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## The UCT story – how entrepreneurship has evolved at a research institution

Over the decades, UCT has deliberately fostered entrepreneurship through a range of activities. A number of initiatives have emerged in faculties and within partnership institutions such as the Graduate School of Business (GSB), the Hasso Plattner d-school Afrika, the Solution Space, International Academic Programme Office and the Baxter Theatre Centre. These initiatives operate both independently and as part of a cohesive institutional strategy.

The university aims to develop graduates who can add value to the wider community, create their own jobs and become employers of others, thus building agility and transformation into the economy. This, in turn, requires a socially engaged curriculum that balances the local and the global to enable students to have ready access to the skills and knowledge required to exercise their sense of social citizenship in the creation of a sustainable and regenerative world.

Each initiative is distinctive: operating within a particular space in the larger institution, mobilising resources and students in specific ways for a particular purpose.

The unique context of each initiative, its distinctive partners, funders and those invested in it, have shaped its character.

UCT's International Academic Programmes Office (IAPO) has several external funding partners, such as the Mastercard Foundation, which have invested in high-performing students from all over Africa. These serve to nurture students within the university, while also developing networks that extend long after studies are completed.

It has been exciting to see the way in which UCT operates as an innovation hub, where the cream of Africa's scholars come to study and to integrate passion, commitment and disciplinary learning with access to entrepreneurial skills and resources, building value beyond South Africa.





*Vendor Expo at the Baxter, connecting entrepreneurs within the ecosystem. Photo by Lerato Maduna*



## Social entrepreneurs and social change

**Solange Rosa and François Bonnici**

*Solange is the director of the Bertha Centre for Social Innovation and Entrepreneurship. François is the centre's founder and former director, and currently the director of the Schwab Foundation for Social Entrepreneurship at the World Economic Forum.*

What makes for a successful entrepreneur? Is it an innovative start-up raking in billions – perhaps enough to fund the CEO's journey into space? Or is it perhaps about creating new jobs and opportunities to boost economic growth? While these factors are time-honoured tenets of business success, increasingly we see that a successful entrepreneur is one who looks beyond the bottom line to address critical social and environmental challenges, and uplifts whole communities with their success.

In South Africa, where pervasive poverty, youth unemployment, environmental degradation and social insecurity endure, it's this broader understanding of entrepreneurship – referred to as social entrepreneurship – that holds the most promise. So, while commercially successful entrepreneurs like Adrian Gore of Discovery are rightly celebrated, we should also be celebrating the social entrepreneurs: people like Luyvo Rani, a former school teacher whose IT services company Silulo Ulutho Technologies was started to bridge the technology gap in

disadvantaged areas by opening internet cafes in townships. We should recognise Francois Petousis, a MPhil student from the UCT GSB who founded Lumkani, which has sought to bring affordable alarm systems to low-income homes and businesses – often in informal settlements.

Rani and Petousis are just two of the many thousands of social entrepreneurs at work across the continent who are playing a critical role in addressing market failures and demonstrating more sustainable business models to build inclusive economies that work for all. Both are products of UCT and, more specifically, the Bertha Centre for Social Innovation and Entrepreneurship, based at the GSB.

Founded in 2011, the Bertha Centre is a leading academic centre in Africa that is focused on pursuing social innovation projects towards social justice. Its pioneering work over the past decade has done much to focus attention on why social innovators and entrepreneurs are so important, and to explore ways to support and

<https://www.gsb.uct.ac.za/berthacentre>



scale up their impact. In the process, the centre has also had a profound impact on the focus of the wider university. The UCT vice-chancellor's Vision 2030 specifically recognises transformation, sustainability and excellence as the three core pillars on which the institution must rest in a rapidly changing world, and asks the question: "The world is changing, are we?" The Bertha Centre has holistically integrated this mandate.

### **"We need to work at a systems level and foster radical new mindsets and approaches to drive transformative change."**

Over the past decade, the centre has been at the vanguard of UCT's radical approach to teaching, learning and research. From the beginning, we realised that because we were teaching disruptive approaches to our students – sending them out to change the world through social innovation and entrepreneurship – we also needed to apply these principles to our own institution and adapt how we were delivering social-impact education. And this is exactly what we have tried to do.

#### **Challenging what we teach, how we teach it and to whom**

At the Bertha Centre, we have always had a Trojan horse mindset: aiming to infiltrate the business paradigm to begin to influence leadership across South Africa to promote activism and social change from within. In the process, we have experimented with and challenged some fundamental principles of learning, including what we teach, who participates and where we engage. To this extent we have invited non-paying students, practitioners, and executives into our classrooms – not only as guest speakers, but also as participants – to broaden the conversation and shake things up. This is simple enough to do, and it is often enough to tip the scales so that interesting and unpredictable learning emerges.

In 2016, we decided to step beyond the traditional boundaries of the institution by establishing a satellite facility in Philippi Village, in the heart

of one of Cape Town's most disadvantaged township communities. This was a very physical manifestation of our desire to overcome barriers of distance and privilege that prevent access to learning. In the same spirit, we also established the Groote Schuur Innovation Hub in the Groote Schuur Hospital with the aim of engaging and supporting hospital staff to develop and implement solutions to some of the hospital's most pressing problems. And we were among the first to launch a massive open online course (MOOC) at UCT, "Becoming a changemaker, an introduction to social innovation", which is currently the top ranked MOOC on social innovation on Coursera, having reached more than 100 000 people in 170 countries.

Curriculum innovations have included launching a Social Innovation Lab, which first ran as an elective on the MBA programme but was quickly made into a core course, making the UCT GSB among only a handful of business schools worldwide to mainstream social innovation in this way. We also launched a new MPhil degree with a specialisation in inclusive innovation and have funded over 100 social changemakers through our Bertha Fellowship programme to study this, or an MBA, at the UCT GSB. Many of our fellows have gone on to launch startling new products and services or are pursuing ideas that are making a social impact.

Our research too reflects our desire to disrupt what is taught. The Bertha Centre has published over 250 teaching case studies that showcase African innovations and businesses. The development of this kind of local content is considered an important part of decolonising the curriculum, given that the vast majority of case material taught at business schools is based on North American examples. Going even further, Bertha faculty have pioneered a new teaching case method – one that incorporates multiple perspectives – as a counterbalance to the dominant Harvard Business School case writing style that typically features a single protagonist in an organisation solving a particular problem. This approach recognises that in a complex and unequal world, a single protagonist can't change the system on their own; multiple actors and institutions have to work together if they stand a chance of developing fresh and workable solutions that deliver real value to more people.





**Taking entrepreneurship to the next level – a systems lens**

The truth of our interconnectedness and the importance of collaboration in a complex world have been laid bare by COVID-19. As the pandemic pushed vulnerable people further into poverty and rolled back years of development gains, it has become harder to ignore the systemic inequalities of our global economic system. If we want to fix our world, we now know that we need to work at a systems level and foster radical new mindsets and collaborative approaches to drive transformative change that leaves no one behind. The needs are just too large and complex and the underlying causes too deep in history, politics and culture; and the best solutions are too constrained by outdated rules and skewed power structures to do anything otherwise. This has major implications for entrepreneurs and for how we teach and capacitate the entrepreneurs of the future.

**“...students of entrepreneurship need to understand more than how to run a business and all this entails; they need to learn how to collaborate with and leverage the strengths of others...”**

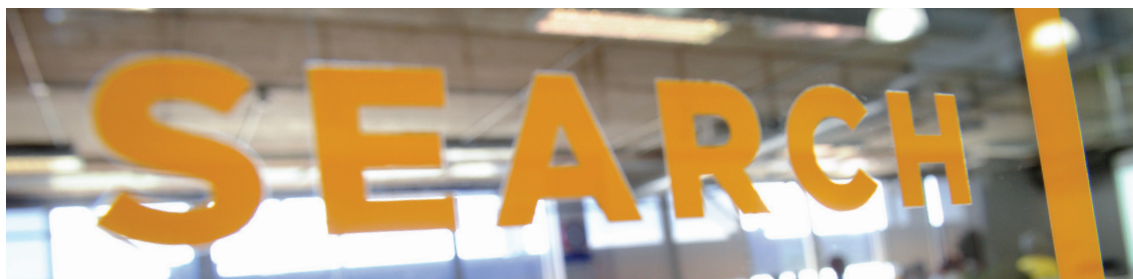


A narrow focus on the traditional, and purely commercial, aspects of business will, by definition, encourage entrepreneurs to work within the current system. But we need tomorrow’s entrepreneurs to rewrite the rules of engagement.

They will need to understand that it's not just about profit, but about unlocking change at a deep systems level to allow new value to bubble to the surface. For this, students of entrepreneurship need to understand more than how to run a business and all this entails; they need to learn how to collaborate with and leverage the strengths of others – including those of local communities – to work together to address structural power imbalances and participate in the remaking of their communities and economies.

In essence, we need all entrepreneurs – large and small – to embrace this new vision for entrepreneurship. And to help them to do their work, we need to focus on building an ecosystem that supports and nurtures their potential, especially that of social entrepreneurs – from recognising and celebrating what they are doing, to ensuring that they are supported and capacitated and that their solutions, where appropriate, can be mainstreamed. Funding needs to be an important focus: for example, the Bertha Centre recently launched the Green Outcomes Fund in collaboration with the Jobs Fund and Green Cape to provide funding for entrepreneurs who are working to impact climate change.

But more than that, we need a new metric of success, judged by the degree to which entrepreneurs enable others to thrive. In many ways social entrepreneurs represent a new yardstick for leaders in the twenty-first century. They manage not just to fill in gaps and meet the needs of the vulnerable, but also to enable whole groups of society to become agents of their own change. By doing so, they start to shift the rigid structures that entrench inequality; they start to shift systems. In this way, we can start to change the world.





*GSB Phillipi hub.*





## UCT GSB Solution Space Philippi Village:

### Extending UCT's places and spaces to serve local communities

**Vanessa Ramanjam**

*Vanessa is programme manager of the GSB Solution Space. She combines experience in for-profit and non-profit ventures of all scales with a purpose to drive social change through equitable economic participation.*

As UCT reinvents itself as a twenty-first century university that is South African, Afrikan and international, balancing the academic imperatives of producing world-class research with a transformative socially-engaged agenda, the call is for a seismic shift in the way the university thinks and acts rather than a gradual evolution.

As a legacy player, UCT is embracing this shift – having already spent nearly a decade rising to the challenge of leadership in innovation. In 2014, UCT's GSB, based at Cape Town's V&A Waterfront, established the Solution Space to serve as an ecosystem hub for early-stage enterprise start-ups, corporate innovation and entrepreneurship research and development.

The mission of the Solution Space is to inspire, nurture and equip purpose-driven individuals,

teams and organisations with an entrepreneurial spirit to build a better Africa, and world. It provides several different opportunities for entrepreneurs, UCT students and alumni, as well as international students, through various programmes and short courses, including a start-up accelerator programme. For corporates, the Solution Space is a research and development platform that can lead market development and test new products and services.

As an extension of this vision, UCT GSB set itself the challenge of finding a way to encourage further interaction between academia, industry and local communities to solve the unique social issues of our context. In 2016, it established the university's first permanent community hub in Philippi Village, one of the city's most under-served settlements.

<https://gsbsolutionspace.uct.ac.za>





Photo by Lerato Maduna

### Location, location

The Solution Space Philippi Village is set at the site of the old cement factory. Re-purposed into an entrepreneurial and recreational/retail hub, it's been given new life as a mixed-use, 6 000 square metre entrepreneurial development zone, strategically located at the intersection of five of Cape Town's largest townships. The development is the result of a joint investment by the Bertha Foundation, founding sponsor of the GSB's Bertha Centre for Social Innovation and Entrepreneurship, and the Jobs Fund.

**“The mission of the Solution Space is to inspire, nurture and equip purpose-driven individuals, teams and organisations with an entrepreneurial spirit to build a better Africa, and world.”**

Twenty-two kilometres from Cape Town's city centre, the area has a large youth population and high unemployment. Despite the proximity to other resources, such as the Cape Town International Airport, industrial and horticultural areas, Philippi's surrounding community is an impoverished one. Approximately 56% of residents live in informal dwellings, which include backyard rentals and informal shelters.

The Solution Space Philippi Village was designed to be a dynamic space that would enable UCT staff and students to interact and work with people from the surrounding communities to solve socio-economic challenges and develop sustainable solutions to the social challenges that constrain Africa's economic prosperity. It was also intended as a research, development and innovation facility, not only for UCT but for businesses, corporates and other organisations. It allows UCT to have a permanent presence beyond its traditional borders.





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In addition, the hub was intended to immediately and directly impact the local communities by providing information and support to young people, entrepreneurs and businesses from the surrounding areas, through foundational and experiential learning, development programmes and access to world-class learning and co-working spaces.

### Supporting local enterprise

Simnikiwe Xanga, who was part of the first UCT Solution Space team at Philippi Village, describes her involvement with the programmes as life changing. “When the University of Cape Town opened the campus in Philippi, its presence signified a transformation for me

as an employee,” she says. “And I have seen how this space has transformed lives.”

After struggling to find employment in 2016, Siphumeza “Blax” Ramncwana and Siphamandla “Space” Mavumengwane decided to start a mobile muffin business, targeting public transport facilities and salons with great success. They joined the Solution Space accelerator programme in Philippi Village in 2018 to help grow and improve their model, gaining access to a range of resources, including a co-working space, practical learning clinics, mentors, staff advisors and a community of peers. The business evolved into Estratweni Mobile Foods, which today employs 15 people and has expanded into two locations, Philippi and Gugulethu.





Simnikiwe  
Xanga



Siphumeza "Blax"  
Ramncwana



Mandisa  
Makubalo

Even with the setbacks of COVID-19, Estratweni Mobile Foods was able to adapt – first to offer deliveries and then online ordering. And although the reopening of restaurants has hurt online sales, the duo have not been discouraged. "We have re-branded and are going to build on this momentum and sustain our business doing only an online service for our customers," Blax says. Not only have they been able to get the business up and running again, they branched out into another business, opening a physical store on Long Street.

In 2019, when founder and managing director of Unlimited Experiences SA Mandisa Makubalo discovered the co-working space at the Solution Space Philippi Village, she decided it was the ideal place to nurture her business. Focusing on solving complex organisational problems through customer and experience management, Mandisa's vision was to make consulting skills available to disempowered locations in South Africa. The business has since expanded across industries and throughout the continent, and yet has remained a venture in residence in Philippi Village.

Mandisa continues to choose Solution Space as the base for her operations, because she believes the greatest impact comes from serving from within the locations you are targeting. "I can deliver these services from within the very townships [I seek to serve], which carries much more value than having to design services for a distant market." Being at the innovation hub has been a game changer, says Mandisa, which has challenged existing narratives around township economic development.

There are many more stories of people who have been inspired to transform their lives by attending programmes at the Solution Space Philippi Village. In addition to its own initiatives, various departments at UCT make use of the Solution Space, including Changemakers, a youth development programme focused on the social entrepreneurship and skills development of young people in Philippi, providing training and coaching to 16-35-year-olds who are not actively engaged in education, employment or training.

#### Looking to the future

The Solution Space Philippi Village manifests UCT's vision to extend education meaningfully into the community, supporting its transformation and inclusion agenda and positioning it as a leading academic institution with a broad social mandate. However, fulfilling this mandate requires long-term engagement with the lived experiences of fellow South Africans, and an understanding of the complex and ever-changing socio-political landscape.

The Philippi campus offers students, alumni, clients and local entrepreneurs a place to meet and engage, but it is just a platform: effecting socio-economic change will require an ongoing commitment to partnership.



## Playing games to grow entrepreneurs in classrooms and spaza shops

**Hamieda Parker and Sarah Boyd**

*Hamieda teaches and researches in the areas of operations management, innovation and entrepreneurship as well as supply chain management at UCT's Graduate School of Business (GSB). Sarah is a case editor and researcher at the Case Writing Centre at the GSB, where she also earned her MBA; she has experience in the area of manufacturing industry.*

Are entrepreneurs born or made? Our experience working with student-entrepreneurs at UCT's GSB tells us that people can indeed learn to be entrepreneurs – both in classrooms and informal learning environments like small businesses. Yet, entrepreneurship education in South Africa is a major challenge for both universities and informal learning environments.

Some of the best tools educators have to build entrepreneurial skills and mindsets aren't actually confined to classrooms or executive boardrooms. Games are an accessible mode of experiential learning that engage players and facilitate practical knowledge transfer. The experience of our MBA students, first as students who played games in class and later as entrepreneurs who use games to teach others, showcases the advantages of focused play for promoting entrepreneurship in both traditional education institutions and in informal learning environments like companies.

These include using affordable, fast, easy activities to learn teamwork, to practice problem-solving and inspire entrepreneurial attitudes.

### **Making entrepreneurs in the classroom**

Entrepreneurship education sets itself apart from other subjects in the university environment, mostly because we have not yet figured out the best way to teach it. Between educators and researchers, a debate rages on about whether entrepreneurship can be taught effectively in formal programmes or whether it can be taught at all.

One major point of contention in this debate is the mode of teaching and learning. In most cases an entrepreneurship education course at university level in South Africa, and Africa more broadly, looks more like your standard general business course. Very few incorporate practical, experiential learning activities.



**“Games are an accessible mode of experiential learning that engage players and facilitate practical knowledge transfer.”**

Our experience at the GSB points to the conclusion, also reached by multiple other researchers, that students can, in fact, be inspired and skilled to create businesses through their classroom experiences. What is more, they can go on to train other entrepreneurs with less access to formal education opportunities to become stronger business managers. In both instances, this learning is made possible through experiential learning approaches that convey deep learnings in relatively simple – and fun – activities. This is to say, we play games.

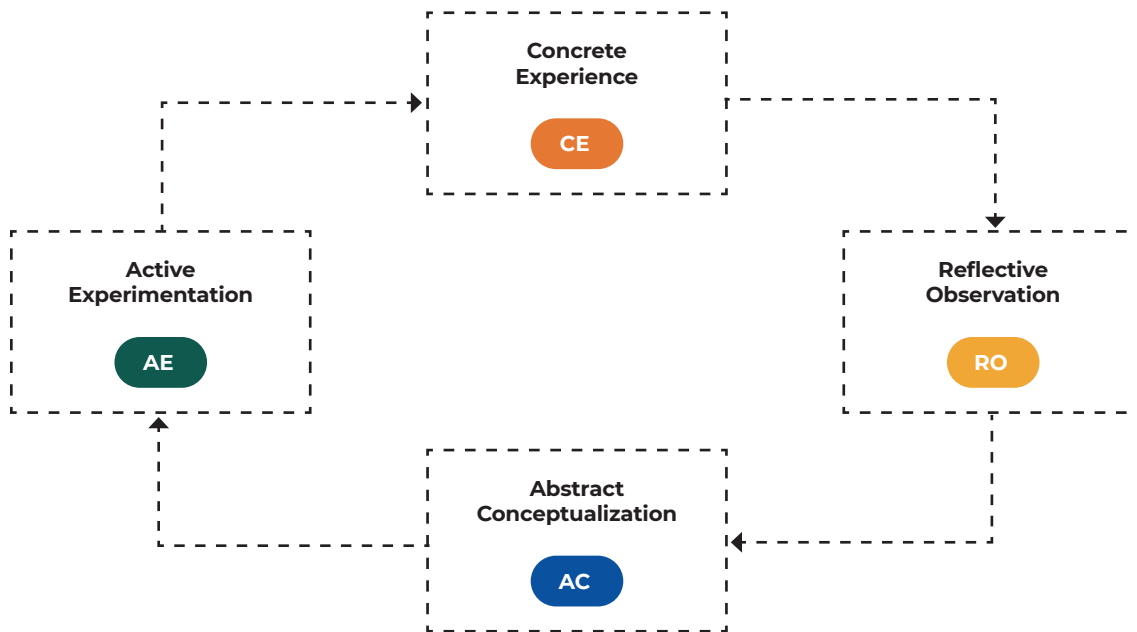
**Experiential learning: marshmallows, spaghetti and tape**

Any professional who has attended business school or worked for a large corporation in the

last 20 years has likely encountered the “the marshmallow challenge” in one way or another. Teams of four to five people are given a simple task: to build the tallest tower possible in 18 minutes using some rudimentary materials (20 pieces of uncooked spaghetti, one metre of masking tape, one metre of string, and one large marshmallow). Since designer Peter Skillman introduced this design challenge to the public at a 2006 TED Talk, it has become a popular creativity and team-building game for people of all ages and disciplines, working in a variety of environments toward a number of ends.

The seemingly facile marshmallow challenge is a form of experiential learning that encourages learning through concrete, practical activities in any environment and at any life stage (Kolb, 2015). Kolb’s learning cycle for experiential learning (Figure 4) consists of four stages: undergoing a concrete experience, reflecting on what happened, forming a conceptual view of the situation (possibly incorporating theory), and actively experimenting in the future, based on learnings of the past experience (Weenk, 2021).

**Figure 4:** Kolb’s learning cycle (reproduced from Weenk (2021))







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As a result, games like the marshmallow challenge offer a number of benefits for players: promoting teamwork and teambuilding, enhancing foreign language skills, encouraging innovation and problem-solving, promoting design-thinking, and enhancing entrepreneurial mindsets and skills.

When we use the marshmallow challenge in the classroom as part of an operations management course, we observe how learning by doing pushes students to immerse themselves in the theoretical concepts of management practices, and to bring these to life. The value of games, which bring students together for a co-learning experience, extends beyond transactional knowledge transfer to team dynamics, as several of our MBA students have found.

### **Building psychological safety through games**

In 2017, MBA student Dr Earle du Plooy decided to investigate if games could be a useful way of increasing psychological safety among the staff at his district hospital (Du Plooy & Parker, 2020). In any setting, for members of a team to work together comfortably and effectively, they must share a sense of psychological safety

– the belief that they can take risks without fear of interpersonal consequences for failure, mistakes or unexpected outcomes (Edmondson, 199). When people feel psychologically safe in a team, they share ideas and concerns freely, they generate creative ideas, and they try new things.

Playing the marshmallow game with multiple teams at the hospital, du Plooy found that teams who successfully completed the challenge and had a positive experience possessed a higher degree of psychological safety. The resource constraints and time pressure of the activity forced groups to respond either with panic and frustration, or with openness and free communication to accomplish their goal. This gave teams two essential learnings: the ways of working effectively in teams, and that seemingly impossible tasks are indeed possible when people embrace the challenge and take action.

In many ways, these are the same learnings du Plooy learned as an MBA student working in a team to complete a series of increasingly difficulty projects over two years. His use of games in an informal learning setting demonstrates the power of experiential learning for other professionals.



*Hospital Games*





Marshmallow Challenge

### A student venture emerges

Student-entrepreneurs Andre Titus and Desigan Govender adopted a similar approach, using games to bring good management practices to life within Sekika Solutions, the business they founded in 2014 upon completing their MBA studies, specialising in operations and supply chain management. Sekika partners with small businesses in the “unseen” informal economy to train, optimise, and strengthen their operations – work that is best represented with their SupplyPal programme for spaza shop owners in townships. In addition to market research, business support and networking services, a crucial part of their offering is training for business owners and their team.

As students in the GSB’s supply chain management course, Titus and Govender engaged in multiple games and simulations to learn essential concepts like lean start-up methods, value stream mapping and problem solving.

The games were developed in collaboration with Dr Earl Starr (a lean-implementation black belt) and aim at helping budding entrepreneurs develop essential business skills. Low-cost, fast, simple and open for anyone to participate, the games demonstrate the power of using play to teach complicated or abstract ideas to a wide variety of entrepreneurs, professionals and employees.

### Games for the win

Given the immense challenges entrepreneurs face to create viable, sustainable businesses – be they in the informal economy or the most competitive industries – it’s understandable that some are sceptical of the power of games to create meaningful learnings. This doubt is not so different from what some teams express when confronted with the marshmallow challenge: *How can this really work?* But what players almost always find is when they let go of their doubts and reservations, and simply play the game, it *does*. They find ways of making sense of the task and working together to achieve something.

Our research and experiences with student entrepreneurs demonstrate that while these learnings might not build a business, they build a foundation for creativity, risk-taking and future learnings, thus opening the door to entrepreneurship for more people.



## The UCT Genesis Project

**Stuart Hendry and Anthony Hill**

*Stuart works in the Faculty of Commerce at UCT; he specialises in entrepreneurship and is Convenor of the UCT Genesis Project. Anthony is a serial entrepreneur and longest standing Genesis director who mentors small businesses.*

**Over thirty years ago, UCT Emeritus Distinguished Professor George Ellis posited the need for real-action learning to prepare students for the realities of the “world of work”. His rigorous analysis showed that students could only be adequately prepared for this world of work by following a process of experience, feedback, reflection and learning. In his own words: “It is fundamental that for real learning to take place, experiential and action-learning opportunities be provided as far as possible.”**

This belief led to the establishment of a Postgraduate Diploma in Organisation & Management (PDOM) at UCT in the mid-1990s, headed by Professor Piet Human, which has since evolved to become the Postgraduate Diploma in Management in Entrepreneurship (PDE) today, headed by Professor David Prillaid.

The first of its kind in the world, this honours-level qualification requires students to complete 12 postgraduate-level courses over a full academic year while they set up and run their own business – their Genesis Project. It’s not a business simulation, a business plan competition or a pitching contest, but an actual registered business, where students are required to team up with six to seven

peers to start and run their own business for a full year – including registration of a company, fundraising start-up capital, developing and managing business relationships and working closely with an external board of directors who provide mentorship. It’s a real business with real money and real-world stakes that places students within an entrepreneurial ecosystem of investors, venture capitalist and customers.

As part of their Genesis process, students receive coaching and mentoring from carefully selected Genesis directors who have first-hand experience of building a start-up business from scratch. They work with the students to support entrepreneurial and leadership skills

<https://commerce.uct.ac.za/applied-management/postgraduate-diploma-entrepreneurship>



development, including business competencies such as generating a business plan, utilising creative processes to develop and manufacture innovative products, conducting effective market research, product costing and financial projections of earnings and, most importantly, working together as a real team. Nearly 60% of the Genesis boards are made up of Genesis alumni who have returned to support the students as they start their entrepreneurial journey.

To date, the UCT Genesis Project has equipped more than 1 450 students from 17 countries across the world with the essential skillsets required to become successful entrepreneurs. Of these, almost half (48%) are female. Given that students come from fields as diverse as science, engineering, microbiology, film and media, fashion design, environmental studies, and even culinary school, it is noteworthy that at least one in four businesses (25%) started

through the Genesis Project continue after graduation and, conservatively, one in three (33%) graduates go on to create their own business.

As the convener of the Genesis Project, I, along with my co-author Anthony Hill, published a book in early 2022 titled, *The Genesis Project: Building Entrepreneurs for Africa*. The book details the impact Genesis has made, and should be making, in universities across South Africa. We explain the why, how, what and where of the project in great detail, focusing specifically on some of the success stories of Genesis alumni, and concluding by arguing the importance of universities as key players in South Africa's entrepreneurial ecosystem.

In the business environment, one of the most critical metrics of success is described by the phrase "proof of concept". This refers to the evidence that a concept, proposed business intervention or solution to a customer problem is



*Pronemotion is a mobility solution for individuals with compromised independence. The Pronemotion was developed by students as part of the UCT Genesis Project in 2022 as a self-powered mobility vehicle that provides an alternative to the wheelchair. It is unique, cost effective and accessible. This MVP is currently being tested at one of Cape Town's top rehabilitation centres.*





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commercially feasible. In applying this metric to the Genesis Project, research clearly shows that it has a proven track record of delivering successful start-ups and building entrepreneurs. To build on our quantitative data, we also conducted extensive surveys targeting PDE graduates, followed by in-depth interviews with several of the most successful graduates, who either took their Genesis businesses forward as a start-up, or started their own business after completing the PDE. Without exception, all of these successful entrepreneurs had actually applied their Genesis learnings to substantially improve their business decisions.

In analysing hours of interviews with Genesis graduates, ten core themes emerged that spoke to the value of Genesis for real-world entrepreneurs.

These included the importance of keeping in touch with your business's target market and selecting the right mix of complementary skills for a team. Graduates echoed the importance of leadership skills and continued personal growth, of knowing what your business does well and outsourcing the rest. They emphasised taking a cautious approach to accepting external funding, and the important role of diversity in making better decisions.

From numerous anecdotes and the evidence of hard data, it's clear that the "proof of concept" is in place – Genesis creates a corps of business-ready entrepreneurs for South Africa and for the wider continent.



*BookBugz provides the first stepping-stone in a child's early literacy and education journey. Their mission is to provide a cost effective and space efficient bookshelf that will fit into every learning space, helping teachers in informal schools to make books easily accessible and to provide storage space that is adaptable.*





**“You often know your strengths, but it is important to look in the mirror to become more self-aware. Genesis for me was like that mirror being held up in front of me, forcing me to look at myself and understand how I was perceived in both positive and negative ways.”**

Taz Watson, 2009 PDE alumnus



**“We didn’t seek any funding during our first four years as we knuckled down and learnt by doing. Don’t be in too much of a rush to raise capital until you have a clear understanding of your business model and real funding needs.”**

Jamie Hedley, 2009 PDE alumnus



**“Before Genesis I would have always partnered up with someone who is a copy of myself! But now I’ve learned how wrong that is! How good it is to have someone with a completely different mind-set on your team and this has definitely helped me in my current business.”**

Ben Boehmer, 2016 PDE alumnus



**“I’ve learnt to ask questions. I’ve always tended to put people on a pedestal or take someone’s word as gospel if they seem to know more than me about a topic. The problem with this is that you can easily be led astray. Although I’m still working on this, Genesis taught me to think more critically and realistically, and back my own gut.”**

Conor Jenkins, 2018 PDE alumnus



**“Genesis prepared us for starting our own business, but it also prepared us for the workplace. From emotional well-being to recruiting and selecting the right people, right through to ensuring profitability – particularly making the comfort-zone not so comfortable anymore!”**

Likenkeng Ramafikeng, 2018 PDE alumnus



## Why entrepreneurs need to embrace design-led thinking

**Richard Perez**

*Richard Perez is the founding director of Africa's first school dedicated to Design Thinking, the Hasso Plattner d-school Afrika at UCT, offering the Foundation Programme in Design Thinking.*

For the world's urban households, waste collection is an issue that's too close to home. According to the UN, an estimated one billion urban-dwelling people live in slums or informal settlements where access to basic human services and service delivery is not a given. In South Africa, the problem is exacerbated by high unemployment, the rapid densification of urban and peri-urban spaces and the legacy of apartheid spatial engineering. A bin isn't just a bin. <http://www.dschoolluct.ac.za>

If we take a closer look, we often see that the everyday solutions we design to address even our most ubiquitous problems – like containing waste – fail in the design process. Too often the communities for whom the solution is meant to serve are left out of the conversation. In an effort to change this story, the City of Cape Town brought the community leaders of Doornbach, an informal settlement of in the Western Cape, together with engineers to co-design a refuse bin.

Engineers learned that a refuse bin in an informal settlement needs to do a lot more than contain waste: it must repel rainwater, guard against theft, remain out of reach for scavenging animals but accessible to older children tasked with taking out the rubbish. It needs to hold waste for several households and still be fitting for a standard city-issued blue bag.

The community explained the complexity of the problem, unlocking new information that enabled the design of the right kind of bin. Thousands of these bins have now been rolled out across the metropole, setting an example of how design thinking's human-centred, cross-silo approach can solve problems that impact our daily lives.

### **Non-traditional approaches, non-traditional solutions**

The world has many challenges and each one varies in complexity, size, difficulty and



importance. Given the scale and variety of the challenges humans face, it may sound foolhardy to think there's a common thread to how we should tackle each one. While there is no single formula, I believe a design-led mindset can give us the best chance of developing the innovative solutions we need to address the complexity of modern life.

Design-led thinking, an evolution of the design discipline and something traditionally taught at art and design colleges, is an attitude to problem solving. It's a powerful tool for the public sector and business alike. It can be applied in a variety of contexts to enhance end-to-end customer experiences, design new products, and shape new services that are better attuned to what customers/stakeholders really need and want.

Design-led thinking requires us to wrestle with the problem at hand with a kind of obsession – bathing in it to fully explore the dimensions that shape it. We are too easily influenced by the seemingly obvious parts to life's puzzles. Cape Town city officials, for instance, may have been

dazzled by best practices in the waste removal world, preventing them from seeing the real challenges on the ground in Doornbach. Design thinking asks us to dig deeper, and then several levels below that, to uncover what's really going on under each issue. With it, we are stretched beyond our traditional frameworks. We are challenged to unlock a creative confidence to problem solving and imagine new possibilities, unbound by the legacy of “the way things have been done”. This is easier said than done, but creativity is a natural tendency all humans share – the same attribute separating us from machines – marking the moment we choose to carve something into existence without having been programmed to do so.

**Design-led entrepreneurship**

It's not a big leap to see how design-led thinking can, and should, inform entrepreneurship. Entrepreneurial thinking is often described as necessarily involving a kind of tenacity and drive to meet the demands of a specific problem – imagining a way to do things differently,



*Photo by Lerato Maduna*





## Entrepreneurship at UCT



*The new Hasso Plattner Design-Thinking School Afrika at UCT*

then tuning an idea with relentless passion. This too is a design-thinking mantra – to work through the moments when you want to give up, to navigate the uncertainty and push a little further to see beyond what’s already been seen by those who have come before.

Entrepreneurship is traditionally geared to building a business, codified in the process of establishing a company, going to market, and making profit. While design thinking goes beyond this, there are four core elements of a design-led thinking mindset that entrepreneurs can embrace to become better business builders.

The first, and perhaps most relevant, is a bias to action. Entrepreneurs often search for the perfect product and spend ages fine-tuning their offering before going to market. Life is too messy, and public opinion too varied to be able to perfect a product in your head. Design thinking encourages building and re-building, getting your hands dirty and testing through trial and error. The sooner you build something, the sooner you will know whether it will work.

Second – and intimately tied to the above – is a willingness to embrace failure. Tripping up is not so much a mark of demise, but a steppingstone to success – it’s through failing that we learn, and from learning that we improve. Learning alone, however, is one dimensional, and we can improve our odds of understanding problems and finding solutions through collaboration. Embracing diversity of opinion is the third element to adopt. It can provide a more nuanced view of reality, uncovering dimensions invisible at first glance.

Lastly, design thinking continually asks us to be context-aware, viewing problem-solving as a process of understanding the tangled threads in the fabric of a problem, as much as the problem itself. One of the most common causes of failed business skeletons is contextual ignorance: not understanding that a business must be adapted to meet the needs of its immediate environment. That a business trend is a sensation in the United States, doesn’t guarantee its success in Africa. The continent has unique qualities that put a premium on product development and entrepreneurially engineered solutions, sensitivity to local cultures, norms and customs.



Overall, these four components of the design-thinking mindset work together to provide a structured approach to innovation. Crucially, this “structure” doesn’t mean a paint-by-numbers approach where one can input a problem, follow model x, and out pops innovation. Rather, it refers to the entire ecosystem around innovation – the behaviour you need, the types of physical spaces for fostering creativity, and the kind of people that reinforce the appropriate processes.

**Transforming “business as usual”**

Any organisation can adopt this design-thinking mindset – in fact, any individual can – but it’s particularly suitable to the domain of entrepreneurship, which is driven by finding innovative solutions to stubborn challenges.

This approach is evident in successful global businesses like AirBnB, which highlights the importance of design-thinking principles as a continuous source of inspiration for understanding customers. It’s equally evident in the ventures of local start-up heroes, Matthew Westaway and Lethabo Motsoaledi, two former UCT engineering students who participated in a foundation programme at the Hasso Plattner d-school Afrika at UCT (d-school Afrika). Sharing the grievances of poor service offered by many customer call-centres, the two decided to immerse themselves in the problem. The result was a voice recognition software company, Voyc. Just a few years later, and their business is set to radically overhaul the call centre industry with their game-changing solution

that enables businesses to handle every single customer interaction with consistency and care while also speeding up response times.

Design thinking provided Matthew and Lethabo a model for how to enter the problem space. Instead of starting with a focus on *viability*, looking at the business possibilities surrounding a solution, or through an understanding of *feasibility*, grappling with what was technologically possible, they approached the problem with customer *desirability* front of mind. This meant they started with the needs and aspirations of the end user – a core design thinking principle and exactly what the City of Cape Town did when they engaged with the community of Doornbach to solve a completely different challenge. From there, they could create the relevant technology and shape the business case – to not only launch a successful start-up but one with innovation at its core.

Everywhere we look we can find problems. How we approach these problems will define our success and, ultimately, our sustainability as a species. There is a special role for entrepreneurs in solving global challenges – they’re the ones who will discover, invent and build businesses that turn obstacles into opportunities. Some will succeed, and many will fail. The difference between them will be how they think about the problem of their focus. It’s here that design thinking can help shape an attitude and structure an approach to unwrap innovation’s core, setting the entrepreneurial design thinkers on a path to success.





## The Menzi Design Laboratory

### Paul Amayo

*Paul is a principal investigator and Senior Lecturer in the African Robotics Unit at UCT, with a Doctorate in Philosophy from the University of Oxford as well as a Master of Engineering in Electrical Engineering from UCT. Paul has a keen interest in the South African youth and creating opportunities for entrepreneurial growth within the university and beyond.*

Each of the engineering departments at UCT commands respect for the discipline and practice of engineering, alongside concerns for safety and sustainability. But the necessary precision of this discipline, which often prioritises knowing before doing, can foster an environment in which expertise trumps exploration. Here, laboratories become places where expensive equipment is deployed with tight precision for already well-defined tasks in teaching and research – not sites of exploration. This leaves little space for discovery, let alone entrepreneurship.

The goal of every engineering graduate should be to apply engineering knowledge to solve local and global societal challenges. Entrepreneurship provides a link connecting the academic discipline of engineering toward social application. Students and staff should be incentivised to explore ideas that address observed problems, converting them into a product or prototype. At the same time, we must acknowledge that the confines of a curriculum

often leaves little space for this experience – space, both intellectual and physical.

With this problem in mind, a small team consisting of Associate Prof Nico Fischer, Mr Justin Pead, Dr Stephen Paine and myself, with overwhelming support from the Engineering and the Built Environment (EBE) faculty and dean, met to discuss, brainstorm and eventually develop a proposal to nurture innovation and entrepreneurship within the engineering faculty. We hoped to yield tangible products and prototypes, associated IP and possible spin-out and start-up companies.

### **In Xhosa and Zulu, menzi is the word for “making” or “creating”**

I had seen how developing curated entrepreneurship spaces within universities can have a multiplier effect in innovation across many more disciplines. As a graduate student at





Oxford University when the Oxford Foundry was set up, I witnessed how a dedicated space for entrepreneurship created a path for student-led start-ups at a scale previously unimagined. I saw, too, how it effectively democratised knowledge, eliminating the need to become an Oxford Don to speak about a subject with authority, or, more importantly, to be listened to and funded. Four years later, this initiative merged with the Oxford Business School to form the Entrepreneurship Centre.

The synergy of connecting engineering with entrepreneurship is underpinned by numerous examples from other universities around the world – from the UQ Innovate at the University of Queensland to the i-Lab at Harvard – all pointing to a model that provides immense benefit both to the university and to society.

UCT absolutely had to have a similar space. The question was, where?

### A space to dream

In the heart of the daily busyness of the engineering mall on UCT's upper campus, there is one place that insists that you pause: the Glass House in the Menzies Building and its associated cafe. Though vendors come and go, this has been the go-to space for meetings, catch-ups and debriefs over a shared meal or beverage. While still surrounded by the engineering faculty, in this space – with its brilliant bay windows that invite sunlight in – frustrations and pressures are momentarily suspended.

Above this space sits a smaller, slightly less renowned space, which shares the same expansive windows and in full view of upper campus – it is here that the first phase of our proposed intervention to bring innovation and entrepreneurship into the engineering space is taking shape.







## Entrepreneurship at UCT

This is the Menzi Design Laboratory. The name itself is a playful union of both its current location and its purpose as a makerspace – in Xhosa and Zulu, *menzi* is the word for “making” or “creating”. On the face of it, it’s similar to many spaces within the engineering faculty, where one will find a variety of manufacturing equipment such as drill presses, 3D printers and design computers. But the Menzi Design Lab deliberately embodies a different ethos, urging all who enter to look outside their curriculum or research agendas, to imagine and make something different.

**“Everywhere we look we can find problems. How we approach these problems will define our success and, ultimately, our sustainability as a species.”**



### A different mandate

It will always be a challenge to make time to dream, discuss, plan and eventually realise an idea, while also meeting the demands of a full-time job or curriculum. That’s why a physical architecture is not only essential for holding space for ideas but also for inspiring them. This is the foundational principle of UCT’s newly built d-school Afrika, which embodies out-of-the-box thinking and innovation in its very walls. It’s fast on its way to becoming an innovation hub in Africa, challenging the Menzi Design Lab to be the engineering department’s own idea incubator.

Because it’s not just engineering acumen that prevents ideas from being born – it’s the absence of other skills like the inability to operate machinery or write code, ignorance in areas such as intellectual property, founding companies, tax, etc – knowledge transfer is at the heart of the Menzi Lab project. The lab manager is required to create and maintain the environment in which knowledge is shared and many project owners can prosper, while also guiding individuals toward resources and on protecting IP with the help of the Research Contracts and Innovation Office.

Fair access and funding are also essential to making this a generative space. While the proposed makerspace provides infrastructure, training, interaction, some loan components and selected consumables, it cannot carry full project costs.

**“The name itself is a playful union of both its current location and its purpose as a makerspace – in Xhosa and Zulu, *menzi* is the word for “making” or “creating”.”**



Applicants will be invited to pitch their ideas to a review panel, which will have an amount of discretionary funding to allocate toward promising projects that can be used to purchase components via the UCT procurement system or pay for services rendered. Other funding sources such as the RC&I Seed Fund or Innovation Builder Fund, the Evergreen Fund and the University Technology Fund will need to be approached separately by the makers. External funding from private, as well as government institutions, will be encouraged.

With the goal of providing the space, expertise and equipment for students and staff to develop their non-curriculum aligned projects towards prototypes and commercialisation, the Menzi Design Laboratory will be launched this year – we can’t wait to see what they make.





The Menzi Design Laboratory. Photos by Candice Lowin



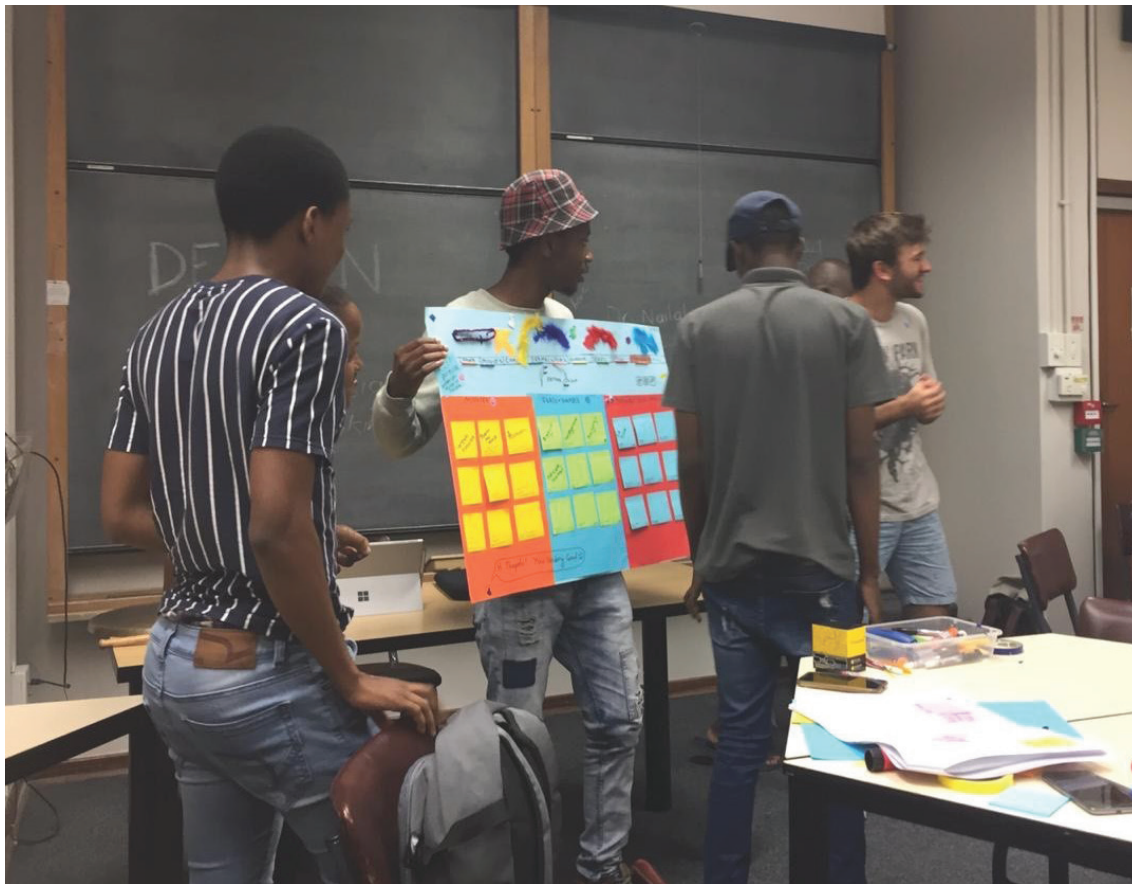
# Teaching that facilitates the development of a new kind of entrepreneur

**Alison Gwynne-Evans**

*Alison is a senior lecturer in Professional Communication Studies, Faculty of Engineering and the Built Environment, UCT.*

How entrepreneurship is conceptualised impacts how entrepreneurship needs to be taught and what students need to learn. Opportunities need to be created to affirm the students' development beyond technical skills relating to an individual business pursuit.

Far from being an individualistic pursuit, entrepreneurship is integrally connected to communities: both the communities supporting the development of the entrepreneurial initiative and the communities that benefit from it. Distinct from trading, which is transactionally oriented, entrepreneurship is focused on





building value through identifying and solving problems for people in a specific context. Entrepreneurship is thus necessarily practised by individuals in community – from the relationship of the street trader with the motorists passing by, to the online expert and her clients – building a commercial web of connections.

Afrikan entrepreneurship can be seen as even more distinct, where the concept of *ubuntu* – of being a person to one another – alludes to a level of solidarity and connectedness beyond that of networking or the creation of access. Afrikan entrepreneurship requires an acknowledgement of the humanity and value of the stakeholders in a way that fundamentally repositions stakeholders as co-beneficiaries of a transformative enterprise.

In addition to the capabilities and skills of emotional intelligence, creativity and critical thinking, complex problem-solving, judgement and decision-making and cognitive flexibility, students need to develop their sense of identity as part of specific communities, rather than operating in isolation. This requires creating opportunities to envision and strategise how business ventures might optimally impact communities, and positions innovation in terms of specific priorities such as sustainability or social justice. These values affect the way the business is positioned and implemented and carry obligations of responsibility to communities and the wider society.

**“Students need to develop their sense of identity as part of specific communities, rather than operating in isolation.”**

The process is necessarily collaborative and practical, such as the processes evidenced in the Genesis project, where students’ ability to manage people, to coordinate with others, to be service-orientated and to negotiate with other stakeholders, needs to be cultivated.

Additionally, in relation to the wider impact of the business, students need to be provided with opportunities to develop a sense of Afrikan citizenship and global citizenship, responsibility towards the natural teaching and learning environment, and strong valorisation of cultural diversity.

At UCT, students develop a specific set of skills, qualities and perspectives that cultivate their knowledge and intellect, as well as their responsibilities towards the community and the broader world. In their journey, UCT students are exposed to different learning approaches, infusing environmental and social responsibility, design thinking and interdisciplinary collaboration. These methods and tools will allow students to develop approaches to engaging with the world in a more holistic way, and to understand their own actions, abilities and behaviour in relation to others.

**“Afrikan entrepreneurship can be seen as even more distinct, where the concept of *ubuntu* – of being a person to one another – alludes to a level of solidarity and connectedness beyond that of networking or the creation of access.”**

Entrepreneurship education, in this context, is not necessarily about teaching students how to start a new business; rather, it is about developing the mindset of innovation necessary to recognise opportunities and make the most of them. It is integrally connected with affirming the value of the individual entrepreneur in the process – that their unique contribution and experience is vital to the success of the venture.

In the following stories, we see how students’ lived experiences, dreams, values and their studies intertwine to create a distinct journey that sees them as central actors and change-makers in the world.



# What makes a great business pitch

**Alison Gwynne-Evans**

*Alison teaches Professional Communication Studies in the Faculty of Engineering and the Built Environment. She provides support to UCT studentpreneurs to communicate and refine their ideas for the national EDHE Competition, where students compete to secure investment for their start-ups.*

Planning and executing a successful business pitch requires imagination, craftsmanship and application similar to that which goes into creating an unforgettable meal. The impact of the pitch needs to be sustained and relevant

and to linger in the memory long after the event. A successful pitch combines the poise, charm and precision of the presenter with careful preparation and strategic judgment about what information and detail is important.



*Chido Dzinotywei, Tshegofatso Masenya and Vuthlarhi Shirindza were winners in the 2021 EDHE National competition.*



*National finalists 2019 EDHE Competition: Denislav Marinov, Lungile Macuacua, Vuako Khoza, Mvelo Hlophe and Tamir Shklaz.*

### Ingredients of the pitch

Crucially, a great business pitch requires quality ingredients, combining a variety of elements in a structure generating the energy to entice and persuade:

- Your business idea is key: addressing a need or problem in a constructive and positive way.
- You are a vital part of the pitch and contribute a confidence and integrity that persuades in a unique way and makes you an essential part of what an investor buys into.
- Your timeline needs to be convincing and achievable with key deliverables identified.
- Finances must be presented to make clear how the investor's funds complement existing finances and make specific goals achievable.
- Slides need to be conceived and executed to portray your idea with compelling visuals and a distinctive style.

### The pitch-presenter

Think of the pitch-presenter as a strategist, working within a context with a variety of elements, combining sensory experience and building ambiance to display the different elements to their full potential within the context.

The pitch-presenter needs to identify and select the detail, position the elements and build the argument into a cohesive story that tempts and invites and even seduces the audience. Not only are you a strategist, but you are an artist and a communicator. Pay attention to how you present yourself as you are an important part of the pitch.

### Know your audience

And then importantly, research and know your audience. Find out what you can about them and about what will motivate them to support your pitch. Craft the pitch to that specific audience. Avoid trying to satisfy two different types of audience in one pitch. Keep your pitch focused and keep your attention on the requirements whilst showing off your own capability.

A pitch provides the opportunity both to inform and to intrigue the investor. Take time to develop something that satisfies. When you think you are done, get input from someone whose opinion you value and incorporate that feedback. And then rehearse until you feel ready and can focus on connecting with your audience, knowing the structure and ingredients are in place.



## The Pitch

### Frank Karigambe

*Frank is the coordinator of the governance and programme support in the Department of Student Affairs; he is also director of The Pitch, an annual, student-run competition.*

UCT is a research-intensive university, but it expects research to translate into action and practical interventions. My postgraduate dissertation focused on the impact skills-training can have on youth unemployment in local townships. Four years later, as an employee of UCT in the Residence Life Division, I sought to implement this knowledge to serve the 7 500 students within the university residence system. The vision was to create a programme that could capture imaginations and harness the entrepreneurial potential of students and staff at UCT. And so, with the support of colleagues Sean Abrahams and Michael Ross, The Pitch was born.

The Pitch was piloted in 2016, within student residences. At the inaugural event at the Baxter Residence Hall, two residence-born companies were profiled: a student-run tuckshop with dreams of becoming an established food chain, and an IT development company with aspirations of connecting homegrown coding talent to start-ups looking for IT solutions. The two businesses could not have been more different, but it was clear they shared the same spirit of creation and innovation.

The Pitch aimed to create a platform for students to implement their ideas for business and innovation alongside their formal education. We wanted to create the space for students to articulate ideas and to start acting now, committing to solutions or new ideas for the long term. It's not just about pitching a new venture – pitching is an outcome of a process of ideation and the development of a minimum viable product. To nurture this process, we host workshops with industry professionals who guide student entrepreneurs; we train students in entrepreneurial mindsets and skills, and, of course, we help students to craft the perfect pitch.

The workshops are supported by the wider entrepreneurship ecosystem at UCT, including the CSB, the Allan Gray Orbis Foundation (AGOF), the Hasso Platter d-school Afrika, Career Services, Residence Life, Department of Student Affairs and the Residence Academic Development Committee (RADC).

Underpinning The Pitch are the core values of grit and growth. These are more than inspirational words – it's an embedded framework called the





Grit Learning Outcomes, adapted from Angela Duckworth's grit framework (Duckworth, 2017). We have a set of empirically informed learning outcomes based upon the well-researched, academically published and internationally recognised frameworks of (i) mental contrasting with implementation intentions, commonly known as 'WOOP', which stands for wish, outcome, obstacle, plan; and (ii) grit, which is associated with perseverance and persistence.

Through The Pitch, students improve their abilities to:

- remain consistently focused
- handle setbacks
- remain interested in an entrepreneurial idea/ start-up project over a long period of time
- commit more effort to developing an entrepreneurial idea or start-up
- set an entrepreneurial goal and stick with it over the long term.

We have hosted seven annual editions of The Pitch since its pilot in 2016. Having directed all of the events, I've seen that it's vital to equip students with skills that accelerate their progress from the ideation phase to the implementation phase of their business. Collaboration between staff and students is essential, which is why we ensure communication channels through putting in place a mentoring and coaching programme for student leaders of the Academic Representative Council (ARC). In 2018, then

president of the ARC, Daniel Tate, invited Vice-Chancellor Mamokgethi Phakeng, to attend the event. This resulted in the on-boarding of Allan Gray as an impact partner. As a result, the programme was expanded to all UCT students.

Without funding and secure buy-in from the university community and other stakeholders, The Pitch would not be a substantial learning experience with real-life implications. For this, we credit the support of the UCT Office of the Vice-Chancellor, and VC Phakeng, in particular.

Due to COVID-19 lockdown and protocols, in 2020 The Pitch went entirely online with all phases of the competition programme. We took the opportunity to incorporate South African judges who were based across the world, and students who were similarly scattered. The following year, in 2021, The Pitch adopted a hybrid model, holding workshops online but culminating in a final socially-distanced event attended by the judges, speakers, finalists, and members of the ARC. Students based outside the country participated virtually, and one such person won.

In 2022, we are holding in-person workshops with dozens of student entrepreneurs. The innovative energy of all our engagements has become a defining trait of The Pitch – one that has been evident since our inaugural entrepreneurship event in 2016. That same spirit we know is alive and thrives at UCT.



Jasantha Singh, winner of the Pitch in 2019.



# The Mastercard Foundation Scholars Program

Carol Ojwang and Mugove Chiwashira

*Carol and Mugove are situated at the African Partnerships and Programmes in the International Academic Programmes Office (IAPO) at UCT.*

The Mastercard Foundation Scholars Program works to develop Africa's next generation of leaders by providing scholarships to talented students from the African continent who lack the resources to pursue higher education. Offering a range of leadership and development opportunities, including career and entrepreneurship development, the vision is to nurture scholars into transformative leaders who make meaningful contributions to their local communities.

The Scholars Entrepreneurship Fund (SEF) was set up by the Mastercard Foundation to award funding to Mastercard Foundation scholars and alumni with the capacity to exercise transformative leadership and give back by catalysing economic opportunities for others. Recipients of the SEF Award are selected after a rigorous application process in which they propose their projects which can be implemented locally or back in their home countries. SEF

awardees are then matched with a skilled entrepreneur to mentor them in the inception stages of their project. The SEF mentors support SEF awardees and their projects to ensure that they are sustainable and scalable with an impact in their local communities and across the African continent.

**“The vision is to nurture scholars into transformative leaders who make meaningful contributions to their local communities.”**

To date, the Mastercard Foundation Scholars Program at UCT has awarded 50 SEF Awards which have led to various projects in diverse sectors including aquaculture farming in Nigeria, start-up finance and training support, USSD service for farmers, biogas and health research, to name a few.

<https://www.queensu.ca/innovationcentre/launch/jim-leech-mastercard-foundation-fellowship-entrepreneurship>



*Mastercard Foundation Scholars (from left, back) Bright Tetteh, Gamuchirayi Manyadzi and Iyanuoluwa Oyetunji. (From left, front) Simamkele Dingiswayo, Simbarashe Kaneunyenye and Sharifa Negesa.*

# SAB Student Seed Fund

## Rowan Spazzoli

*Rowan lectures in the Faculty of Commerce at UCT. He also works as an innovative finance consultant at the Bertha Centre.*

Since 2015, the GSB's Bertha Centre has collaborated with the South African Breweries Foundation in designing and implementing a social enterprise seed fund, open to both current students and recent alumni of the UCT's programmes. The fund offers seed capital to student-led businesses that demonstrate socially and environmentally impactful ideas.

The SAB Foundation Student Seed Fund (SAB SSF) provides support at the early stages of an enterprise's growth cycle and plays an important role in the success of the GSB programmes to support the development and refinement of new business models with social impact. The SAB Student Seed Fund is

part of a growing international trend of leading universities with impact investing funds.

The Bertha Centre's innovative finance team has managed the fund since inception. The SAB Student Seed Fund is governed by an investment committee, which is comprised of entrepreneurship experts and MBA students within the GSB.

As the Seed Fund's application intake increases year-on-year, and as new MBA students reflect that the Bertha Centre's social enterprise and social innovation work is a major draw, there is a demonstrable need to continue the fund to promote social entrepreneurship and innovation.



*Titose Chembezi and Julian Kanjere, UCT MPhil in FinTech alumni and founders of Mandla Money and joint winners of the 2021 UCT Leopards Lair competition joint funded by the Bertha Centre, SAB and Imvelo Capital, hosted in 2021 by Akro Capital*



## The Baxter Theatre Centre as a site to support entrepreneurship in the arts

**Lara Foot and Fahiem Stellenboom**

*Lara is the Baxter Theatre Creative Director and CEO. Fahiem is the Baxter Theatre Marketing Manager.*

The Baxter Theatre Centre at UCT has won awards for its productions, created meaningful, cutting-edge work and remained a fixture of the South African arts. In 2017, to celebrate its 40th birthday, it achieved the rare distinction of taking six award-winning productions to the Edinburgh Fringe Festival. Over the decades the Baxter has provided a crucial infrastructure to performing artists, remaining independent of political interference and sustainable as a business.

The Baxter Theatre Centre's very existence is based – and founded on – resistance, resilience and pushing boundaries. It is the only remaining fully operational theatre in the Western Cape – and one of few in South Africa – with an operating mandate to remain accessible to a broad audience, which, in fact, has always been the case. Its legacy of openness is evident today through its programming and its continued commitment to creating and producing new

work by a broad range of South African artists. In line with UCT's Vision 2030 policy, the theatre's social justice content, which it tackles head-on, has earned it much respect, garnering several accolades, both locally and internationally.

The Baxter does not receive any funding from the national government nor from the National Lotteries Commission. UCT currently covers approximately one-third of its annual operational expenses and some project-based funding from the Western Cape Department of Cultural Affairs and Sport and the City of Cape Town. The theatre has to raise the remainder of the funding itself, with its expenses paid from annual income, which includes ticket sales, donations, theatre rentals and interest on the Permanent Endowment Fund. The plan is for the Baxter to become financially independent from UCT in the long-term, given the multiplicity of demands on tertiary institutions.







*The Baxter Theater Centre. Photo by Lerato Maduna*

### The art of entrepreneurship

The business of the arts in South Africa – or anywhere – is hard. And, just like any successful venture, to survive the Baxter has had to take risks, challenge the status quo, stay in touch with its audience and reinvent itself time and again. With the moratorium on gatherings, COVID-19 dealt a particularly hard blow to the Baxter and to artists everywhere. And yet, by reimagining its spaces and devising clever funding schemes, it has managed to withstand external pressure – proving that creativity and grit are as vital to the arts off-stage as they are on it.

The COVID-19 pandemic and worldwide lockdown restrictions has been debilitating and devastating for the global economy. This is even more so in South Africa, with its myriad set of socio-political-economic complexities and widespread inequalities. All sectors were severely hit. The arts industry was brought to a sudden halt when theatre doors were closed and the curtain downed. The show could no longer go on. The Baxter Theatre Centre immediately embarked on an innovative, affordable, financial sustainability drive to keep it afloat during unprecedented times. The Baxter Coffee Angels campaign required patrons, theatre and arts lovers to donate as little as R30 a month, to ensure the iconic theatre's financial sustainability

during this time and into the future. This was possible because of many years of building and sustaining relationships with patrons and users.

This initiative was applauded for its creativity, its price-sensitive donation request and entrepreneurship – it used a basic funding model, but also considered the broad audience base that the theatre serves. The income derived from the campaign offset some of the losses incurred during the pandemic. For the campaign to succeed, it had to generate R1 million per month, requiring 30,000 donors at just R30 a month. Finding strategic partners and networks to help promote the Baxter Coffee Angels drive for financial sustainability was crucial, and in early 2022 The Baxter Theatre Company welcomed Pam Golding Properties as a funding partner for a five-year period.

Amidst enormous loss of jobs, homes, vehicles, businesses and, most importantly, human life, a “new normal” had to be navigated. At some point social gathering restrictions vacillated between allowing 50 to 100 hundred people in indoor venues, making very little economic sense for any theatre to keep performing. Despite these challenges, the Baxter remained resilient, withstanding the change so it could continue to be an agent for change, creating opportunities for artists, theatre-makers and audiences.





## Training emerging filmmakers to develop technical, personal and entrepreneurial skills

**Liani Maasdorp**

*Dr Liani Maasdorp is a senior lecturer in the Centre for Film and Media Studies. She developed and convenes the Stepping Stone community engagement video training programme and ScreenCubator.*

The Stepping Stone community-engagement video training programme was launched in 2012 to give aspiring young filmmakers who are unable to register for UCT film degrees access to foundational video production knowledge and skills. It aims to make UCT film and media facilities, equipment and knowledge accessible to a wider audience, to link university and non-university communities, and to create opportunities for creative collaboration and social interaction between diverse participants.

The project brings together stakeholders in film and video production in South Africa, acknowledges difference and celebrates diversity, consciously facilitating a creative collaboration for all involved. ScreenCubator is a follow-up project that provides support that enables Stepping Stone graduates to produce their first short film or a production trailer to raise further funding for a bigger project or to start their own production company.

### **Professional and personal development**

Participants learn technical and vocational skills through the programme, and work in diverse teams – an essential skill for a career in film or television in South Africa and for collaborative work in general. To break away from outmoded perceptions about how knowledge-transfer happens between higher education institutions and marginalised communities, it's important that the programme fosters reciprocal agency. Participants are required to take an active, creative role rather than remaining passive beneficiaries of knowledge.

There are currently two UCT certified Stepping Stone short courses. Course assignments require participants to identify original concepts about their geographical communities and communities of interest, and to generate content that will appeal to niche audiences they are uniquely positioned to access.



Though the initial intention of Stepping Stone was purely to offer vocational skills training, it very quickly became clear that personal growth was an important “side-effect”. Post-course facilitator meetings identified how the “soft skills” participants developed alongside the “hard skills” were necessary for film production and running independent businesses – whether it was confidence, focus, verbal communication skills or interpersonal skills.

**Impact, benefits and challenges**

The South African film and television industries are in dire need of transformation – even now, more than two decades after our first democratic election. We need diversity and inclusion on a much more significant scale. For filmmakers from under-resourced communities in South Africa, a free course, even if it offers a UCT certificate, is simply not enough. Personal growth and vocational skills development are valuable benefits of the course, but for most participants the real challenges start after completion. It is, to a large extent, the nature and quality of the post-course support that will make the real difference. Participants need a “step two” to launch their career and put them in a position to start their own production company.

**ScreenCubator**

In order to be successful in the film industry – to become filmmakers, directors, or producers in charge of their own stories – participants need a combination of qualifications, work experience, a reference from a reputable person or institution, access to equipment and facilities, mentorship, networking opportunities and fiscal support. Without these pieces, the entrepreneurship puzzle is not complete and filmmakers cannot flourish. This realisation led to the formation of the ScreenCubator project. Through support from

our grant funder we are able to host pitching sessions and select viable, compelling projects to support every year. We provide the selected Stepping Stone graduates with equipment, editing facilities, mentorship, small business training, industry connections and other forms of support they need to produce their first short film or a production trailer for a longer project (a feature film, documentary or television series, for example). We have partnered with other stakeholders like the Encounters South African International Documentary Film Festival to host workshops that take ScreenCubatees through the process of registering their production company, opening a business bank account, getting a tax number and engaging an accountant. Apart from launching their small business, this puts them in a position to apply to the National Film and Video Foundation for substantial funding.

**A new story**

It is critical to resist the apartheid “white man with camera” legacy in the film and media industry and actively address the lack of diversity in film, television and digital production in South Africa. UCT and other state and private organisations have a role to play in offering free, well-structured training to aspiring filmmakers from under-resourced and marginalised communities. But we can’t stop there. We must also facilitate post-course support for participants to produce their first independent films or launch their own production companies.

With the right strategy and adequate resources, it is possible to make an impact on the lives of aspiring filmmakers and to transform what South African audiences see and who is making it – to change the story on and off the screen.



**“For me, it all started when people knew what I do and approached me independently. Then I saw there was a need for my services - but my challenges are resources and funding.”**

Sandz Tshetu



## Enabling the commercialisation of research

### Saberi Marais

*Saberi works as Innovation Commercialisation Manager at UCT's Research Contracts and Innovation (RC&I) department.*

UCT is a research-intensive Afrikan university where researchers, postgraduates and those who support them are driven to apply their disciplinary knowledge to achieve maximum impact in the world. At RC&I, we undergird this effort by helping researchers translate their ideas and inventions into commercial benefit. With experience throughout the innovation development value chain, our diversely skilled team is uniquely equipped to enable this industry access.

The work we support runs across disciplines, including that of the Faculty of Health Sciences, out of which emerged Impulse Biomedical. Impulse Biomedical is a UCT spin-out company co-founded by Gokul Nair and Giancarlo Beukes to develop

and commercialise the inventions researched under the supervision of Prof Sudesh Sivarasu in the Department of Biomedical Engineering.

RC&I has helped assess the inventions and developments that have been birthed through the biomedical engineering course using an iterative, interactive process with students and researchers. We use the process to develop an intellectual property management strategy, including deciding which species of IP to use, if at all, and a technology development, funding, and commercialisation plan. Ultimately, we hope to build an evidence-supported invention pipeline, where researchers can achieve their goals and make an impact on society at large.

<http://www.rci.uct.ac.za/rcips/fundinnov/overview>





Gokul, Giancarlo, and Professor Sivarasu engaged with us early in the process as they unpacked the opportunities behind two key inventions: a metered dose inhaler assistive device and an adrenaline autoinjector device. With elegantly engineered solutions, both inventions were protectable using patents, while also meeting a clear value proposition and market need.

**“We hope to build an evidence-supported invention pipeline, where researchers can achieve their goals and make an impact on society at large.”**

We engaged the inventor team and several local and international technology agents and pharmaceutical companies to understand the industry dynamics and value chains for each device. Once we collectively identified key players, we packaged pitch decks and brochures to sell both the commercial and inventive advantages of the technologies – a process that was often facilitated by confidentiality agreements. Together with students and researchers, we assimilated feedback to build a commercialisation view and roadmap. At this point, we concluded that despite the interest industry players showed in the invented solutions, there was no prospect of licensing the technologies to key companies in the value chain at that time.

After planning sessions, the student inventors proposed commercialising both technologies as a partnership. We workshopped the risks and potential rewards with them and workshopped the technology development options, the funding strategy and additional support they would need both from the biomedical engineering laboratory and RC&I. We spent time with them to unpack their drivers and the values they wanted to reinforce through the commercialisation of the technologies. We wanted them to centre on their purpose and the kind of organisation they wanted to establish and represent in future.

It was evident that Gokul and Giancarlo wanted to use technology to make an impact on the marginalised and underprivileged in society. This was a follow-through of the Frugal Biodesign process and their own personal values. It was important to ensure the continuity of these values into the commercialisation phase; we would later find out how important it was to centre their “why” in their communication platforms and pitches.

We realised that the founders needed to bolster their general knowledge of commercial concepts, so we engaged the UCT Graduate School of Business MTN Solutions Space to enrol them into the entrepreneurship incubation programme. The founding team applied using the market information from their own searches in the Frugal Biodesign course and RC&I's own research from pharma company meetings to complete the initial entrance pitch.

At the time, RC&I and the Solution Space had been trying to determine how we could collaborate to enable the venture training for UCT researchers. We wanted to ensure that current and future research spin-out companies had the basic theory and exposure to mentors and commercial models. Impulse Biomedical provided an opportunity to prototype this model.

While the Impulse Biomedical team had engaged the Solution Space course, they were also working in the biomedical engineering lab to complete the funded technology development milestones that we had secured for them through the Technology Innovation Agency Seed Fund and later the Technology Stations Support Fund. These respective funding instruments enabled the iterative prototyping and development of the inventions and gave the team and RC&I a better understanding of the route to market, as well as the best means of scaling the manufacturing.



**At RC&I, we undergird this effort by helping researchers translate their ideas and inventions into commercial benefit.**

With this knowledge at hand, Impulse, Prof Sivarasu and RC&I co-developed the project plan and application for the Department of Trade, Industry and Competition's Technology and Human Resource for Industry Programme (THRIP). We assisted them in submitting the plan and concluding the contractual support, which included license rights to give Impulse Biomedical an option to commercialise the inventions if the development proved successful.

Informed by the technology development plan, the co-founders came up with a sound fund-raising strategy. They engaged with various funders from government organisations, venture capital locally and abroad and networks of accelerators and funding organisations.

When they raised capital from an early-stage private equity consortium and a venture capital company, RC&I was there to assure the funders that we would continue our support. Impulse Biomedical was careful about choosing their investors, understanding how organisations could enable their commercialisation downstream and the investor's ability to assist them to raise more capital. The team secured capital to operationalise the company.



*The ZibiPen is a lifesaving piece of technology designed to deliver adrenaline during instances of anaphylaxis.*



**“The UCT Evergreen Fund (UTF) investment reinforces the technology gap funding model for pre-revenue start-ups, complementing the original investment funding and recognising the potential in the team to scale operations and go-to-market.”**

The UCT Evergreen Fund, along with the University Technology Fund (UTF), provided additional funding to assist the company reach market and complete the industrialisation and regulatory approval process of both devices. The UCT

Evergreen Fund (UTF) investment reinforces the technology gap funding model for pre-revenue start-ups, complementing the original investment funding and recognising the potential in the team to scale operations and go-to-market.

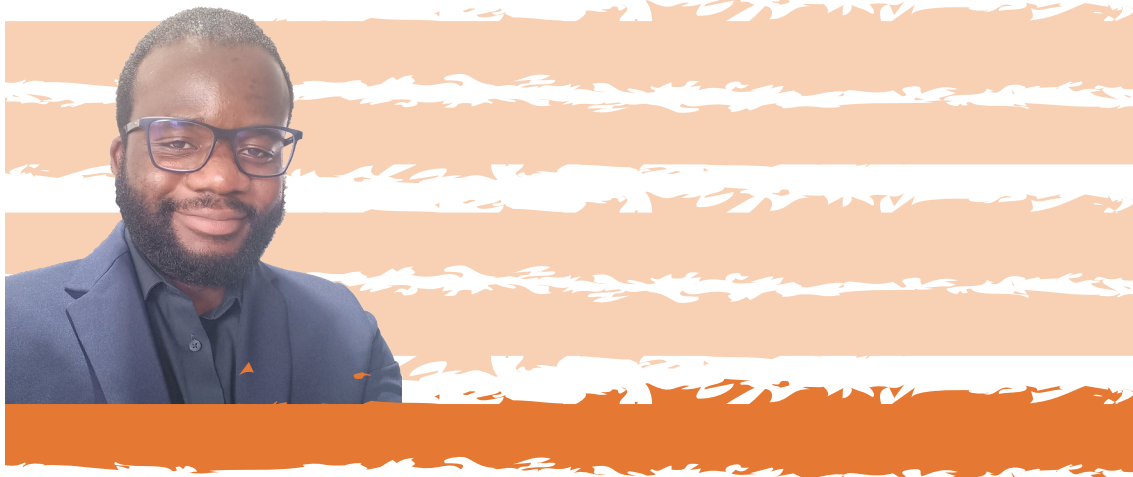
The Impulse Biomedical team was hard-working and driven, coachable and proactive about finding solutions. This helped RC&I to respond appropriately to whatever challenges we faced, tailoring our actions to Impulse Biomedical's specific journey and, ultimately, translating their technologies to commercialisation.

Over the years, UCT has built a diverse set of skills, know-how, expertise, and networks, both in its funders and local and international industry, to support its innovation management value chain.



*Prof Sudesh Sivasu, Gokul Nair and Giancarlo Beukes working on the ZiBiPen.*





## Leveraging intellectual property management support systems at UCT

**Wasiu Afolabi**

*Wasiu is the Principal Intellectual Property Officer at RC&I.*

Every entrepreneurial venture or project begins with an idea, which must be formulated into an invention or new business, providing new concepts of products and services. In this process, Intellectual Property (IP) rights play a crucial role where the value of an IP and the method of capturing maximum value through efficient IP management cannot be overemphasised. Aspirant entrepreneurs need to know of the type of exclusive rights attributed to their creations; these include copyrights, which protects literary and artistic works and general creative work, trademarks, geographical indication, patents and design rights.

The Research Contracts and Innovation (RC&I) Department – which oversees all IP related matters – is a one-stop shop to identify, protect, manage and extract value from IP brought forward by the university community. RC&I is more than a

decade old and one of the first offices of innovation management in South Africa. There are two main functions of RC&I: that of IP management and of innovation and commercialisation. The RC&I team works with students on their IP, from idea to successful technology, development, product/service validation, and successful venture launch.

**At UCT, the whole is greater than the sum of the parts. We take a holistic approach to intellectual property management to continually improve how best to support the university community based on global best practices.**

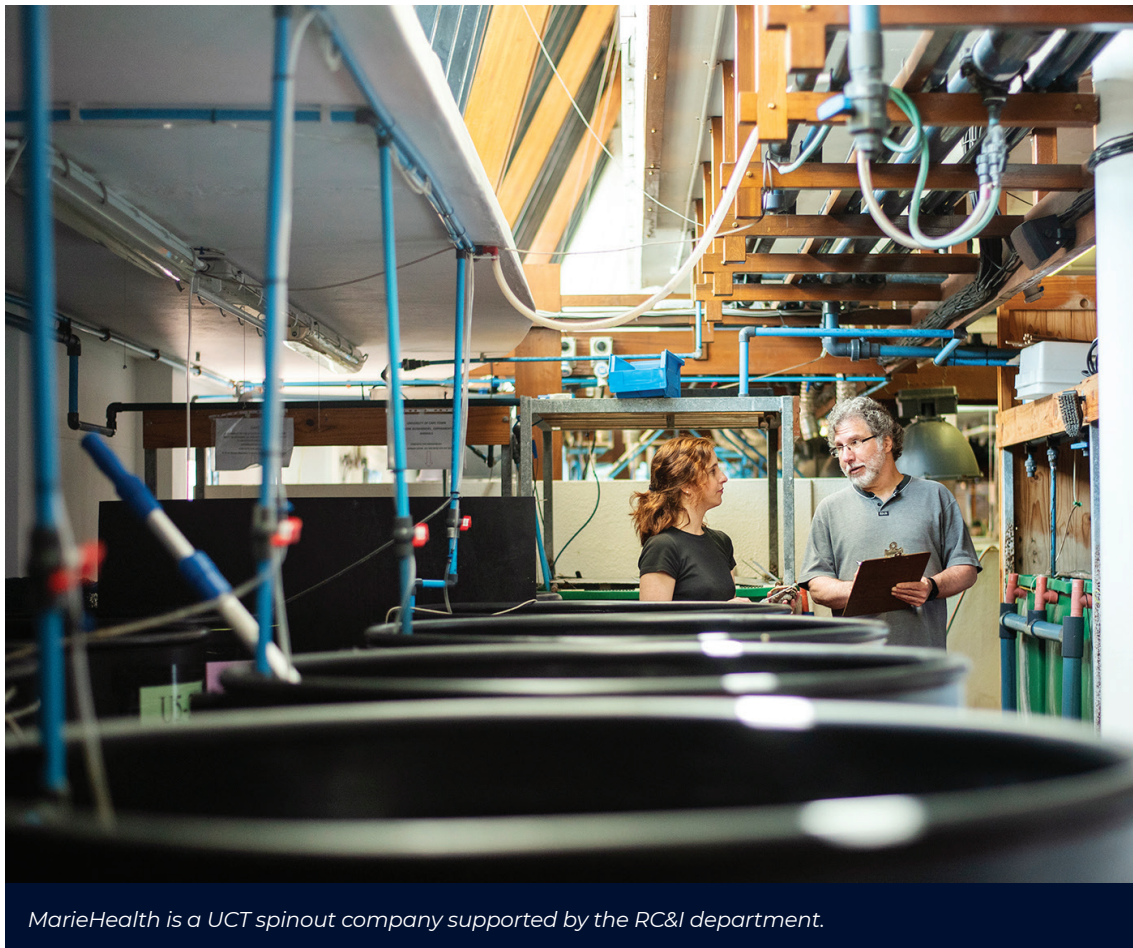


The prompt identification, management and valorisation of intellectual property is a pivotal axis to any entrepreneur, new business or service. Now more than ever, it has become apparent that entrepreneurship is critical for national economies. To this end, higher educational institutions are making strides to ensure that their mandates go beyond formal teaching and learning to infuse entrepreneurship into their curricula and provide support for staff and students to venture into entrepreneurial projects.

At UCT, the whole is greater than the sum of the parts. We take a holistic approach to intellectual property management to continually improve how best to support the university community based on global best practices.

**The story of UCT's spin-off company which emanated from a PhD student's project**

MariHealth was launched in 2021, as a venture building on the intellectual property developed at UCT by Dr Sarah Caroll who was a PhD student at the time. The biotech company developed diagnostic solutions for improved aquaculture practices and overall farm health, to ensure sustained and improved annual yields for farmers and long-term food security on a global scale. In this case, the student could have just published her work, graduated and started seeking employment elsewhere. Instead, Dr Caroll opted to commercialise the outputs of her research. Today, with support from RC&I, MariHealth is on the path to create a sustainable business solution for markets beyond South Africa.



*MariHealth is a UCT spinout company supported by the RC&I department.*



## Actively growing the number of studentpreneurs

**Nadia Waggie**

*Nadia Waggie is the head of Sustainability & Impact at UCT's Careers Service in the Centre of Higher Education Development, where her portfolio includes the provision of support services to student entrepreneurs. She also serves as the institutional and national representative for students at the Entrepreneurship in Higher Education (EDHE) initiative.*

### **Fostering an environment for studentpreneurs**

Given my personal interest in entrepreneurship, it was not at all difficult for me to agree when the Vice Chancellor nominated me as UCT's elected representative at EDHE in 2017. Working with student entrepreneurs is a labour of love, one which I embrace wholeheartedly. Graduate entrepreneurs are able to draw on a wide range of knowledge and tools they have access to as students, and the ecosystem that exists around student entrepreneurs continuously evolves to be responsive and forward thinking – with effective care and attention.

In 2015 the EDHE initiative began as a nation-wide project of Universities South Africa (USAf). The intention was to develop the entrepreneurial capacity of students, academics and professional support staff in higher education. One of its first major programmes was the Student

Entrepreneurship Week (SEW), which has grown to be a flagship annual event for the studentpreneur community. In 2018 a second major annual event, the EDHE Intervarsity Competition, was initiated to complement SEW. The intervarsity is a year-long competition which showcases new and existing businesses. It consists of several elimination rounds, eventually selecting the top entrepreneurship ideas across a range of themes.

While EDHE and other entities focused on ensuring that opportunities exist for national recognition and injections of capital, staff members at the various institutions offer direct moral and practical support to those studentpreneurs who are competing. Once I have put out the call for participation in competitions like the national intervarsity, I coordinate the next steps. Whether this be objectively shortlisting submissions with the support of judges, identifying mentors, setting up the internal competition rounds or working

<https://careers.uct.ac.za/entrepreneurship/careers-services-support-student-entrepreneurs>





with academics who assist with the finalisation of the pitch, my role is to be alert, responsive and to ensure that UCT's student entrepreneurship talent has every opportunity to thrive.

In 2020 when pandemic conditions required many adjusted approaches, I reconsidered all support offerings so that UCT student entrepreneurs were able to access what they needed with minimal interruption. In the process I learnt that there are several online tools that can continue to be applied to the advantage of student entrepreneurs eg accessing mentors located anywhere in the world, hosting online pitch competitions in the evenings without requiring students to navigate night time travel.

**“I worked with others across the university to assist students on several fronts as best we could during this difficult time, including regular online webinars and panel discussions, more efforts to connect students with mentors and more frequent communication through targeted emails and newsletters.”**

UCT studentpreneurs have long been oriented toward social enterprise but while studying remotely in late 2020 and early 2021, they of course found themselves back in their communities – out of the supportive higher education environment and confronted on a daily basis with the reality of our socio-economic inequality. While on campus they were able to access resources like connectivity and peer engagement – which is important for testing ideas – while also having their basic needs met. Now, many found themselves in far-flung rural areas without the online or human connection necessary to evolve their ideas successfully. At the same time, the country's youth unemployment numbers rose remarkably.

Despite the challenges, our students continued to work and, for many, entrepreneurship became recognised as both a means to make a living and a means to solve real challenges they observed around them. Being attuned to the social and economic challenges present in the South African context was evident in a number of applications we received for the 2020 and 2021 competition. It was incredibly heartening to see many great ideas with social impact come to fruition.

I worked with others across the university to assist students on several fronts as best we could during this difficult time, including regular online webinars and panel discussions, more efforts to connect students with mentors and more frequent communication through targeted emails and newsletters. I hoped to successfully nurture the desire to continue their entrepreneurial journey despite the very changed practical circumstances.

By the time we returned to hybrid and then on campus learning, it was clear that the following outcomes had been achieved:

- We had nurtured students already interested in entrepreneurship.
- We had extended this interest to others who had not considered entrepreneurship before the pandemic.
- We had seen clear evidence of growth in social responsiveness in the business ideas put forward by studentpreneurs.
- The UCT entrepreneurship ecosystem was more vibrant than ever.

Despite all the preceding challenges, 2021 proved to be an excellent year for UCT students in the EDHE Entrepreneurship Intervarsity. Three of our students – all female – made it into the final round, including one who won the coveted “Entrepreneur of the Year” award. These three entrepreneurs: Chido, Tshegofatso and Vuthlarhi (their businesses are covered elsewhere in this publication) are full-time students with a heavy workload, and they are sterling examples of how student entrepreneurship can flourish when the right support is accessible to meet their personal drive, confidence and belief in their business.