

2018 Alumni Awards: Beyond graduation UniSA stars shine



The prestigious UniSA Alumni Awards showcases the most distinguished members of our global alumni community – now more than 215,000 strong – our innovators and pioneers shaping the world for the better.

Former politician and Ambassador to Italy, and prominent media commentator, **Amanda Vanstone**; young business entrepreneur, **James Tan**; renowned virologist, **Dr Kirsten St George**; and respected podiatrist, academic and leader in Indigenous health, **Dr James Charles**, were celebrated at the ceremony in recognition of each of their inspiring careers they have forged after university, armed with their qualifications from UniSA.



Image: James Tan, Dr Kirsten St George, Vice Chancellor Professor David Lloyd, Amanda Vanstone, and Dr James Charles at the 2018 Alumni Awards.

Years after retiring from Parliament, former South Australian Senator, **Amanda Vanstone**, continues to make an impact not only in the media, but with prominent positions on the Board of the Port Adelaide Football Club, DrinkWise Australia, Chair of Vision 20/20 Australia, and as the Federation Chair and Independent Director of the Australian Royal Flying Doctor Service.

Vanstone says her family environment was a huge encouragement for her to pursue tertiary education and complete her Graduate Diploma in Legal Practice (GDLP) at the South Australian Institute of Technology, a UniSA antecedent.



Image: Amanda Vanstone

"I think growing up in a household with a mother, two sisters and a brother, means the females were in the majority. I also went to an all-female school, so I didn't see men making decisions, and that means you grow up thinking you will one day make them," Vanstone says.

"My advice to any young person who wants to go into politics is to get a decent education – go to one of South Australia's great universities – like the University of South Australia – and once you have graduated then get yourself a real job and some experience.

"Learn about life and about people because that is what politics is about."



Image: James Tan

UniSA Bachelor of Business Administration, **James Tan**, is the Founding and Managing Partner of Quest Ventures recognised as one of Singapore's largest early stage technology investors in artificial intelligence, e-commerce and marketplaces, entertainment, finance, food, insurance, logistics, media, property, sports and the Islamic digital economy.

Building the company from the ground up, it now has offices in China and Singapore and has supported more than 30 companies across Asia. He says he is still draws upon the knowledge and skills he learned at UniSA as a guide and inspiration in his everyday working life.



Image: Kirsten St George

Chief of Viral Diseases at the Wadsworth Center New York State Department of Health, **Dr Kirsten St George** grew up in Adelaide and earned a Master of Applied Science in Medical Technology from UniSA before moving to the United States and pursuing a stellar career in public health focussed on virology.

She was awarded the 2017 Diagnostic Virology award, an international honour voted on by global experts in the field, in recognition of her career achievements.



Image: James Charles

Kaurna man, **Dr James Charles** didn't get a great start in education. Still only semi-literate at 27 years old, when he decided to go 'back to school', it was a sprint to excellence, starting with a Bachelor of Podiatry and then a Master's from UniSA and a great passion for making a difference to Aboriginal health.

Today, Dr Charles has a PhD and is an inspiration for Aboriginal people not only for his personal example of achievement, but also in the fantastic work he is doing to research and teach in his field.

In 2008 he was the inaugural Chair of the Indigenous Allied Health Network and in 2017 he was named national NAIDOC Scholar of the Year.



Congratulating the 2018 winners, UniSA Vice Chancellor Professor David Lloyd says he is always proud to see how UniSA graduates have used their education to transform their own lives and improve the world around them.

"While every story is different, I always notice a common thread – gratitude for the opportunities presented to them and a passion to contribute to society.

"What I see in the stories of our inspiring alumni is a spirit of enterprise – hard work, curiosity, self-belief, dedication to service and action, and an ambition to be the best they can be.

"We're proud of the support and education we provide our students when they are with us, and even prouder of what they do with that education when they leave."

An entire gallery of photos from the night can be found [here](#) and for more insight into the event, including each of the 2018 Alumni Award winners, visit the [website here](#).

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The Making of a South Australian Icon

Jeff Ellison

CEO & Managing Director, [SeaLink Travel Group](#)

Non-Executive Director, [Adelaide Botanic Gardens and State Herbarium](#)

[Bachelor of Arts \(Accounting\)](#)



Almost as iconic as the pristine coastline and breathtaking wilderness teaming with everything from kangaroos to koalas eying you from the gum trees, seals and penguins parading the beach, the [SeaLink](#) ferry has been a Kangaroo Island mainstay for almost three decades thanks to CEO & Managing Director, and University of South Australia Alum, Jeff Ellison.

Jeff joined the [SeaLink Travel Group](#) in 1991 as a Chartered Accountant after an Arts (Accountancy) degree at UniSA antecedent the South Australia Institute of Technology, and time in private practice.

During his tenure he proved instrumental in the development of the SeaLink Travel Group from a ferry operator to one of Australia's most successful and expansive tourism and transport businesses.

Under Jeff's guidance, the SeaLink Travel Group's increased its revenue from \$12.8 million as a small, privately-owned South Australian business in 1997 to \$204 million in 2017, even making it onto the Australian Securities Exchange (ASX) as a multi-million dollar publically-listed company in 2013.

Today, during peak periods, SeaLink Kangaroo Island ferries make the 45-minute journey up to 12 times a day, carrying locals and tourists alike to the beautiful sanctuary lined with more than 500 kilometres of pearl white beaches and towering cliffs.

"My interest in tourism started at SeaLink when we found that it was a great way to increase the number of passengers on the ferry services and showcase a great part of Australia," says Jeff. "Today on the Kangaroo Island ferry over 80% are now visitors to the island, including around 23% of which are international visitors.

"We had a strong belief that we had developed a sustainable business model of balancing transport (commuters, cars and freight) with the tourism industry.

"Following the success in the South Australian business, we expanded into New Zealand in 2000 purchasing a loss-making ferry business operating out of Auckland.

"We were able to refocus the business, introduce tourism experiences to the islands and built a strong profitable business. Since then we have expanded into Queensland, New South Wales, the Northern Territory, Western Australia and recently Tasmania with the same business model of transport and tourism."



Image: Seal Bay, Kangaroo Island

After all his success at the SeaLink Travel Group, with the acquisitions of multiple cruise lines and diversification into transport (with companies such as Transit Systems, the Adelaide Central Bus Station, and operation of the SkyLink Adelaide Airport Shuttle Service), Jeff still credits his time at UniSA as a significant stepping stone and valuable groundwork for his career.

"I have very fond memories of my time at UniSA and it's great to be involved with such a strong growing leading University.

"I chose the UniSA degree as it was recommended by my employer and considered to be the most practical degree to have for the accounting industry. Not only did it give me a great base to build my career but it was a very enjoyable time of my life – with a great environment to work, study and network."

Now with the SeaLink Travel Group firmly planted in the country's tourism psyche, employing more than 1600 staff nationally – operating in every state except Victoria and Tasmania – and a fleet of 80 vessels and over 60 coaches, Jeff announced his retirement in August this year confident he will be leaving the company with a strong foundation.

"I firmly believe that now is the time to give a new generation of leaders the opportunity to build on the strong platform that now exists. The direction and strategy of the organisation is established as an integrated provider of transport and tourism experiences," he says.



Image: Jeff Ellison in his office

But retirement doesn't mean exactly slowing completely down for Jeff. Still a voracious traveller, he is particularly looking forward to a holiday with the freedom to just enjoy the destination, and spending relaxing breaks at his new beach house.

But SeaLink will always hold an important place in Jeff's heart, with the relationships he formed just as significant as the many business heights he reached at the company.

"There are many highlights from listing on the Australian Securities Exchange in 2013, building our very first vessel in 1998, buying the Captain Cook brand and operating on Sydney Harbour, but my greatest enjoyment comes from the people I work with and meet during my career."

"Retirement from SeaLink for me will be a change in career, but I will still look forward to keeping in touch with my many friends at SeaLink.

"The SeaLink Board has also suggested they would like me to come back as a Director after a break. For me that would be a great way to stay connected.

"I am a great believer all businesses have a responsibility to the community in which they work. I have always been happy to provide support, particularly in the tourism industry, as a strong industry is good for the whole state."



Image: The Remarkable Rocks, Kangaroo Island

As someone who knows the spectacular oasis of Australia's third largest island more intimately and distinctly than most, Jeff has a couple recommendations next time you are down Kangaroo Island way.

"Kangaroo Island is a zoo without fences, so number one must be the abundant wildlife of kangaroos, koalas, seals, echidnas."

"Second are the amazing natural landscapes such as Admirals Arch, Remarkable Rocks, and the amazing coastal cliffs on the south of the island or the prestige sandy beaches on the north.

"Finally it is the small towns and the food and wineries, and many other tourist attractions you can find dotted around the island."

With his many accolades and achievements – like becoming a Fellow of the Australian Institute of Company Directors, a Life Membership to the Tourism & Transport Forum Australia, the 2013 South Australian Tourism Award for Outstanding Contribution by an individual, and the 2014 Ernst & Young Entrepreneur of the Year Listed Award – Jeff as proven himself as a canny businessman in expanding SeaLink and putting Kangaroo Island on the map.

For now though, Jeff will continue his role as CEO and Managing Director officially up to October 2019 when he can properly celebrate his contribution to South Australia's thriving tourism industry –and he will finally have more time to relish trips to the beach cave at Stokes Bay on Kangaroo Island which he considers a "real gem".



Image: Stokes Bay, Kangaroo Island



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Building a Secure Nest to help people with their mental health

Sally Skewes

Co-Founder, **Secure Nest**
Clinical Psychologist, **Private Practice**
Master of Psychology (Clinical)



Psychologist and UniSA alumna Sally Skewes and her husband Joseph have created **Secure Nest**, a new online eHealth tool to support schema therapy clients and therapists, empowering people struggling with various issues to change negative life patterns.

The lens through which we see the world is often coloured by our childhood experiences. As children develop they learn rules and concepts about how the world works, what to expect and how to behave based on these experiences. These ideas become deeply felt and often unconscious beliefs. Psychologists call them 'schemas'.

A relatively new form of psychological treatment, schema therapy is proving to be a valuable tool for people who struggle in their daily lives with anxiety or depression, or have been diagnosed with a personality disorder.

"In schema therapy we focus on the emotional experiences of the present moment, and find the links back to the unmet emotional needs that arose in childhood that are often the root cause," says Sally Skewes, a Clinical Psychologist and practicing schema therapist.

"In my studies I saw the value of the schema therapy approach because of its integrative model that emphasised understanding and healing the core negative themes with origins in childhood. The focus on childhood needs and development resonated with me."



Most families work hard to do their best by their children, but it doesn't always go to plan. For some, parents, significant authority figures, and important peers can leave scars, both physical and psychological.

This can result in individuals forming certain unconscious beliefs about themselves. For example, if an individual feels abandoned by an important person in childhood they may grow up believing that relationships are difficult and they will eventually be abandoned again.

This belief can lead to unhealthy coping mechanisms that become self-fulfilling prophecies – in other words, situations play out in a similar pattern and these individuals struggle to maintain relationships.

"My interest in the therapy was strengthened when I was having some personal problems myself," says Sally.

"I tried cognitive therapy but it had limited effectiveness for me. Then when I was completing my schema therapy training, my supervisor really helped me to get to the bottom of where my difficulties with self-worth were coming from.

"In this supportive environment I learned so much about myself. My schema therapy supervisor was strong, accepting and kind, and through this experience of being known and seen by another, my confidence grew. I feel it was this connection and therapeutic relationship that led to positive changes in my life.

"I realised in this process that I was not aware of my themes – why I had these difficulties or how to solve them. This lack of cognitive awareness could be why cognitive therapy didn't work for me."



Image: Sally Skewes

Schema therapy is centred on helping clients feel happier, improve relationships, make major life changes and undergo deep personality change. There is a focus on feelings and thoughts that are outside of the client's awareness, and reparenting oneself with the help of a therapist to change deeply held thoughts and beliefs about past experiences.

"We created Secure Nest because there can be a considerable waiting time for patients to access schema therapists," says Sally.

"In Australia only 10 psychology sessions are funded under Medicare each year, regardless of diagnosis. Even for less severe difficulties, this is rarely enough and leads to the most vulnerable clients being unable to access the help they need.

Sally and her husband Joseph, an IT specialist, developed Secure Nest as a secure portal where therapists and clients could continue to interact between treatment sessions. It also allows people to access schema therapy tools and learn about the therapy and their own patterns while they wait to see a therapist.

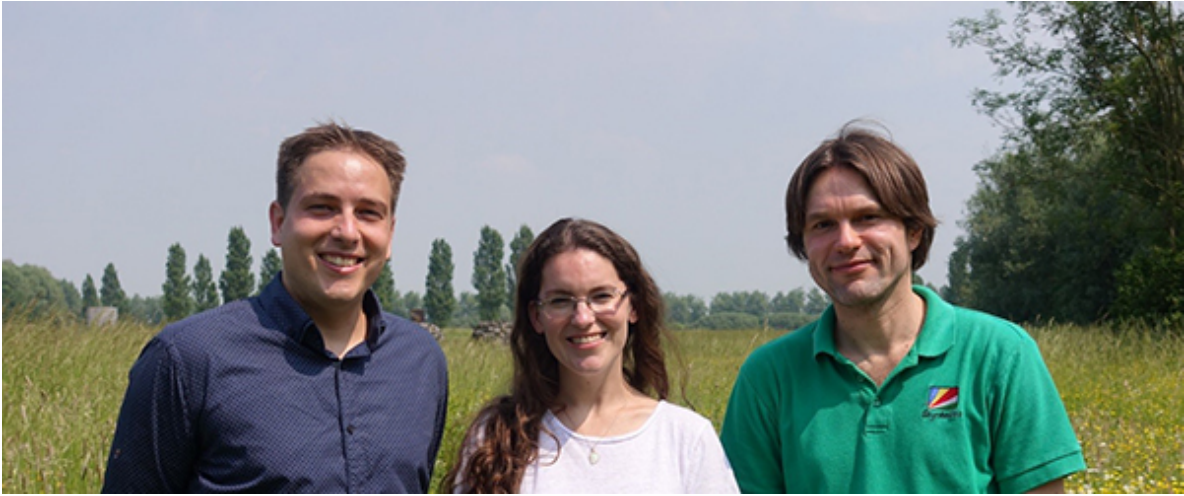


Image: Joseph Skewes, Sally Skewes and Michael van Vreeswijk

"We really wanted to create an effective e-health tool to enhance the connection between therapy sessions to help catalyse the change process," says Sally.

"We hope the portal will also lead to broader accessibility, further research and acceptance of schema therapy as it is still a relatively new field."

Sally and her team have been bolstered along the way through UniSA's **Innovation & Collaboration Centre (ICC)** Venture Catalyst program in which they received a \$50,000 grant and support to turn their idea into reality.

The ICC's flagship program gave the team invaluable experience in refining their offering, learning how to market and pitch their idea to possible investors. It also allowed them to progress the idea from an early stage project to a working prototype recently piloted in South Australia and Europe.



Image: Secure Nest interface

"We have learnt how important it is for the culture and values of our business to align with our own personal values. It has also been valuable to learn and work with colleagues and individuals with complementary skills, as well as get feedback from therapists and clients," says Sally.

"Our next stage will be to conduct research to clarify how best to offer eHealth tools and combine them with face-to-face therapy. This is a new area of clinical practice and research in schema therapy so the possibilities are largely unknown.

Secure Nest can be trialled for free at securenest.org by therapists and their clients, or by individuals who don't yet have a therapist.

*The **Venture Catalyst** program provides workshops, one-on-one mentoring, workspace, a stipend and the chance to pitch for a fully funded overseas tour. Applications open in early November via icc.unisa.edu.au.*

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Uncle Lewis O’Brien recognised as a leading light in education

Uncle Lewis Yerloburka O’Brien AO

Adjunct Research Fellow, Education Arts and Social Sciences Divisional Office, University of South Australia



University of South Australia Alumni and Adjunct Research Fellow, Uncle Lewis has been honoured at the 2018 Australian Council for Educational Leaders (ACEL) National conference as the recipient of the ACEL Leadership Award.

Born at Point Pearce Mission, Uncle Lewis is a Kaurna man whose family originally lived in the northern-most reaches of Kaurna country, near the Clare District.

With knowledge passed down from his Elders and relatives, he has developed a brilliant capacity to bring together Aboriginal ways of knowing with western philosophy and share culture with all those he encounters.

He began working in schools in the late 1970s teaching children traditional Aboriginal knowledges and values, and since, over more than 30 years, has been a mentor for hundreds of Aboriginal children families and inmates.

His research and scholarly work including a commitment to keeping alive the Kaurna language and culture has been substantial.

He has been a driving force in re-inscribing a Kaurna presence into the Adelaide topographical and cultural landscape and bringing to light Aboriginal knowledge and protocols.

UniSA Pro Vice Chancellor: Aboriginal Leadership and Strategy, Professor Irene Watson says Uncle Lewis has been tireless in his efforts to restore, maintain and evolve cultural knowledge.

“Since the 1960s, Uncle Lewis has been a tireless and proud contributor through committees and consultancy, to heritage, arts, sports, reconciliation and of course education, from pre-school to tertiary,” Prof Watson says.

“At UniSA he was a key consultant on integrating Indigenous knowledge into science and engineering programs, which was an Australian first. And he has been engaged with all three SA universities in promoting Aboriginal language and culture.

“This acknowledgement from ACEL is richly deserved.”

Uncle Lewis was made a Fellow of the University of South Australia in 2004.

ACEL is a not-for-profit organisation that actively supports the development of educational leadership capabilities across Australia, through conferences and workshops, leadership programs, in-house publications, online resources and bookshop.



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Marketing for good – not evil

Associate Professor Svetlana Bogomolova

Senior Marketing Scientist at the [Ehrenberg-Bass Institute for Marketing Science](#)

Director, [The Barossa Co-op](#)

Master by Research, [Marketing](#)

PhD, [Marketing](#)



Associate Professor Svetlana Bogomolova is an expert shopper. But not just any shopper, as a consumer and social marketing researcher, she knows her way around complex marketing theories and practice, not to mention a bustling supermarket aisle.

Her studies have included extensive research into food choices and shopping habits, including the intricacies of the supermarket landscape and what shoppers are naturally attracted to – and why certain foods are stocked in particular places.

“A typical supermarket stocks over 30,000 items and yet a typical household buys just 300 or so unique products per year. That is, they walk past roughly 29,700 products on shelves without putting any of these in their baskets,” writes Associate Professor Svetlana Bogomolova in [The Conversation](#).

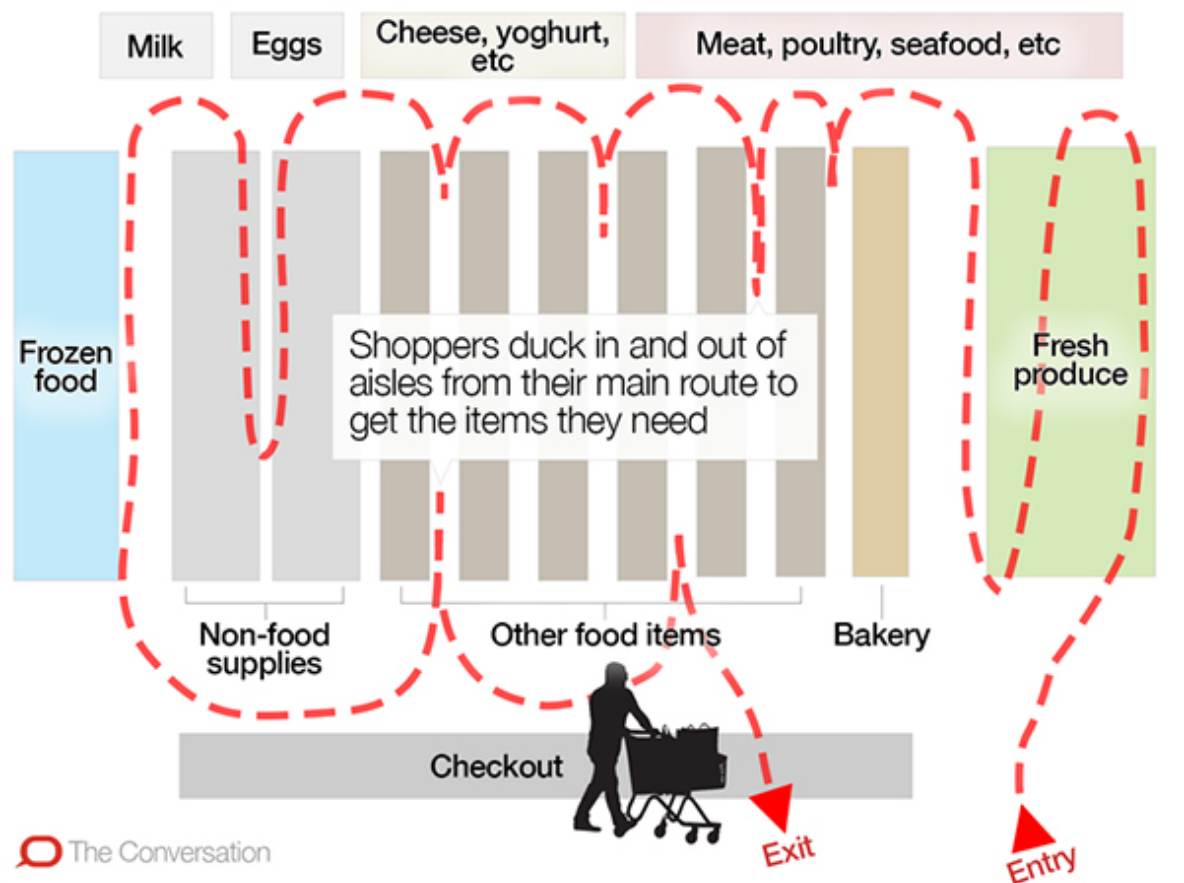
“That’s assuming those shoppers actually walk past the shelves in the first place! Despite a quarter of shoppers claiming to traverse every aisle on a shopping trip, less than 2% of shoppers actually do.

“Shoppers are naturally attracted to empty spaces. They prefer a wide pathway around a store or mall that allows them to see into the distance and avoid getting too close to other shoppers. Thus, the most common route around a store is the perimeter of the store, known as the “racetrack”.

“From that main route shoppers can see down each aisle and duck in and out to get the items they need. Naturally, the shelves at the ends of aisles, known as “endcaps” or “gondola ends”, are the most valuable, simply because more people go past products placed here. So these products get seen (and bought) by more people than products hidden away in the aisles.”

A shopper’s preferred route around a supermarket

Shoppers are naturally attracted to empty spaces. They prefer a wide pathway around a store that allows them to see into the distance and avoid getting too close to other shoppers.



Since graduating from Lomonosov Moscow State University, Svetlana arrived at the University of South Australia in 2003 to study a Master by Research in Marketing, later followed by a PhD in Marketing.

Now as a fully fledge member of the [Ehrenberg-Bass Institute for Marketing Science](#) at UniSA, she has nearly two decades of research experience and an extensive repertoire of collaborative cross-disciplinary projects with health researchers where she uses her expertise in consumer behaviour and shopping to promote healthy behaviours.

She also balances her main role as Associate Professor at UniSA with serving as an independent non-executive Director on The Barossa Co-op Board – the largest regional retailer and employer in her local Barossa community.

She has been widely published, and attracted competitive industry research funding from health-promoting organisations such as SA Health, Council of Ambulance Authorities, National Pharmacies, and Active Ageing. She was also an ARC Discovery Early Career Research Award Fellow (DECRA).

Since contributing to studies on healthfulness of food choices in supermarkets, increasing physical activity in rural and ageing populations, and raising quality of health services, Svetlana and her Senior Marketing Scientist colleague Amy Wilson, are now turning their attention to health and wellbeing education space where marketing can be used as a force for good.

It is not uncommon to hear marketers accused of being ‘evil’. Marketing is often blamed for overindulgence in unhealthy food, and the overconsumption of new gadgets and games that make us lazy and isolate us from the rest of the world. But, is there another side to marketing?



Image: Associate Professor Svetlana Bogomolova

Svetlana and Amy argue that marketing skills are essential for informing the community about products and services that improve health and wellbeing, enhancing the delivery of those services to benefit individuals and society.

“Many of today’s health practitioners are also involved in the running their own businesses. Think, physiotherapy, podiatry, psychological counselling,” says Associate Professor Svetlana Bogomolova.

“Many wonderful doctors find themselves challenged by the need to attract their own patients and keep them loyal. Hardly any medical school teaches these skills.

“On the other hand, there are a great number of business (or even marketing) graduates, who at some point in their career would find themselves working for a non-for-profit, charity, Government or private organisation, that aims to provide the community with product, services and ideas that promote health and wellbeing.



Image: Amy Wilson

Realising this unmet need from both sides – for health professionals to get some essential marketing skills, and for business professionals to better understand the health context, Svetlana and Amy have developed a cross-disciplinary course – Marketing for Health and Wellbeing at UniSA. In 2017 the course has been awarded the Best Teaching Team Award reflecting how much students enjoyed the course and the skills it provided.

“As the teaching team are both active social marketing researchers, the new discoveries and insights from the many research projects are also incorporated into the course.”

“Examples include the use of ‘nudging’ strategies to influence dietary choices, how patterns of engagement in physical activity can inform physical activity promotion, helping local producers get better market access, designing a TV campaign for methamphetamine use prevention, encouraging healthy menus for kids in pubs and clubs and much more.”

The course also has a very practical focus, bringing to students a diverse range of industry experts, who share their experiences. These include practitioners from the Red Cross Blood Service, Obesity Prevention and Lifestyle (OPAL, SA Health), Southern Cross Care, Surf Life Saving SA, Jurlique and Janesce skincare lines, Grains and Legumes Nutrition Council, The Barossa Co-op, Sanitarium Health and Wellbeing, Mater Health Services, The Physio Clinic, to just name a few.

Marketing for Health and Wellbeing

Established through extensive research and industry collaborations, this course equips participants with marketing tools on how to better understand customers and to promote both the business and individual behaviour change, and how to evaluate their efforts, all with the ultimate goal of achieving positive change for health and wellbeing services and products.

This course is relevant to aspiring and current industry practitioners from any qualification and employment background. No formal marketing training is required. It is run in an intensive mode over two weeks, with a one week break in between.

Course aim:

To provide students with an understanding of how government, not-for-profit and commercial organisations can apply marketing and consumer behaviour principles to promote behaviour change for improved health and wellbeing.

Course content:

Cross-disciplinary approach to addressing social challenges; principles of marketing; social marketing; fundamentals of consumer behaviour; social marketing intervention; formative consumer research; industry practitioner perspective; tools of communication and behaviour influence; behaviour change metrics and evaluation.

For more information visit: <https://unisabusinessschool.edu.au/marketing/marketing-for-health-and-wellbeing/>



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Smart connected health device to aid rehabilitation and athlete training

Lyndon Huff

Chief Executive & Founder, **Prohab**

Bachelor of Physiotherapy

Master of Physiotherapy, Sports and Exercise



When physiotherapist Lyndon Huf's mother experienced a fall that resulted in ongoing discomfort and issues with her shoulder, an innovative new physiotherapy and professional sport concept was born.

Using his extensive experience in the physiotherapy and sport science spaces, Lyndon formed **Prohab**, combining a smart sensor that works in real-time with an app (compatible with your smartphones and tablets) that measures the amount of force the individual can produce. Making rehabilitation from injury or surgery safer, faster and more effective.

"While on holiday mum fell badly and tore a rotator cuff tendon in her shoulder," says Lyndon. "My parents live in another state and the physiotherapy exercises she was provided were making things worse."

“As a physiotherapist myself, mum asked me if I could help her out. I thought she was doing too much exercise but there was no easy way to measure this with existing resistance bands, so I created a prototype to measure the effectiveness of each exercise and make better decisions about her exercise dose.

"That's how we came up with the Prohab concept, where people can use the device to measure exercise doses and confirm the best exercise regime tailored precisely to an individual."



Now as the founder and CEO of Prohab, Lyndon's days are focused on communication management and business strategy starting from 5am while he's still fresh. Every day is varied across research and development (R&D), product development, user testing or flying interstate to demonstrate to AFL clubs.

After stints at the Wakefield Sports Medicine Clinic and Australian Institute of Sport as a Physiotherapist and Sports Scientist, in 2008 Lyndon made the move to the United Kingdom to take up the position of Lead Physiotherapist at the English Institute of Sport.

There he led a high-performance team to service Olympic athletes based upon data to deliver evidence-based medicine for the 2012 London Olympic Games, using innovative approaches to challenge existing methods with the latest technology creating a winning edge.

This experience was also pivotal in the development of Prohab and commercialising the concept which helps more people around the world achieve world-class healthcare, as the system has capabilities to support elite athletes to get an easy and clear picture of their performance and any weaknesses they need to focus on.

"My training at UniSA allowed me to spring board to work at the highest levels in the health sector including the Australian Institute of Sport and the English Institute of Sport," says Lyndon.

"During this time, we used data capture and all sorts of innovations to solve problems for sport. I was drawn to the idea of leading my own team one day to solve problems for patients and athletes. I carried this thought with me throughout my journey and I was able to action this later in my career.

"I returned to Australia with a commercial mind-set which has led me into a new area of the health industry. Using this thinking I continue to learn from my peers, particularly through the Future Industries Accelerator."

It was with the help of the South Australian Government and the UniSA's **Future Industries Accelerator** that Prohab really started to get off its feet and further refine the business.



"My relationship with UniSA has continued through engaging Professor Emily Hilder and the Future Industries Accelerator (FIA) to provide the research and development (R&D) capabilities that internally Prohab could not achieve itself."

"They provided a low-risk process where we could partner with domain scientists to solve the challenges of developing our custom sensors. It has been a brilliant experience to partner with them."

"The UniSA FIA relationship has been a brilliant experience for Prohab and we highlight that industry needs to be aware of the benefits to their business. I encourage industry to engage with them."

Ultimately, Lyndon hopes Prohab will become a commonly used system to help more people meet their rehabilitation or training needs.

"It has taken two years to go from idea to commercial product and this experience trumps any work I have done in the highest levels of sport – it has been such an incredible learning experience," he says.

"This is just the first steps in that direction. We plan to continue our partnership with UniSA to solve our ongoing R&D challenges. It has been a fantastic experience and I'm very grateful and proud of UniSA."

"I'd also like to help others thinking about a similar pathway and how I may be able to help them. I'm keen to 'pass it forward' for any researchers or industry who would like to hear more about and learn from our journey."

Lyndon invites anyone interested in the project to reach out via www.prohab.ai.

Future Industries Accelerator

Government of
South AustraliaUniversity of
South Australia

The Future Industries Accelerator (FIA) can help your business

Is your business facing a challenge? Or is there a product development idea you want to explore? Get in touch with our team and we'll walk you through the FIA schemes, connected facilities and expertise across the University.



The FIA provides funding for South Australian industry to access UniSA's infrastructure and expertise. FIA is a \$7.5M investment from the SA Government to create high value jobs in the state and assist local industries to build their R&D capacity and accelerate revenue growth.

The Future Industries Accelerator (FIA) drives our approach to partnering and economic transformation. It provides an innovative model for effective and sustainable collaboration between universities and industry.

FIA is a \$7.5 million investment from the South Australian State Government, which focuses on creating high-value jobs in South Australia and assists local industries to build their R&D capacity and accelerate growth.

You don't need to have worked with the University before to consider engaging. FIA provides the mechanism to develop a new collaboration, or strengthen an existing partnership, with FII (across multidisciplinary areas including biomaterials engineering and nanomedicine, energy and advanced manufacturing, environmental science, and minerals and resources), and more broadly with research expertise from across the University.

Explore the opportunities to partner with us and discover how we support companies across South Australia via the Future Industries Accelerator.

For more information visit: <https://fiil.unisa.edu.au/engage-with-us/fia/>.

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Green mango peel: a slick solution for oil contaminated soils



For the petroleum industry remediating oil sludge is a costly and an ongoing challenge, particularly when 3-7 per cent of oil processing activities are irreversibly lost as oily or sludge waste.

UniSA researcher and former PhD Fellow in Environmental Remediation and Public Health at the School of Natural and Built Environments, Dr Biruck Desalegn says without treatment oil contaminated soil presents a massive risk to ecosystems and the environment.

“Last year, global oil production reached a new record of 92.6 million barrels per day, but despite improvements in control technologies, oil refineries unavoidably continue to generate large volumes of oil sludge,” Dr Desalegn says.

“Oil contamination can present cytotoxic, mutagenic and potentially carcinogenic conditions for all living things, including people.

“What’s more, the toxicity and physical properties of oil change over time, which means the process of weathering can expose new, and evolved toxins.”

The new nanoparticles, synthesized from green mango peel extract and iron chloride, provide a novel and effective treatment for oil contaminated soil. They work by breaking down toxins in oil sludge through chemical oxidation, leaving behind only the decontaminated materials and dissolved iron.

Dr Desalegn says the new plant-based nanoparticles can successfully decontaminate oil-polluted soil, removing more than 90 per cent of toxins.

“Plant extracts are increasingly used to create nanomaterials,” Dr Desalegn says.

“In this study, we experimented with mango peel to create zerovalent iron nanoparticles which have the ability to breakdown various organic contaminants.

“With mango peel being such a rich source of bioactive compounds, it made sense that zerovalent iron made from mango peel might be more potent in the oxidation process.

“As we discovered, the mango peel iron nanoparticles worked extremely well, even outperforming a chemically synthesized counterpart by removing more of contaminants in the oil sludge.”

Dr Desalegn says this discovery presents a sustainable, green solution to address the significant pollution generated by the world’s oil production.

“Ever since the devastation of the 2010 Deepwater Horizon oil spill, the petroleum industry has been acutely aware of their responsibilities for safe and sustainable production processes,” Dr Desalegn says.

“Our research uses the waste part of the mango – the peel – to present an affordable, sustainable and environmentally friendly treatment solution for oil sludge.

“And while the world continues to be economically and politically reliant on oil industries as a source of energy, working to remediate the impact of oil pollution will remain a serious and persistent issue.”

This research was conducted as part of Dr Desalegn’s PhD with support from CRC CARE.



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