound Seal, CritiValve and Burn-Eaz have been used in the following situations:

1. Up the steepest drivable ascent in the Southern Hemisphere.
2. Used at -14°C in sleet/snow on a burns victim.
3. Driven to the highest drivable point in the Drakensberg (and then hiked higher with a patient).
4. Used on numerous international tours such as Tour De Tuli, Lesotho Sky, Entabeni Tour of legends and many more
5. CritiValve chest decompression at 3250m (Mafadi Peak).

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

We are in the process of investigating FDA certification for our CritiSeal Chest Wound Seal for launch in the US market. We are also looking at the potential of exhibiting at the FIME Medical Trade Show, held in Florida, USA in 2020. We are working on several new ideas we believe will solve several currently unsolved patient care challenges in the Emergency Medical Services, so watch this space.

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

The Western Cape has some of the most progressive healthcare facilities and healthcare professionals in SA. We find that our healthcare professionals are very open to new ideas and to testing and offering advice on devices in development. The openness of the Western Cape Healthcare system is one of the most important catalysts in our success. We have also been very fortunate to have received assistance from the DTI, who were instrumental in affording us the financial means to exhibit at shows such as Arab Health.





### Inspiring success stories that showcase Biovac's innovation

1. In 2008 we developed a technology that has been licensed out to two Asian manufacturers.
2. We are currently developing a novel vaccine, and are one of only three manufacturers developing this vaccine, and the only one in the developing world.
3. We have attracted investment from leading companies such as Pfizer and Sanofi who have transferred technology to Biovac.

### The future of your business?

We are always looking for new opportunities and to diversify into the wider biopharmaceutical area beyond vaccines.

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

Biovac was founded in Cape Town and has continued to grow in this city. The Western Cape provides a healthy ecosystem encompassing good tertiary education, a vibrant health tech industry, and is well-positioned to attract the right skills and promotes a balanced lifestyle.

*"Biovac is one of only five vaccine manufacturers on the African continent."*

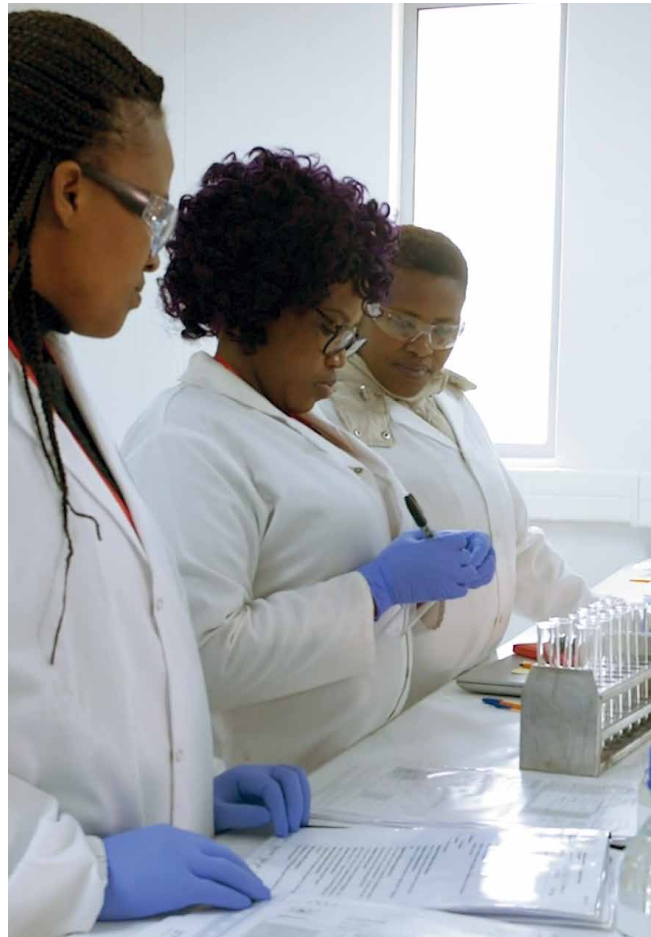
The Biovac Institute is a Public Private Partnership that was set up to revive human vaccine manufacturing in South Africa for Africa and the developing world's needs. As the only Southern African human vaccines manufacturer, we recognise the need for a domestic manufacturer of vaccines to enable the Southern African region to respond to regional epidemics and vaccine-preventable diseases.

### Positively contributing to the Cape Health Innovation movement

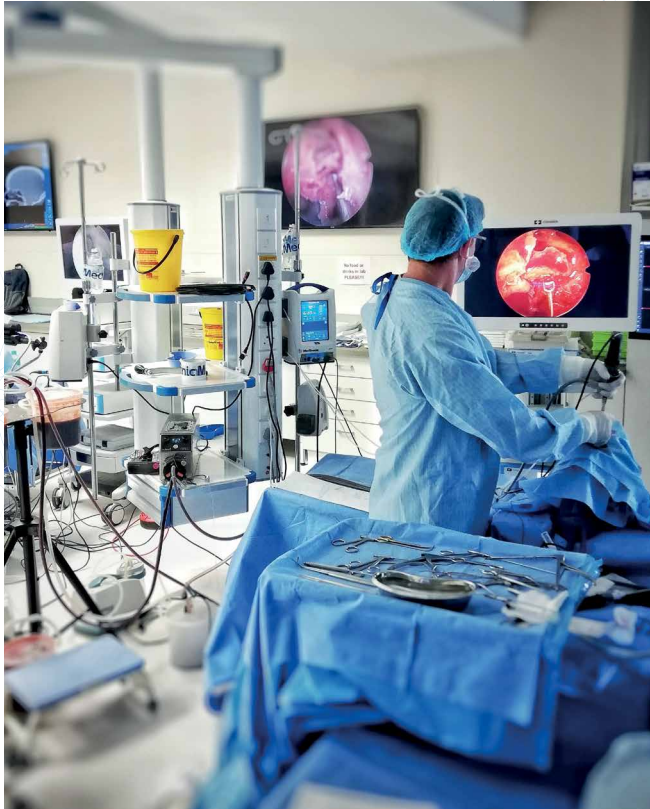
For the last 15 years we have played a pivotal role in supporting the South African Department of Health during introductions of new vaccines and vaccination campaigns. Currently, we supply over 25 million doses of vaccines annually to the South African provinces and we currently employ over 300 staff members, the majority of which have an undergraduate qualification in the science field.

### Leading the way in the Bio Medical field

Biovac is one of only five vaccine manufacturers on the African continent and we are the most modern of the five, developing new vaccines using the latest technology.







*“BMEC is a Cape Town based multidisciplinary engineering consultancy.”*

We provide our global network of clients with a one-stop-shop for project management, design, manufacture and regulatory services. Our multidisciplinary team specialises in using the latest technologies and manufacturing methods to provide insightful solutions quickly and affordably.

### **Positively contributing to the Cape Health Innovation movement**

BMEC is working hard behind the scenes of many of South Africa’s medical start-ups including Liquid Medical, CapeRay, Strait Access Technologies, DISA vascular, Praestet, Incitech and Thinta diagnostics.

### **Leading the way in the Medical Devices field**

Bringing a medical device to market requires careful balancing of the clinical, technical, regulatory and commercial considerations. We overcome this challenge by using the latest scalable rapid prototyping technologies such as biocompatible 3D printing, digitised quality control and traceability to drastically accelerate time to market.

### **Inspiring success stories that showcase BMEC’s innovation**

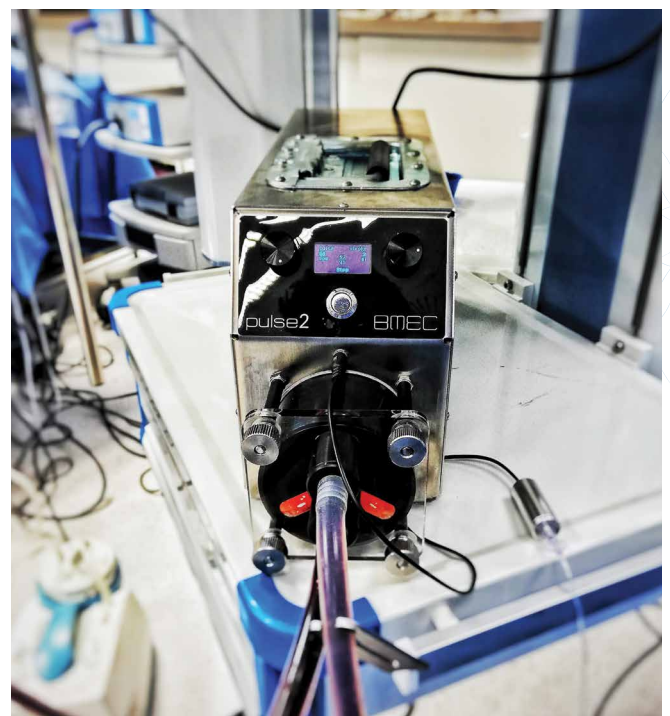
1. G-tag - a head impact monitor for rugby, designed to alert players, spectators and officials to potentially dangerous head impacts on the field.
2. Pulse - a cadaveric pulsatile perfusion system used to circulate blood in cadavers for realistic surgical skills training and medical device development.
3. GIS - a revolutionary medical device and surgical technique for the placement of tympanostomy tubes (grommets) which is expected to drastically reduce the health burden of one of the most common surgical procedures globally.

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

Looking forward, BMEC is working with the most innovative local institutions and individuals in the medical space to ensure we grow the culture of medical innovation in South Africa. Our Pulse perfusion project is a key component of this strategy as it provides a platform for accelerated medical training and device development while reducing the need for human trials.

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

Biomedical engineering is the foundation of BMEC and our team is passionate about the development of home grown medical devices and the local medical device sector. The Western Cape is a long standing hub of medical innovation and has a unique set of resources and facilities that make it possible for BMEC to achieve the success we do in health technology development.





*“Cape Bio Pharms uses its disruptive plant-based platform to produce a wide range of proteins for bio-medical research.”*

Cape Bio Pharms is an exciting new (ad)venture based in Cape Town. We produce proteins in a strain of tobacco. Cape Bio Pharms is commercialising the biotechnology behind the production of plant-made proteins that has been developed over the last 20 years by a lab at the University of Cape Town. With grant funding from the DTI and co-investment from UCT, we have developed a plant-based commercial transient-expression platform which includes an indoor hydroponic grow room for our plants and laboratory services for protein development and testing.

### **Positively contributing to the Cape Health Innovation movement**

Cape Bio Pharms is currently in start-up phase with a range of proteins in R&D and three antibodies available for sale on Ximbio. We have a range of antibodies on the market since July 2019 which gives local researchers immediate access to critical research reagents.

### **Leading the way in the Bio-tech field**

We are one of the first plant-based commercial-scale protein production platforms in Africa and are producing high quality, validated plant-made proteins for research and pharmaceutical applications. We have a range of antibodies, which traditionally are derived from injecting rabbits, mice, etc. Plant-based expression technology has the potential to produce a whole range of high-value IP protected proteins in the future. In addition, due to the recombinant nature of our products, we can produce novel, innovative products.

### **Inspiring success stories that showcase Cape Bio Pharms' innovation**

1. We have an exclusive license agreement with UCT for production of antibodies already fused to HRP at the genetic level.
2. Within the last year we have built an indoor hydroponic grow-room, as well as a working laboratory for cloning, purification and testing.
3. Within the same year we have three products ready for sale, with 20 more currently in R&D.

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

By end of 2019 we aim to have a range of tested and validated primary and secondary antibodies of many variants, each conjugated to various markers. We will also have our in-house laboratory complete for custom protein services. Our product development path is to expand into producing cheaper proteins for diagnostic test kits and therapeutics. In addition, our medium-term goal is to apply our antibodies for rapid disease diagnosis. Our longer-term goal is to produce therapeutic grade pharmaceutical proteins as either vaccines or treatments for a variety of diseases. To this end, we hope to develop a cGMP grade manufacturing facility right here in South Africa.

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

Our partnership with UCT in a business-friendly city makes Cape Town and the Western Cape not just a great environment for research and development, but the perfect place to do business as well. The Western Cape Government's business assistance and networking programmes can potentially give us a boost. In addition, we are forming connections and collaborations with other biotech companies based here. For these reasons we feel Cape Town is the perfect place for us to grow our plants and our business.







*“Our business has developed a world-first product for the early detection of breast cancer.”*

CapeRay is a privately held company that came out of the University of Cape Town (UCT) in 2010, with the Industrial Development Corporation (IDC) as the main investor and shareholder. Our primary focus is the development of solutions for early detection of breast cancer, particularly in women with dense breast tissue.

## Positively contributing to the Cape Health Innovation movement

One of the great success stories to come out of the Western Cape was the invention and development of the computer tomography (CT) scanner by renowned physicist Allan Cormack at Groote Schuur Hospital and UCT in 1956-57. In 1979 Cormack would share the Nobel Prize in Medicine for his contribution, which was characterised as the greatest medical imaging breakthrough since Röntgen's discovery of X-rays in 1896. Our business, which has developed a world-first product for the early detection of breast cancer, shows that the spirit of innovation pioneered by Cormack here in Cape Town over sixty years ago, is alive and well.

## Leading the way in the Medical Devices field

One in eight women will be diagnosed with breast cancer during the course of her lifetime, making it the number one killer of women aged 40 to 55. A mammogram (X-ray of the breast) fails to detect cancer in dense breast tissue, which affects 40% of women. A false negative diagnosis can have devastating consequences: more expensive treatment and a poor prognosis. However, ultrasound is able to penetrate and “see through” dense tissue, so our engineers explored this potential and developed a breakthrough product which they have named Aceso (after the Greek goddess of healing). It's a single device that acquires dual-modality images (including full-field digital mammography and automated breast ultrasound) simultaneously. We are the first company in the world to bring such a product to market.

## Inspiring success stories showcasing CapeRay's innovation

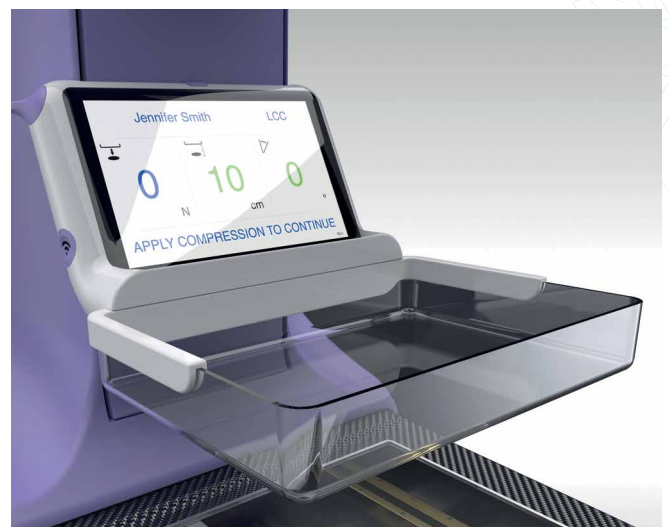
1. Our Aceso innovation featured in *Diagnostics*, an open-access journal published by the Swiss-based Multidisciplinary Digital Publishing Institute (MDPI).
2. We were awarded the CE Mark which enables us to market the Aceso system in the European Union and South Africa.
3. The award of a patent by the United States Patent & Trademark Office for our dual-modality invention (read the full story on [caperay.com](http://caperay.com)).
4. The recent endorsement by AOK Plus, the largest health insurance company in Germany with over 30 million members, which means women in Germany who are screened with Aceso will be reimbursed.

## The future of your business?

In order to future proof the business, CapeRay is ramping up sales of the Aceso system locally and abroad. In South Africa we are seeking a partnership with a large private hospital group; in Germany we are building on the endorsement of the AOK Plus insurance company; in the USA we have recently initiated the process of securing FDA clearance for Aceso; and we are in talks in China. Our future plan is to develop a next-generation breast imaging system that incorporates 3D X-rays and 3D ultrasound.

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

We believe that access to talented engineers, scientists and clinicians (working at and graduating from the tertiary institutions in the Western Cape) is the number one reason why Cape Town and the Western Cape is ripe for driving and innovating health technology. In addition to that, the medical device industry in the Western Cape enjoys strong support from Wesgro and the Department of Economic Development and Tourism.







*“CPGR is using the most advanced solutions in the fields of Genomics, Proteomics and Bioinformatics in SA.”*

CPGR combines state-of-the-art information-rich genomic and proteomic ('omics') technologies with bio-computational pipelines to render services and support projects in the life science and biomedical arena. These are all run in an ISO 9001:2015 certified and ISO 17025 compliant quality management system.

### Positively contributing to the Cape Health Innovation movement

The CPGR has recently launched an accelerator program to stimulate the creation of South African start-ups based on 'omics' technologies and set up Artisan Biomed to develop and implement Precision Medicine solutions in South Africa. In general, we have made sophisticated, expensive infrastructure available to the life science and health research communities in South Africa.

### Leading the way in the Genomics field

CPGR uses the most advanced technological solutions in the fields of Genomics, Proteomics and Bioinformatics. We also mostly employ South African and African talent who operate the machinery and systems we house. We create value locally, wherever possible, by refraining from offshoring parts or entire value chains. We are also translating our knowledge into local communities (scientific or medical) through bespoke training and education programs. Lastly we are making it our mission to make Precision Medicine solutions affordable, and accessible to all (eg: enhanced cancer genetic screens).

### Inspiring success stories that showcase CPGR's innovation

1. We were the first lab in Africa, to implement highest resolution HLA typing (for stem cell donor/patient matchmaking). What this means for patients is that the chance of finding

a matching stem cell donor, and possibly the only cure, has gone up dramatically.

2. We are the first lab in Africa using super computing for ultra-rapid analysis of genome sequencing data, a system used by some of the most advanced laboratories in the world (e.g. Genomics England in the UK, or Rady Children's Hospital in San Diego). This allows us to process data in minutes instead of hours, with concomitant effects on the speed of diagnostic testing.
3. Recently, we partnered with OneBio, to create the first fully-fledged biotech incubator in South Africa.

### The future of your business?

In 2019/20, we will introduce two fundamental innovations in how we do genetic testing in South Africa:

1. Rather than doing individual lab tests, for everyone who is in need of a germline (= DNA from blood) test, we'll sequence a full exome (= 20,000 genes). We'd then report only on the genes relevant to the condition at hand.
2. We will launch an ancestry test, similar to those offered by 23&Me or Ancestry. In contrast to these organisations, we will focus on African populations, which is where the biggest gap in research and data currently lies.
3. We are augmenting our current training platform to include eLearning, to scientists and medical practitioners across the continent.

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

Cape Town has a vibrant tertiary institution eco-system, meaning there is access to enormous talent and projects. It's also a growing tech innovation hub which we can learn from and collaborate with. In addition to being a beautiful city, it has well-functioning infrastructure, without which the sophisticated projects we run, and the services we offer, would be more expensive or not possible at all. As an added benefit, Wesgro is actively involved in nurturing Cape Town and the Western Cape as a biotech/health tech hub.





# CUBIC



*“Our purpose is to develop and provide access to innovative magnetic resonance imaging technology, stimulate and grow research capacity and deliver superior quality imaging.”*

CUBIC is a core research facility under the management of the Faculty of Health Sciences at UCT that provides affordable research capacities to internal and external clients in need of MR- as well as PET-CT imaging.

### **Positively contributing to the Cape Health Innovation movement**

CUBIC is the only research-dedicated MR and PET-CT research imaging centre on the African continent and is a joint initiative between the Universities of Cape Town and Stellenbosch. We collaborate with several stakeholders worldwide to advance understanding of diseases specific to the African population, with the ultimate goal of improving healthcare for all.

### **Leading the way in the Health Sciences field**

Our centre hosts a Siemens 3 Tesla Skyra whole-body MR scanner with cutting-edge hardware and software solutions allowing techniques such as functional MRI, diffusion tensor imaging, spectroscopy and advanced cardiac imaging to be available to all researchers. Additionally, we acquired a Siemens Biograph mCT Flow 64 which will be fully operational from October 2019. As a leading medical-imaging research facility, we strive towards excellence in research and innovation, and contribute to the development of human capacity. We host a variety of

CPD-accredited hands-on courses and seminars aimed at radiographers, radiologists, cardiologists and other interested parties, attracting attendees from clinical practices across South Africa and beyond. We contribute to improved patient care by scanning of patients from surrounding hospitals to ease the load on their facilities

### **Inspiring success stories that showcase Cubic's innovation**

1. We are currently the only research MRI facility with advanced imaging capabilities on the African continent.
2. Through our extensive collaboration network, we attract substantial local and international funding which supports the skills development of clinicians, researchers and postgraduate students at all levels from a variety of disciplines.
3. Our track record of research excellence and innovation has resulted in knowledge production across fields ranging from cardiology to psychology, producing publications in peer-reviewed journals as well as patents for the development of innovative technology.

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

To further our expansion, we are constantly investing in additional equipment to enhance our medical imaging research capabilities. Increasing our offerings to include modalities such as PET-CT will broaden the scope of research and attract additional local and international funding.

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

A key advantage is the proximity to several Cape academic institutions and tertiary hospitals, making us uniquely positioned to service their needs as well as to benefit from the expertise of an assortment of scientists from engineers to clinicians. We also enjoy a close collaboration with the manufacturers of our equipment.







*“H3D is the only integrated Drug Discovery centre in Africa.”*

H3D has Medicinal Chemistry, biology as well as drug metabolism and pharmacokinetics (DMPK) capabilities –required for drug discovery in order to move a compound towards becoming a clinical candidate. It has 60 scientists from across the world working in an environment similar to a pharmaceutical or Biotech company while based in close proximity to the leading medical school on the African continent. It was founded in 2010 and has raised more than \$30 million since 2013 in grant funding.

#### **Positively contributing to the Cape Health Innovation movement**

H3D is recognised globally for its innovative research in Africa. Throughout the years it has also played an active role in supporting the National Bioeconomy Strategy that is promoted by the South African government. In the past H3D played a leadership role in getting the four universities in the Western Cape to work closer together and using relationships with international companies to promote the upgrade of the local environment, like the Phase 1 clinical trial site at the University of Cape Town Clinical Research Centre. H3D's Director, Prof Kelly Chibale, is well-known internationally and has been recognised for his leadership and vision and he uses this exposure to keep directing the focus to Cape Town, South Africa and Africa.

#### **Leading the way in the Pharmaceutical field**

H3D has all the skills and expertise necessary to take a small molecule screening through the hit-to-lead and Lead optimization phases of drug discovery. H3D led an international team that discovered Africa's first small molecule malaria Phase 2 human clinical candidate as well as a back-up preclinical candidate and continues to be recognised globally as a credible partner in drug discovery.

#### **Inspiring success stories that showcase H3D's innovation**

1. We are extremely proud of H3D's world-class infrastructure (including access to the UCT Clinical Research Centre).
2. Our expertise (including international expertise) and our strategies to ensure local expertise is built up and that jobs are created here.
3. Being a part of a global community and the importance of participating in the global economy from Africa.

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

We are moving into antibiotic-resistant microbial diseases (antimicrobial resistance) drug discovery in addition to our current focus on Malaria and Tuberculosis. H3D is also focused on developing research platforms that allow customization of medicines to the needs of African Patients to ensure better health outcomes – the African Drug Metabolism and Disposition Platform. Currently, drugs are developed using cell lines that are derived from Caucasian patients and it has been proven that there are differences in the metabolism of drugs between Africans and Caucasians – which has implications for drug efficacy, dosage and toxicity. H3D is in the process of establishing this capacity and offer it to the global community for developing and formulating medicines for the African patient population.

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

The outstanding universities in the area attract outstanding talent from across the country and internationally. And through advocacy work undertaken by Wesgro, we've been supported with introductions to partnerships that proved useful in exploring new opportunities for funding and investment.





*"We developed Exatype,  
a unique software platform  
that makes routine genetic  
diagnostics possible."*

Hyrax Biosciences is a South African company that specialises in bioinformatics. Our leading innovation – Exatype - takes DNA data and quickly and accurately detects mutations that cause disease. It can be customised for a wide-range of diseases. Current tests are for HIV and TB drug resistance and tests for other Anti-Microbial Resistance (AMR) and oncology are being developed.

### **Positively contributing to the Cape Health Innovation movement**

One of our key focus areas is to enable the rollout of low-cost DNA-based diagnostics to populations who would not normally have access to such technologies. For example in South Africa, the majority of HIV-infected individuals do not have access to a HIV drug resistance (HIVDR) test before they start treatment with antiretrovirals. Such tests are standard procedure in resource-rich settings, meaning that every HIV-infected person gets a drug regime that is personalised to their disease. Hyrax Biosciences has partnered with large multinational organisations as part of the Global Access Programme for HIVDR testing. This programme aims to make HIVDR testing affordable and accessible for people in lower income countries and therefore get more people onto the most effective HIV treatment for them.

### **Leading the way in the Bioinformatics field**

Our vision has been to see DNA diagnostics scale to transform the way diseases are diagnosed and treated. We have approached the problem not from just a traditional bioinformatics perspective but by also incorporating software development principles, biology 'rules' and design-thinking. Our solution needed to be highly accurate (Exatype has a 99% accuracy for HIV drug resistance

testing compared with as little as 60% in other solutions), so users didn't have to keep checking results. It had to be user friendly and intuitive, so that you don't need a highly skilled bioinformatician to operate the system, it needed to be able to handle hundreds of thousands of tests at a time and it needed to be affordable. In Exatype we have created a platform that has been designed with the accuracy, usability and infrastructure required to scale. Although it is used for HIV and TB drug resistance testing at present, the platform is disease-agnostic and can be easily applied across numerous disease lines.

### **Inspiring success stories that showcase Hyrax Bio's innovation**

1. Stanford University Medical School was our first customer and uses Exatype for their HIV drug resistance testing.
2. One of the largest diagnostic labs in the US uses Exatype for their Proviral HIV drug resistance testing.
3. Hyrax Biosciences has a commercial collaboration agreement with a multi-national manufacturer of genetic testing and precision laboratory equipment. This enables us to support a Global Access Programme which offers HIV-DRT at around a quarter of the current cost.

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

We are raising capital to expand the business into new infectious disease lines and developing solutions in completely new disease spaces such as oncology.

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

The company is a spin-out from the University of the Western Cape so the links with academia and the scientific community are strong. Having scientists and academics from the three Universities and a big pool of talented and smart people so close by has been great for scientific collaboration and for getting the right people involved in the business. The Province is making huge efforts to create an ecosystem for start-ups to grow, especially in the bio/ medtech space. Initiatives such as the OneStopShop, the Health Industry meet ups and the creation of a Health Park housing numerous health and life sciences companies with shared services and space, goes a long way in this regard.







INNOVUS



*"From 2000 Innovus has played an active role in innovation within the region."*

As both a division and a wholly-owned subsidiary of Stellenbosch University, Innovus manages the university's intellectual property, group of companies, Short Courses and Copyright Division, the SU trademark portfolio, and provides support to a broad spectrum of entrepreneurs through our LaunchLab business incubator.

### **Positively contributing to the Cape Health Innovation movement**

SU has a diverse staff and relevant infrastructure spread out over the Faculties of Engineering, Science/Agrisciences and Medicine and Health Sciences. This varies from genetic/biochemical laboratories, engineering prototyping/production and nanotech facilities, to clinical research laboratories, including up to BSL III level. SU have patent applications across a wide variety of technologies in the Health Science and Medical Device fields.

### **Leading the way in the Medical Devices field**

From 2000 to 2018, Innovus has received 616 ideas from SU researchers, for which nearly 300 provisional patent applications and over 100 PCT patent applications have been filed over the past decade, more than any other private or public entity in SA. These ideas and patents have been commercialised through over 90 licenses to industry (since 2013) and the creation of more than 20 spin-out companies. While most of the spin-out companies from SU are still in start-up phase, the combined turnover was nearly R300 million in 2018 and approximately 300 people are employed by these companies.

### **Inspiring success stories that showcase Innovus and IBE's innovation**

1. The Stellenbosch Nonofiber Company (SNC) is focused on the commercialisation and further development of

various nanofiber technologies developed at Stellenbosch University. These technologies include two processes for high-throughput electrospinning of polymeric nanofibers, and a process for making continuous nanofiber yarns. SNC develops products for the medical and cosmetic industries.

2. Unistel Medical Laboratories - Conducts between 10 000 and 15 000 genetic diagnostic tests per month. These tests entail DNA profiling for forensic and paternity testing among people and stud animals as well chromosome and DNA analysis for the diagnosis of single gene defects and chromosome abnormality. UML focuses on micro array technology which enables up to 9 600 genetic abnormalities on one slide.
3. Surfactant Medical Technologies – a synthetic lung surfactant formulation consisting of a combination of readily accessible phospholipids and synthetic peptides which may be administered as either a liquid or in a nebulised/ aerosolised form.

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

With the fourth industrial revolution, we expect to see more innovation involving Machine Learning and Artificial Intelligence coming through our commercialisation platform. We are likely to see more "smart" medical technologies coming through our research channels. There are many models of Industry-Academia collaboration facilitated by Innovus in development at present. These include: internships, partnerships for co-development of IP and contract research.

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

The Western Cape is known for its innovation and strong export market and is becoming an increasingly attractive location for start-up activity. In fact the 2018 Venture Capital Industry survey (by the Southern African Venture Capital and Private Equity Association (SAVCA) (2018) found that more deals had been concluded in the Western Cape, than any other province in the country. Combined with the good quality of life and advanced infrastructure and support mechanisms, the Western Cape is fast becoming a strong knowledge region on the continent.





*"We provide first-to-world diagnostic products and solutions that will assist in fighting difficult-to-diagnose diseases and epidemics."*

Medical Diagnostech was established in 2010. We manufacture high quality, lateral flow rapid diagnostic test kits using our trade secret methodology for increased sensitivity and early detection. Lateral flow tests are manufactured under ISO 13485 accreditation and include tests for alcohol consumption, drugs of abuse, HIV, malaria, pregnancy, and fertility/ovulation. Our products are robust and are optimised to withstand extreme storage conditions for up to 24 months.

### **Positively contributing to the Cape Health Innovation movement**

Our high quality first-to-world diagnostic products and solutions assist in fighting difficult-to-diagnose diseases and epidemics. We also strive to make them readily available, cost effective and innovative. We also offer contract manufacturing and development services for new innovative lateral flow components and test kits.

### **Leading the way in the Medical devices field**

Our team of dynamic and knowledgeable scientists drives our passion and innovation, so we are always coming up with newer and faster methods of diagnoses. This includes faster, more reliable results for existing diseases and radical new methods

of diagnosis for newly emerging diseases. Our team also works alongside customers through each stage of development, providing regular updates, advice and joint troubleshooting strategies throughout the development process.

### **Inspiring success stories that showcase Medical Diagnostech innovation**

We are proud of our achievements since our inception and Ashley Uys, the founder of Medical Diagnostech, has been recognised and honoured with the following awards (to name just a few):

1. The 2012 SAB Foundation Innovation Awards Winner.
2. The 2013 Innovation prize for Africa Finalist.
3. The 2015 All African Business Leader Awards Young Entrepreneur of the year.

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

We are currently developing novel saliva diagnostic tests for cannabis, and will be focusing on veterinary products. OculusID (which uses image capturing and processing technology to evaluate pupil response) will be launched this year as well ([www.oculusid.com](http://www.oculusid.com)).

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

It was when Ashley Uys was studying at UWC that he noticed the gap in the market for local manufacturers of Rapid Test Kits in South Africa. He started small scale but through hard work and resourcefulness he has grown over time and opened his first offices in Muizenberg. Over the years he built a network of local based suppliers here in the Western Cape and he is also a part of the Western Cape Medical Devices Cluster which gave him more exposure.







*“Following in Pasteur’s footsteps,  
Marcel Mérieux established  
Institut Mérieux in 1897.”*

As one of the longest-established commercial food testing laboratories of its kind in South Africa, Mérieux NutriSciences provides a comprehensive product-safety service to the food and beverage, cosmetics, hospitality and related industries throughout the SADC region from its branches in Cape Town, Midrand, Durban, George and Jeffreys Bay.

By addressing needs such as microbiological and chemical testing of products, the design, implementation and auditing of quality management systems, staff training (from floor-worker to management level), hygiene auditing and sampling, as well as an on-site technical consultancy service, Mérieux NutriSciences builds long-term partnerships with its clients.

#### **Positively contributing to the Cape Health Innovation movement in South Africa**

Through our global network of over 100 laboratories and centres of excellence, as well as our local implementation of new, innovative testing methods, our goal is to lead the charge as thought leaders in the innovation of South African food safety testing.

#### **Leading the way in the Health tech field**

All of our laboratories are ISO17025 accredited and have all successfully maintained their accreditation since first obtained. This unbroken accreditation is testament to the fact that our laboratories are held to the highest standard.

#### **Success stories that showcase Mérieux’s Innovation**

1. **Digital Solutions:** In a more and more globalized and competitive business environment, with increasing and fast-changing regulations, food industry players struggle to protect their brands and guarantee a consistent global level of food safety and quality. For this reason, Merieux NutriSciences has created a business unit dedicated to digital solutions, from environmental monitoring software, supplier data management and more.
2. **NGS:** Next Generation Sequencing (NGS) is a term which describes the sequencing of millions of DNA strands simultaneously, and covers mixed microbial communities (MetaSequencing/Metabarcoding) and isolated micro-organisms identification and characterization (Whole Genomic Sequencing – WGS). Through our global Food Science Centres, we now offer full support on projects to ensure correct sequencing and bioinformatics analysis – as was seen during the heat of last year’s Listeriosis crisis.

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

NGS and rapid testing technologies and constantly improving and evolving the way we are doing business with our clients. We are always looking for new technology and new methods to help the industry and, ultimately, the consumer in South Africa.

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

The province is the hub of tourism in SA and has a vibrant food industry, which we have been proudly servicing for nearly 30 years!





## RESEARCH CONTRACTS & INNOVATION



*“RC&I supports the faculty of Health Sciences at UCT which brings in R700m per annum into the Western Cape for R&D activities.”*

Research Contracts and Innovation (RC&I) is a department based at the University of Cape Town (UCT) and has two main functions: responsibility for all the contracts associated with research conducted at the university; as well as the identification and protection of intellectual property arising from the research and importantly management of innovations en route to market.

### Positively contributing to the Cape Health Innovation movement

RC&I further supports the faculty of Health Sciences at UCT to bring in more than R700m per annum into the Western Cape for various R&D activities. RC&I played an important role in many innovations being transferred from UCT to local and international companies in the health ecosystem. RC&I started and supported the start-up of several companies to commercialise health technology innovations.

### Leading the way in the Health Sciences field

Because of our leadership position, RC&I has been able to commercialise R&D outputs from world leading researchers, for example commercialising health technology innovations and managing the innovation process in the health domain.

### Inspiring success stories that showcase RC&I's innovation

1. Straight Access Technology (Pty) Ltd started at UCT, and was incubated within the Health Sciences faculty, commercialising novel heart valves and heart valve delivery devices. The company reached their first in man trials and raised significant amounts of investment from multinational companies.

2. CapeRay (Pty) Ltd – a UCT spin-off company based in Cape Town commercialised a dual modality breast scanning technology to improve the detection of breast cancer. The company obtained its CE mark enabling it to sell its products in the international market.
3. NiSonic – a Norwegian founded company commercialising technology developed by researchers at UCT with co-inventors at SINTEF (Norway). As part of the commercialisation process, Nisonic has an agreement with UCT and committed to commercialise the technology in SA. This access of the technology to the South African market will provide new job opportunities as well as enable a high-tech health innovation to be made available here.

### The future of your business?

Beyond the actual R&D work, RC&I is continuously improving support for researchers and innovators at UCT and also constantly seeking new partners for the IP developed at UCT. UCT has committed R69m investment funding to support the translation and commercialisation of the R&D at UCT. The premise of this Evergreen Fund is to enable UCT to further support innovators in the technology development and commercialisation process by providing risk capital at a post-research stage. The funding will typically support innovators in start-up and spin off companies commercialising UCT technology.

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

The Western Cape and Cape Town has a long history of successful health innovations. The area is assembling a critical mass of researchers and research institutions, skills, human resources, investors, international trade access routes and an enabling environment. This recipe is very attractive for innovators in the health technology space. Wesgro is a valuable resource for the local health technology companies who typically struggle to open international markets.







*"We design and manufacture innovative medical devices that improve health care."*

Sinapi Manufacturing is one of three affiliated companies that designs, develops, manufactures, sterilises and distributes innovative medical devices. Sinapi Biomedical is focused on the design, development and distribution to first world countries. But we also serve the local South African market plus other developing countries, whilst Sinapi Plastics moulds and extrudes the components required to assemble the Sinapi products. Products include the Sinapi Urine Meter, Sinapi Chest Drain range, Ellavi Uterine Balloon Tamponade, Sinapi Sputum Cup and the nutritional range. Sinapi is ISO 13485 accredited and most of our products hold the CE mark.

### **Positively contributing to the Cape Health Innovation movement**

We have developed the Sinapi Chest Drain specifically in collaboration and for the benefit of state hospitals in the Western Cape. The Sinapi Chest Drain is an innovative and unique product, which provides clinical benefits to patients as well as assisting the HCP's to provide better care to more patients. Our chest drain is also much more affordable than that of our competitors.

### **Leading the way in the Medical devices field**

Our Scheffler Valve design is unique in chest drainage and our patient recovery rates are better than that of our international competitors. We are also very innovative in applying novel manufacturing technologies and polymer selection, which gives us a competitive advantage in production cost. Our urine meter is unique in the fact that the construction is Polypropylene, an inexpensive commodity plastic. Our competitors typically use engineering plastics which are more costly than Polypropylene.

### **Inspiring success stories that showcase Sinapi's innovation**

1. Sinapi Chest Drain: Grew from zero market share to majority market share in the Western Cape, roughly 50% market share nationally (Private Healthcare SA) and we export to more than 15 countries.
2. Sinapi Urine Meter: Grew from zero market share to majority market share in 5 years (Private Healthcare SA).
3. Ellavi UBT: New innovative device developed in conjunction with PATH ([www.path.org](http://www.path.org)) to reduce morbidity and mortality from Postpartum Haemorrhage.

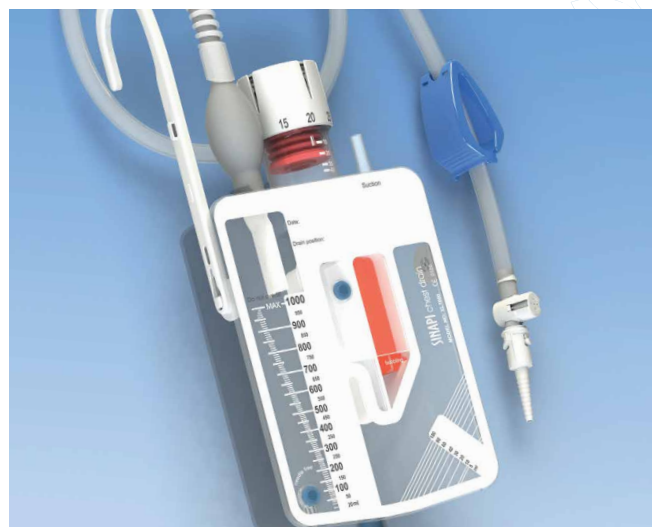
### **The future of your business?**

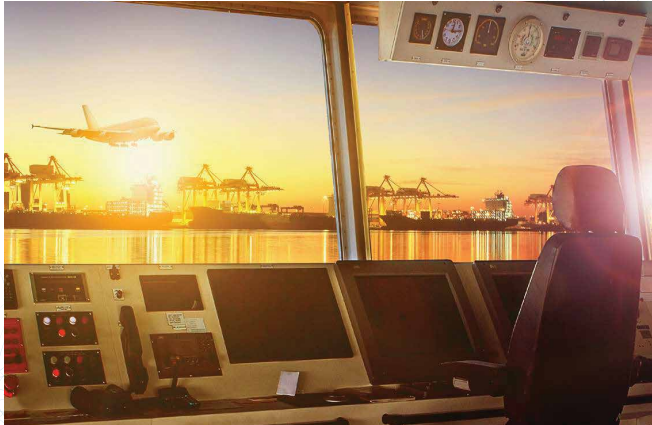
We are planning two major innovations over the next two years. Firstly, we are in the process of developing a new version of the Sinapi Chest Drain. The two biggest goals are to bring the production cost down by 50%, and to add new features to improve our competitiveness in terms of "ease of use" and clinical benefits. Our goal is to have the SCDV2 production ready and on a patient by the end of 2019.

Secondly, we are currently in development of a Digital Chest Drain. We have completed the concept design and feasibility study, and have contracted in three young and innovative engineers to work on this project full time. The expected timeline is to have a functioning prototype by August 2019, and apply for CE mark in the first half of 2020.

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

Being based in Stellenbosch, Western Cape allows us to build valuable and enduring relationships with Professors at the Stellenbosch University – Medical Faculty. This also gives us an opportunity to work closely with the Western Cape Department of Health.





*"Stone Three Healthcare focuses on the development of innovative healthcare."*

Our core technology focus areas are Medical Visualisation, Precision Telemedicine and Clinical Workflows, built on our experience with medical device and data inter-operability. Our expert and decision support systems often utilise the power of machine-learning to unlock the value of the health data we work with - especially related to cardiovascular health.

### **Positively contributing to the Cape Health Innovation movement in South Africa**

Stone Three have been able to incubate and develop world-class healthcare tech solutions here in the Western Cape and scale them to the American markets. We have a rich portfolio of intellectual property which we continuously build on. Our company has a reputation as a great place to work - in terms of innovation and company culture.

### **Leading the way in the Health Tech field**

TeleSensi is considered a world leader in live auscultation sound quality whilst SensiCardiac is considered a world leader in computer-aided auscultation (CAA). We have US granted patents for our assisted diagnostic cardio solution - SensiCardiac. To our knowledge, Stone Three are the owners of the world's largest clinically validated heart sound reference database which is key to developing new assisted diagnostic cardiac solutions.

### **Inspiring success stories that showcase Stone Three innovation**

1. Stone Three is the technology partner for PPO Serve, focusing on building clinical workflow software to operationalise care coordination for integrated care. The Intelligent Care System. (ICS) is currently used in about 20 consortiums in South Africa - ranging from Birthing Teams to Population Health consortiums.

2. Cardiovascular disease is one of the leading causes of death amongst truck drivers. TeamCME based in Oregon USA (established to undertake the statutory Department of Transport health assessments on truckers) now uses Stone Three's SensiCardiac offering that can detect underlying heart conditions such as murmurs.
3. Stone Three have created a unique consultation platform developed for Georgia Partnership for TeleHealth (GPT) that enables complete telemedicine consults to GPT's network of nurses, doctors and hospitals.

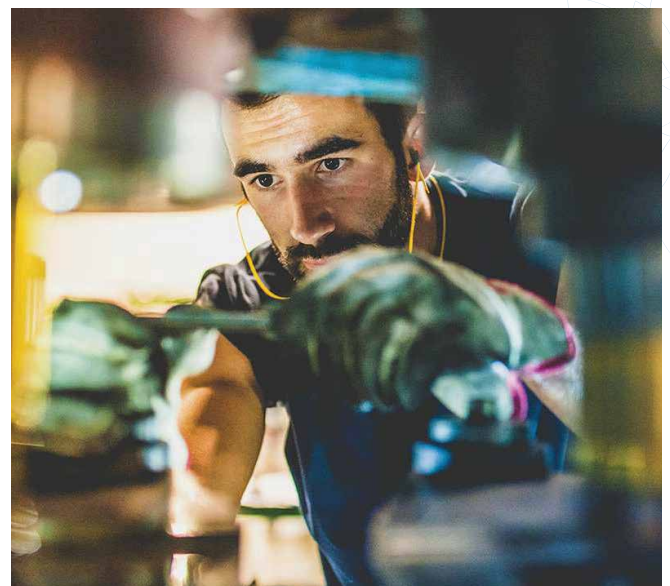
### **The future of your business?**

We hope to grow significant market share in the South African and North American tele-auscultation market in the coming years. We also aim to enter into other global markets once telemedicine regulations in those markets become more conducive to our technology. We are also planning to involve more medical sensors relevant to cardiovascular health.

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

Cape Town and Western Cape offers an environment conducive to innovation because of the availability of skills, access to funders and support services in terms of intellectual property and compliance advisory services.

We are busy unlocking telehealth potential in the Western Cape by trying to work more closely with the Medical Research Council (MRC), the Western Cape Provincial Government (WCPG) and some private companies. We are also one of the four founding partners of the SA Digital Health Association - a self-regulating body to provide guidelines and standards of practice for digital health providers in SA.







*“TASK is the leading global player in early phase TB medicine evaluation.”*

TASK is a social enterprise committed to developing novelty medicines, vaccines and diagnostics that help improve global health care. Established in 2005 by physician Dr Andreas Diacon, TASK brings much needed novel anti-tuberculosis (TB) drugs to patients that need them as fast as possible. TASK has since grown and diversified into five distinct research sites able to perform clinical trials. Autonomous support units include a TASK bio-safety level 3 mycobacteriology laboratory, a phase I unit with 24 beds, a registered dispensing pharmacy, a data management centre and TASK Academy. The academy specialises in regulatory support and offers training in clinical trial methodology nationally and internationally.

### **Positively contributing to the Cape Health Innovation movement**

TASK is collaborating closely with local clinics and health authorities. TASK's previous works has enabled new TB drugs to reach the South African public; resulting in improved outcomes, lower death rates and reduced hospital stays for patients with drug-resistant TB. TASK also supports diagnostics and device development. Being the recipient of international grant and donor funding, TASK is able to employ local health professionals, trains them for clinical trials, and develops research capacity in the Western Cape.

### **Leading the way in the Health tech field**

TASK is a global player in early phase TB medicine evaluation. Studies conducted at clinical research sites determine within two weeks whether a new anti-TB medication is effective. There is currently no other unit offering these services worldwide.

### **Inspiring success stories that showcase TASK's innovation**

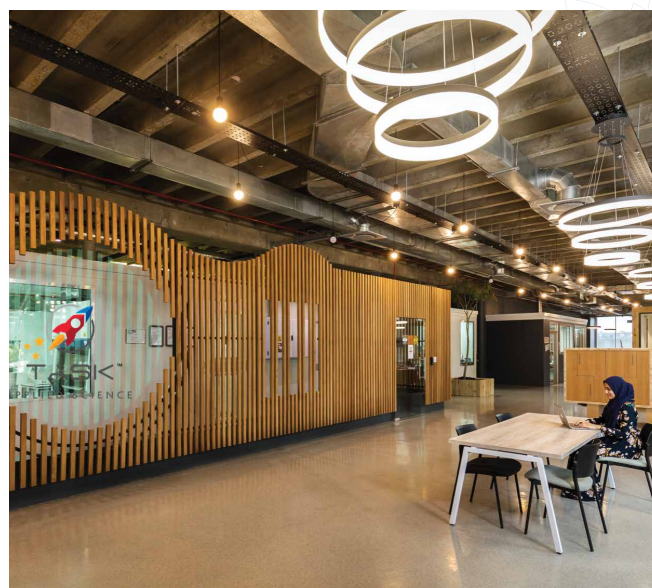
1. Conducting the clinical trials that led to the registration of Bedaquiline, the first new TB drug in decades, for patients with TB resistant to conventional antibiotics.
2. Achievements were published in leading medical journals such as the New England Journal of Medicine and Lancet.
3. Professor Andreas Diacon was awarded the 2016 Scientific Prize of the International Union Against Tuberculosis and Lung Disease and recently published in 2 articles: Bill Gates's Heroes in the Field and Forbes Africa.

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

TASK's focus remains on improving healthcare for all therapeutic areas by continuously providing the highest quality service and deliver results in time.

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

The combination of access to suitable study participants and well-established infrastructure is key to performing clinical trials. Cape Town and the Western Cape have one of the highest incidence of TB per capita in the world and a high prevalence of other poverty-related and lifestyle diseases. Cape Town also has leading academic institutions, modern hospitals, an international airport and high speed internet. TASK's relationship with the Western Cape Government has been paramount to its success. The province allows for access to various academic institutions (Stellenbosch University, University of Cape Town) and community health facilities. In addition, TASK worked closely with the province in establishing its trial sites including a registered clinical trials hospital in Boston, Bellville.





*"Ti-TAMED designed and developed an internationally certified Spinal Screw Implant System offering unique correction techniques."*

Founded in 1996 Ti-TAMED (Pty) Ltd is a manufacturing company that specialises in high precision engineering with titanium and other exotic materials such as specialised stainless steels, aluminium and high performance polymers.

### **Positively contributing to the Cape Health Innovation movement**

Ti-TAMED offers an ISO certified OEM manufacturing service to the medical, aeronautic-aerospace and marine industries. With experience in medical device design, manufacturing and certification, Ti-TAMED assists their customers with R&D through manufacturing and design inputs to achieve a product that can be efficiently manufactured and commercially viable. Ti-TAMED places emphasis on employment and skills development, and is involved in training apprentices from Technical Colleges.

### **Leading the way in the Medical Devices field**

Ti-TAMED designed and developed a locally made Spinal Screw Implant System which made spinal surgery more affordable to patients and easier to use for surgeons and theatre staff in SA. Besides general spinal corrective surgery, this system also specialises in both posterior and anterior paediatric scoliosis corrective surgery and obtained CE and FDA (510k) approval.

### **Inspiring success stories that showcase Ti-TAMED's innovation**

1. In collaboration with the CRPM (Centre for Rapid Prototyping and Manufacturing) in Bloemfontein, Ti-TAMED formed the Western Cape arm of the South African team producing customised titanium lower jaw bones for 3 patients in KZN who had their jaws removed due to tumour growths.
2. Ti-TAMED assisted with the design and manufacture of a faciomaxillar implant that slowly moves healthy bone across the face to regrow bone that was removed due to cancerous tumours.
3. In the veterinary field, Ti-TAMED has also assisted with manufacturing customised implants for animals such as an Arabian Tahr and a springbok, both of which had their legs amputated and required prosthetic implants.

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

Ti-TAMED collaborates with universities and private companies to develop medical devices in the areas of partial limb replacements and facial bone reconstruction after cancer surgery, spinal surgery, ear grommets, and more. Ti-TAMED produces top end high quality products for the global marine industry, turbines, satellite componentry and parts for Airbus.

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

Cape Town's access to major, international sea and airports provide efficient transit channels for imported raw materials and exported finished goods. The close proximity to the universities in the area allows for easy access to innovative R&D projects that require production services in the aerospace and medical fields, as well as the access to academic hospitals for clinical trials. Wesgro's export facilitation workshops and the connection to the PUM and CBI programmes have also been invaluable to Ti-TAMED's success. The Western Cape Medical Devices Cluster provides essential networking and knowledge-sharing opportunities with both the industry and government sectors.







## Robust Inclusive Impact



*“We are effecting systemic change and addressing the need for societal disability inclusion.”*

Shonaquip (Pty) Ltd designs, manufactures and distributes award-winning mobility and postural devices and provides clinical assessments and support services, helping remove physical barriers to access, so children can interact more easily and effectively within their local environment.

### Positively contributing to the Cape Health Innovation movement

As one of the founders of the Western Cape Medical Devices Cluster, we are committed to promoting local product innovation in the health sector. We have proved through export demand that products like ours are urgently needed across Africa and other under-resourced regions of the world. Our product is designed to meet the needs of both the private and government sectors.

### Leading the way in the Medical devices field

By working directly with both private and government beneficiaries we are able to gather vital feedback and learnings which contribute to a continuous learning journey of social change through product innovation and systems improvement. The holistic and integrated approach we follow, through our hybrid social enterprise model, synthesises products and services and places us in a position of strength to offer something both clinically-effective and uniquely African.

### Inspiring success stories that showcase Shonaquip's innovation

1. In 2017 we helped 17 164 people, either through programmes or products, and 347 603 lives were positively impacted through capacity building. We've expanded to 7 countries in Southern Africa and across all nine Provinces in SA.
2. We won an Accelovate Award in 2016 (a partnership between Jhpiego and the United States Agency for International

Development (USAID) in the Design Challenge. We addressed the lack of appropriate postural support devices (PSDs) for wheelchair users in less-resourced settings. This product is now in production and has been identified by buyers in the UK as a potential export opportunity for the NHI.

3. We've won numerous other awards including Design Capital, Indaba Expo 2014 Innovation Award for the 'Madiba2Go' wheelchair, the SABF award for LaLa Positioner, Chamber of Commerce Exporter of the year award and Premiers Social Enterprise of the year award.

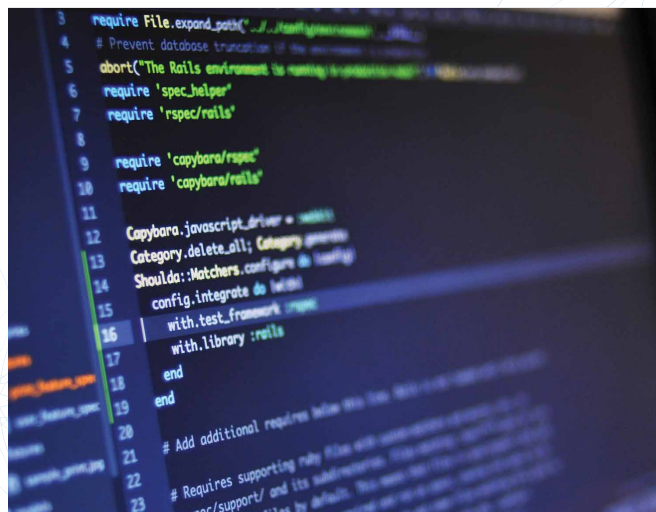
### The future of your business?

We aim to intensify our presence in certain provinces where government tender delivery is not meeting its intended purpose, and to export our products into Eastern Europe and the United Kingdom. As a hybrid Social Enterprise we are able to leverage our model to pursue multiple income streams including philanthropy through international donor organisations, government tenders, commercial services, investments and B2B markets. Our recently registered FET training academy provides additional opportunities for upskilling a new field of medical device technicians. We are also focusing on developing our trusts like our Champions of Change Trust, which builds on the work of Shonaquip as a parent-initiated organisation to empower and provide a platform for parent-driven advocacy and community-based action. Shonaquip's current BBBEE QSE status is at level 2.

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

Cape Town is the epicentre for progressive human-centred design and innovation in South Africa. The community offers an open-minded and agile environment which motivates one to address social need, to innovate, adapt, grow and reach scale through serving both the local and export markets. Wesgro and the Department of Economic Development has assisted us with links to funding, collaboration opportunities and research information. This assistance would otherwise require dedicated internal resources.





*“We develop and maintain software solutions that assist in capturing, collating, analysing and reporting data.”*

Established in 1995, WAMTech and has been involved in software and engineering technology solutions that support good governance and maximise efficiency. We have developed, maintained and supported the South African electronic registers for both TB and drug-resistant TB on behalf of our National Department of Health, as well as developing the electronic HIV register for the University of Cape Town.

### **Positively contributing to the Cape Health Innovation movement**

The knowledge and technology WAMTech applies during information system development and implementation are also transferred as part of an ongoing knowledge and skills-sharing exercise. WAMTech also ensures the further development and maintenance of information systems in the Health Sector, and continually explores new ideas and concepts including stock control systems for hospitals and many more.

### **Leading the way in the Health Tech field**

Over the past two decades, WAMTech has been at the forefront of health information systems aimed at supporting surveillance of the most deadly communicable diseases in South Africa. Our TB/DR-TB/HIV Electronic Registers and other software systems are used by the South African Department of Health (NDoH), University of Cape Town (UCT), Janssen Pharmaceuticals, South African Medical Research Council (SAMRC), World Health Organization (WHO) and the US Centers for Disease Control and Prevention (CDC).

### **Inspiring success stories that showcase WAMTech's innovation**

1. EDRWeb is used for the surveillance and management of DR-TB. Key information is readily displayed to allow for rapid decision making and to determine where interventions are needed. The software is implemented throughout the 9 provinces of South Africa.
2. TeMP is an asset management and maintenance process software system and has been used in several countries, including Ghana, Kosovo, South Africa, Sri Lanka and Vietnam. TeMP can be easily translated to the users' preferred language using translation files.
3. The Integrated Health Technology Package (iHTP) Simulation Tool is a comprehensive hospital planning tool and has been implemented or introduced in ±10 countries, including Kyrgyzstan, Malawi, Mexico, South Africa, Sudan, Tanzania and Ukraine.

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

We look forward to continuing our long-term relationships, and will expand our already well-established network of end-users of the products we have developed for our health sector clients in order to ensure more direct and live feedback - enabling us to make more targeted improvements. We will continue our pursuit of enhancing our client's access to the most accurate, reliable and meaningful data in order to support their important decision-making ultimately aimed at sustainably improving healthcare in our province, country and beyond.

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

The Western Cape is currently setting the standard of how information technology and contributions by various stakeholders can be optimally coordinated within and between government and the private sector. Having a province that actively promotes the establishment of relevant networks (between policy makers, implementers and investors) is highly conducive to the shared success of all provincial citizens – individual and corporate citizens.







*"WCBS is a leader in the testing of blood, maximising blood safety for recipients."*

The Western Cape Blood Service (WCBS) is an independent, non-profit provincial healthcare organisation, which collects, processes and tests blood donated by blood donors, and subsequently supplies safe blood products to all people in the Western Cape. The Service has regional branches in Paarl, Worcester and George, six permanent blood donation clinics, a specialised donation services unit, apheresis collections department, 101 emergency blood banks at 92 hospitals, and seven blood banks. The Service convenes over 1000 mobile blood donation drives every year throughout the province.

### **Positively contributing to the Cape Health Innovation movement**

WCBS is a leader in the testing of blood, maximising blood safety for recipients. High volume, automated nucleic acid testing was introduced in 2005 and we conform to these high standards. Genotyping of selected blood donors is done to deliver closely-matched blood products to multi-transfused patients.

### **Leading the way in the Biotech field**

Despite having no direct competition, the WCBS operates as efficiently and economically as possible to provide the safest and most affordable blood products and services in the province.

### **Inspiring success stories that showcase WCBS's innovation**

1. In 2016 electronic cross-matching was introduced at all blood banks, improving turn-around times.
2. WCBS embraces the rapidly changing digital marketing landscape, and in 2017 the WCBS blood mobile application was launched, a first for South Africa.

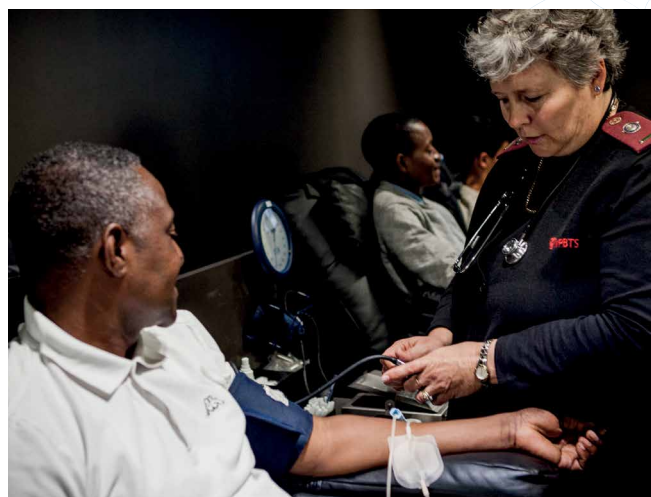
3. A structured Continuous Improvement (Lean) Programme was introduced in early 2017 – efficiencies have been optimised, and average maturity levels of 91% have already been reached for seven modules. A managerial position focussed on Continuous Improvement has been created to ensure we maintain our commitment to continuous improvement in the long term.

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

We are learning to understand potential emerging infectious diseases which could affect the safety of South Africa's blood supply, and we're developing strategies to minimise the risks to blood recipients. Strategies include: expanding the array of tests done, as well as introducing pathogen reduction technologies. Together with the South African National Blood Service, the WCBS is exploring the feasibility of using drones to deliver blood products to hospitals to overcome logistical challenges. Patient Blood Management (PBM) encourages the rational and restrictive use of blood products, resulting in better outcomes for patients. WCBS supports PBM and is involved with the implementation of PBM Programmes in the larger teaching hospitals.

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

The Western Cape Blood Service (WCBS) operates in the Western Cape, while the rest of the country is served by the South African National Blood Service (SANBS). The WCBS and SANBS provide a comprehensive national blood programme and are committed to serving the broader South African community. The Western Cape Department of Health is WCBS's biggest blood user and therefore our largest customer. We have a collaborative relationship with the department and meetings are held on occasion to discuss strategic issues. WCBS has also been involved with the Water Supply Preparedness Plan with the Western Cape Government and has enjoyed the support of WCG in developing the Day Zero mitigation plan to ensure that we have sufficient water for critical processes such as the testing of blood.



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Health Tech Hub of Africa, where the future  
is not just being imagined, but created.

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