

ALUMNI MAGAZINE • SPRING 2022



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NURMUR

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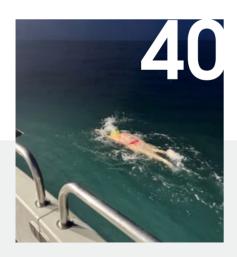
VC Welcome Special welcome from new Murdoch Vice Chancellor & President, Professor Andrew J Deeks.



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Acknowledgement of Country

Murdoch University acknowledges the Whadjuk people of the Noongar nation as the traditional custodians of this country and its waters and that Murdoch University stands on Noongar Country.

Murdoch University pays its respects to Noongar elders past and present and acknowledges their wisdom and advice in teaching and cultural knowledge activities.

From the editor

When have a series of the seri

I was reminded of this tendency when interviewing alumnus and vet Jo Lewis when the old cat person v dog person cliche came up. Can't you be both? Surely that would be the biggest (as yet uncategorised) group of all? Our love of binary and compartmentalising seemingly infers an impossibility to adore tabbies and mongrels in equal measure.

So, fingers crossed all the dog people out there can still find it in themselves to enjoy the centrepiece of this publication as Jo Lewis sheds light on the unique behaviour of Felis catus and why she loves every day of her role running the UK's first mobile vet clinic dedicated to visiting cats in their home.

Dealing with real polarities such as a work/life balance is a common occurrence for alumnus Claire Seeber in her business coaching female employees and leaders. Through workshops, development programs and career and leadership coaching, Claire helps her clients take control of steering their own career success. We find out about her own career trajectory, as well as life being stuck at sea as the pandemic hit.

In this issue we feature a Q&A with a public policy expert. By day, alumnus Andrew Wear works as the City Economist and Director of Economic Development and International at the City of Melbourne. But in the evenings, he has found some time to produce two acclaimed books that are generating discussion across the globe. The first, Solved, examines some of the amazing results specific countries have achieved in tackling the big issues such as health, education and climate change. For his latest work, Recovery, Andrew has placed a lens on the world's opportunity to bounce back from the pandemic by drawing on lessons from history.

We also feature two engineering alumni who became friends and subsequently joined forces to create a 1.5 tonne Autonomous Hybrid Vehicle suitable for multiple industries. Their story reveals the incredible outcomes that can result when creativity is blended into problem solving. While on the incredible, we close the issue with a tale about current Murdoch student Fiona Cullinane, who recently completed one of the great endurance challenges in the world of swimming. When it comes to another one of those conversational polarity quizzes – the evergreen France or Italy debate, I imagine that with the relief she must have felt following those first few steps on land, she would certainly opt for the former.

Enjoy.

Michael Sampson Editor - Murmur



A message from the **Vice Chancellor**



Dear Alumni,

I am delighted to connect with you for the first time through the pages of our alumni magazine. At the time of writing, it has been four months since I first stepped on to Murdoch's beautiful bush campus as Vice Chancellor.

After 13 years in the United Kingdom and Ireland – the last eight of these as President of University College Dublin – I have been given the privilege of leading a university with a uniquely Australian flavour: where a commitment to sustainability and educational opportunity are part of the DNA.

I also know that the last few years have been frustrating for many alumni, with several issues adversely affecting the reputation of the University.

It has been my priority since arrival to speak with as many staff and stakeholders as possible to understand the issues, make changes where necessary and put in place a longer-term plan to get Murdoch positively focused on its core mission of teaching and research.

The co-design of a new vision, values and purpose for Murdoch, along with a new strategy that will roll out from 2023, is well underway. This has been completed in conjunction with Murdoch's key stakeholders – staff, students, industry, business, government, the community and of course, our alumni.

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"I believe we can work through our challenges together, and I am very optimistic about Murdoch's future..."

You may recall I wrote to you in July seeking your views about Murdoch's opportunities and the direction ahead. I thank you for your feedback, which has been collated and considered by the senior executive team and the University Senate.

I believe we can work through our challenges together, and I am very optimistic about Murdoch's future for several reasons.

At my Investiture Ceremony, I spoke about Murdoch's historic alignment in sustainability and social equity, with our strengths in veterinary and agricultural sciences, health and wellbeing, sustainable development, and environmental and conservation sciences positioning us well for the current age.

Governments and industry are also looking to universities which work collaboratively to address pressing societal challenges. Again, Murdoch has a rich history of translational research, and we conduct our research across areas crucial to human progress – namely food, health and the environment.

Finally, as we adapt to the impact of the pandemic and a world that is fundamentally changed, Murdoch's reputation as a caring university will become even more important to our current and prospective students. Coupled with our contemporary teaching and significant investment in state-of-the-art learning spaces, we find ourselves well placed to support the needs of the current and future workforce. I said soon after my arrival that Murdoch is a university whose time has come. In some ways, it feels like the world is catching up – but we need to work hard to retain our position and build on our successes.

Murdoch also needs champions, and as we look to our 50th anniversary in 2024, I hope that you would like to get involved and offer your support. You need only read the stories of your fellow alumni in these pages – the career coach; the veterinarian with a special insight into cat psychology; the author and policy expert; and inventive engineers taking autonomous vehicle technology in new directions – to see the breadth and depth of contributions our alumni are making all over the world.

I am honoured to share these pages with such a diverse and talented group, and I look forward to connecting with you more often as we create a new and positive vision for Murdoch University.

Thank you,

Professor Andrew J Deeks Vice Chancellor & President

Historical lessons for a brighter tomorrow

SOLVED!

ANDREW WEAR

urdoch alumnus Andrew Wear (Grad Dip Applied Econ 2004) has a fair bit on his plate working as the Director of Economic and International Development for the City of Melbourne but has somehow found time to write two books.

The first, Solved, was an examination of how some countries have addressed some of the biggest global problems. He delves into the ways certain countries have led the way in achieving inspirational results. Countries such as Denmark, whose vision in energy production means they will reach 100 per cent renewable electricity by 2030. He examines the history of South Korea, whose residents are heading towards becoming the longest living citizens on the planet. The work examines the possibility

of these pioneering initiatives being shared globally to help policy makers lift outcomes in their own corner of the world.

Andrew's latest book, *Recovery*, looks at how the world might build back better following the COVID 19 pandemic. Focusing on previous disease outbreaks, natural disasters and world wars, Andrew puts the spotlight on previous recoveries to illuminate how the current period may be a unique chance to create a better future. Placing his lens on the Spanish Flu pandemic, the Depression and the Second World War amongst others, Andrew brings a much-welcomed dose of positivity in detailing how prosperity can often be just a few stops ahead from catastrophe. We caught up to find out a little more...

How was your time at Murdoch?

I studied at Murdoch University via distance learning, back when that involved hard copies of course materials sent in the mail. Whilst

> working full time, it was an extremely convenient way to study, meaning I could complete the coursework at a time of my choosing. With the course content in my Graduate Diploma of Applied Economics skewing towards practical applications, it was extremely easy to understand how what I was learning could be used in my work.

What were some of the major shifts in your thinking or key learnings you took from your time at Harvard Kennedy School?

Studying at the Kennedy School alongside students from all around the world – from the USA to Nigeria to Mongolia – it became clear to me that governments all around the world are grappling with similar problems. We learnt almost as much from each other as we did from the coursework.

Returning to Australia, it did seem as though we needed to do more to learn from other jurisdictions around the world, and to strive for global best practice. This can not only inform our practice, but can inspire us to greater ambitions. Because if other countries can solve the world's biggest challenges, then perhaps we can too!

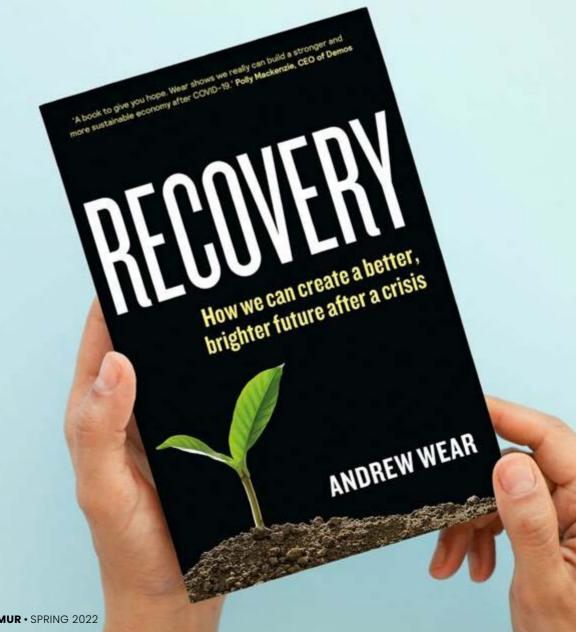


Why isn't there a greater attempt across the developed world to mirror other nation's successes in various sectors?

As Australian public servants, there is an opportunity for us to do a better job of policy transfer - looking to other jurisdictions for policy inspiration, systematically reviewing what other things they are doing, and transferring that where relevant into our system.

Travelling overseas to observe how other countries respond to big problems is incredibly useful - but in the Australian context, sensitivity over the use of public funds makes this difficult. In some other countries, this is different. Singapore, for example, has a real drive to learn from the other countries and the notion of 'policy transfer' is deeply embedded into the fabric of its public sector. Public servants are routinely sent overseas to learn from the world's best.

Australia's thinking has been to some extent held back by its position in the anglosphere. Where it has engaged internationally, it has tended to look mainly to the UK and the USA for inspiration. Yet, in many domains - health, climate, education, equality - countries in places such as Northern Europe or East Asia are leading the way. Developing an openness to learning from countries beyond the English-speaking world will enable us to expand our thinking.



With Singapore dominating education standards globally, do you think their model shows Australia could have a dominant Government school system if it so chose or is our love for private education too embedded?

Singapore is achieving educational outcomes that far outstrip most developed countries. The average fifteen-year-old Singaporean reads at a standard a year and a half ahead of their Australian counterpart and is roughly three years ahead of their American peers in maths.

While there are undoubtedly some cultural factors at play, Singapore's success is fundamentally a result of valuing teachers and the work they do, investing in government schools, using assessment meaningfully and focussing on careful improvement.

At the centre of Singapore's success is its government school system. 98.5 per cent of Singaporean students are enrolled in a government school (the Australian equivalent is just 61 per cent). This focus on government schools is sensible and consistent with the evidence from around the world. While Australian parents make their choices about what is right for their children, there really is no evidence that private schools help to raise the overall level of performance. Countries with more private schools do not achieve better educational outcomes. "About half a million Germans enter the workforce through apprenticeship schemes every year. There is a lot of prestige attached to vocational education."

This is not the case in say Australia or the UK, so where does the prestige come from?

Germany offers vocational training programs that offer advanced and prestigious training that leads to well-paid jobs with excellent career prospects. Germany is particularly strong in manufacturing. While it's easy to name large companies such as BMW, Volkswagen, Siemens or Bosch, there are literally thousands of German manufacturing companies of all sizes, leading the world in their particular niche. If you want a career in mechatronics (which combines electronics and mechanical competencies) or as an IT technician, the German vocational training system offers very practical training that prepares you for a successful career.

Unlike in Australia, there's a long history in Germany of providing apprenticeship pathways for all sorts of occupations, not just the standard trades. For example, German apprentices in manufacturing companies learn a variety of roles, from machine and systems operator to technical product designer to industrial clerk.

And while training is done on the job, students don't just acquire company-specific skills, they develop skills and qualifications relevant to an industry or occupation. This means that if their employer goes broke, they have an easier time finding a new position.

"Australia's thinking has been to some extent held back by its position in the anglosphere. Where it has engaged internationally, it has tended to look mainly to the UK and the USA for inspiration."



In your recent article you said, "We need to be confident that we've captured the lessons of the pandemic." Do you think there is common agreement on what the main lessons are?

I think it's important to remember that the pandemic is not over. While signs are positive, it's critically important that we don't get complacent – the pandemic potentially has more that it will throw at us.

Before we eventually move on, we really do need to be confident that we've captured the lessons of the pandemic, so we can be ready for next time. Almost certainly, there will be new infectious diseases that threaten us, or a brutal new variant of an existing disease such as flu.

And there will be other crises too. In a country such as Australia, climate change-induced crises such as fires, floods, droughts, heatwaves and storms are becoming increasingly frequent. COVID-19 has taught us many things about our governments, our institutions and ourselves, and it's important that we harness these insights. In due course, we will need to establish a robust process to assemble and document the lessons. This will need to drill deep into the capacity of the health system, but also explore the broader institutional and political context. A Royal Commission is one way to do this. The Victorian government did this quite successfully after the 2009 Black Saturday bushfires.

While we'll need a careful and methodical process to assemble the lessons, I think it's possible to sketch out some of the top line lessons revealed by the pandemic:

 Health is not just a private matter; it is a public concern. What happens in the community impacts all of us. All the private health insurance in the world can't protect us if the public health system is not up to the task of containing the virus, or if significant numbers of people fail to comply with public health directions.



- What happens around the world impacts us at home. How well we cooperate at a global level is critically important – whether through the sharing of early intelligence on emerging infectious diseases, developed nations lending support for global vaccination or even sharing approaches to post-conflict reconstruction. Getting it right at the global scale benefits us all.
- Some parts of our existence are more fragile than we thought. While globalisation has contributed to enormous growth and price reductions, it has been accompanied by long and complex supply chains, with components being shipped back and forth across the globe. Disruption to air and sea freight movements means that shortages in even one component can disrupt supply.
- At times like this, it's actually quite important to have a competent government. It's a boring concept and largely invisible much of the time. Competent governments rely on the existence of institutions that have the capacity and authority to do things properly.
- Governments and citizens have a symbiotic relationship. During a crisis, people need to trust experts, governments and one another.
 But the incompetence of government likely to undermine trust. Trust and capable public sectors are national assets that need to be nurtured over many years.

"After 1918 flu the recovery and boom were due to invention of the production line, expansion of electricity and technological changes."

Will we need a similar technology breakthrough if we are to replicate some of the results of that period, or can it just be a case of doing things smarter?

Following a crisis, successful places look to go forward, not return to the way things were beforehand.

Following the Spanish Flu, some countries sought to return to conditions that existed in 1913, prior to the pandemic and war.

But during this time, the United States was embracing new developments such as the internal combustion engine, mass electrification and a surge of investment in science and new technology. This forward-looking mindset set the country up for a decade of growth. The Roaring Twenties saw improved life expectancy, greater involvement of women in work and in politics, and the rise of consumer culture. Following a crisis, it's tempting to focus on the short-term response. But it's important to also keep a focus on the medium to long-term future too.

It doesn't really matter whether it's new technologies, the adoption of new ones or a relentless focus on productivity improvements – and all of the above are probably required.

You say in your book it took until 1954 for the US stock market to recover to 1929 levels – what's to say the recovery won't be as slow this time?

A robust economic recovery after a crisis is by no means guaranteed. Back in 2008, for example, Australia's response to the global financial crisis was among the best in the world. We were one of the few developed countries to avoid recession. But we then experienced a decade of stagnant economic growth, negligible improvements to productivity and median incomes that went backwards. We responded well to the crisis, but then squandered the recovery.

"Following a crisis, successful places look to go forward, not return to the way things were beforehand." This time around, it's essential that we nail the recovery. The next decade needs to be less like the one following the GFC, and more like the Roaring Twenties that the United States experienced after the Spanish flu, or the post-war periods in Germany and South Korea.

As we move past the acute phase of the crisis, it will be time to steer our stimulus away from cash support towards initiatives that contribute to long-run economic growth and help us to tackle intersecting challenges, such as climate change or inequality. South Korea, for example, has built its stimulus response around a massive investment in decarbonisation.

A renewed focus on industry policy will be important too. Recoveries throughout history have been fuelled by new technologies and a deliberate focus on the emergence of new, globally oriented industries. Germany is backing a new green hydrogen industry. It's critical that Australia, too, identifies and supports emerging industries that will underpin its long-term growth.

Who are the surprise nations rising to the situation and leading the recovery and how?

There have been some impressive responses around the world. South Korea, for example, through its 'Korean New Deal' has used its pandemic response to 'set the foundation for the next 100 years'. It involves large-scale investment in digital infrastructure, grants and subsidies to expand adoption of artificial intelligence, and strengthening of cybersecurity.

Similarly, Germany is endeavouring to ensure that it will emerge from the crisis in a more climatefriendly manner. It is spending billions on public transport, railways and charging infrastructure for electric vehicles. It is also investing large amounts of money towards research into 'green hydrogen' – a clean, energy-intensive gas made with water and renewable electricity. This is aimed at developing a next-generation export industry that will enable it to store and sell surplus renewable energy in the form of hydrogen and become a global market leader in associated production machinery and equipment.

You have studied recoveries from war, and natural disasters such as bushfires and tsunamis. Are these good examples to examine when in a sense they are 'localised', and we are assessing how the whole globe will recover from a disease?

Many of the most successful responses to crises are deeply embedded in local communities and in the years ahead, community needs to be central to recovery. This was certainly the experience of Aceh, recovering from the 2004 Boxing Day tsunami, when the government determined that recovery would be community driven. Although this approach perhaps took longer, the resulting public support for rebuilding efforts yielded long-term dividends. Bottom-up participatory approaches are more likely to bind stakeholders together under a common purpose, ensure project outcomes are tailored to local needs and build the capacity to better respond to future disasters.

Similarly, in New York City - the epicentre of the global financial crisis - the recovery process was driven by local government. Rather than return to the way things were, the team at the city set out to diversify the city's economy, looking to grow different sectors that could be important to the future - such as biotechnology, fashion, media, technology, tourism. They did things such as establish a new, world-class graduate school of engineering on Roosevelt Island in the middle of the East River. They also worked with a private real estate firm to develop an enormous bioscience centre on land owned by the city. They established a new investment fund for fashion. In the decade after the financial crisis, New York City's economy diversified and added more than 700,000 jobs the longest and largest expansion since World War II.

While there are some big policy challenges ahead of us, the good news is that crises do not have to leave a long-term legacy. We can recover. Countries and cities rebuilding from devastation have gone on to create prosperous, exciting futures. The people living in New York, or Aceh or South Korea now enjoy a quality of life that far exceeds that pre-crisis. In many cases, countries which experienced a shattering crisis have not merely recovered but have gone on to lead the world. This should provide us with the confidence that we too can recover and thrive.

RIGHTATHOME

Alumnus, Dr Jo Lewis BSc BVMS (Hons) MRCVS, is a pioneer. She established The Cat Vet – the UK's first mobile vet clinic dedicated to visiting cats in their home. She has also recently become an author having written What's My Cat Thinking? The book aims to help people understand their cat's behaviour and body language nuances to have a happier life together.

"I spent my whole childhood caring for animals, studying and striving for my dream of becoming a vet."

Jo treating a cat at its residence

he award-winning, feline veterinary surgeon is a certified Cat-Friendly Vet with AAFP (American Association of Feline Practitioners) and is also a longstanding member of the ISFM (International Society of Feline Medicine).

In a niche field that she is incredibly passionate about, Jo nearly didn't make it into the veterinary world.

"I spent my whole childhood caring for animals, studying and striving for my dream of becoming a vet. So, you can imagine as a 16-year-old, it felt like the end of the world when my application was rejected not once, but twice by Murdoch University Vet School," said Jo.

Jo's desired career path almost got stopped in its tracks when family matters hit towards the end of her school years.

"In my final year at high school, both my grandparents in the UK became very unwell and sadly died. My Mum, therefore, had to return to England for an extended period. As the eldest child of six, I naturally took on the role of 'Mum' to my younger siblings," said Jo.

Understandably falling behind on schoolwork, Jo felt enormous pressure at final exam time and just missed out on the grades required to get into the Veterinary Science course. was heaving with wannabe vets, but we were told that there were over 500 applicants for less than five places," said Jo.

"In hindsight, this just added more fuel to my 'vet fire'. I knew this was not going to be where my vet story ended. I wasn't going to give up on myself and I would be one of those five people... no matter what!"

Opting to take a gap year, Jo gained experience from volunteering, helping with everything from marine and zoo animals to marsupials and reptile conservation work on Garden Island. Her favourite experience came working as a laboratory assistant at what was then the Vetpath Laboratories in Ascot, WA. This brought her into contact with two influential Murdoch figures who helped change the course of her life.

> "At Vetpath I fell in love with veterinary clinical pathology, and it just confirmed why I wanted to be a vet. Murdoch's Dr Sue Beetson was such an inspiration to me. She really believed in me. I also had a memorable pep talk from Dr Jan Thomas (Murdoch Distinguished Alumni Recipient 2017), another Murdoch pathology guru, who gave me some very sound advice. She suggested I make my application stand out from the hundreds of

others by focusing on the science angle."

All the diligence and focus paid off and Jo ultimately made it into Murdoch's Veterinary Science course in 1998.

"As is often the case with things that seem insurmountable in life, I do think in the end it was the better route into Vet School for me. I learned so much in my gap year and met my best friend Vanessa Milborn (nee Lynch), a fellow cat vet in Perth. I also grew up a lot, learned to be more resilient, and earned the right to look back and say 'I did it' despite all the initial setbacks."

Though devastated, Jo decided to enter a Biological Science course with a mindset that she would redeem herself academically in her first year and get all the grades needed – and she did. But it turned out that working as a vet nurse at her local vet practice every Saturday during that year didn't set her apart from all the other applicants with top marks and there were only a handful of places available.

"I specifically recall going along to a talk designed for all the students who had opted to do the first year of a Biological Science degree to use it as a stepping stone for direct entry into second-year Vet Science. The lecture theatre



Jo signing copies of her book.

What was your first job post-Murdoch?

I got a job in a regular small animal practice. It was a steep learning curve. Treatment plans were always based on a gold standard way of doing things at university, so it was a bit of shock to meet the financial hurdles and people with a more 'agricultural' view of pets. I recall a young cat that had been in a road traffic accident and broken its leg. It was a simple fracture, that could have been easily repaired. The guy just looked at me and said, 'Oh well, it's cheaper to get a new one, isn't it' and asked me to put it down. It was heart-breaking.



Did you decide at Murdoch that you were going to work only with cats?

I love all animals but knew I only ever wanted to work in small animal practice. For me, animals are respected companions, to be loved like a family member, so farm animal practice was a non-starter.

I love dogs but found working with some of them less fun - I'm much more out of my comfort zone when I'm with an unknown dog that is nervous about being in a confined space with me. With cats though, I am very much in my comfort zone. Having spent every day of my life with them, I just feel like I understand the way they see the world and instinctively read their body language.

When I was at vet school, cat-only clinics weren't around, so a job like mine was more a distant dream. It was only when I first graduated and saw first-hand what a raw deal cats get at the vets, that I dedicated my career to changing that.

You obviously have an affinity with cats. What is it that you love about them?

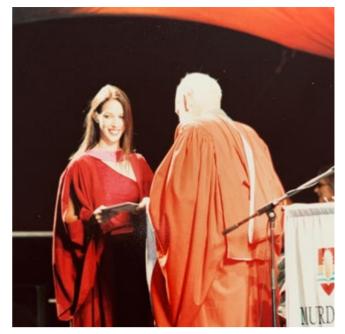
Yes, my first siblings were actually cats! It's almost something innate that I can't quite explain. On the outside they are just a masterpiece to look at, aren't they? So graceful and beautiful, sleek, and agile. But it's really about their personality – no two are the same. They have their own little ways and are a real presence – another soul in the home. I like the fact that they are secretive and complex, and you have to build their trust. They're massively misunderstood, often mis-labelled as being aloof, even unkind, perhaps from their instincts as hunters, but given the chance, they can be ever so affectionate.

It's easy to forget that they are essentially in many ways still a wild animal, nowhere near as domesticated as dogs are. Genetically they're virtually the same as the African wildcat that they descended from – and yet they can lie with their paws on your face, with those 'killer' claws that could theoretically cause a lot of damage, tenderly retracted. I feel honoured that they've chosen in that moment to tame their wild side for me.

"I love all animals but knew I only ever wanted to work in small animal practice."

What do you love about working in the field of feline medicine?

For all the same reasons I love living with cats, I love working with them too. No two cats or days are the same. From a purely medical angle, cats have very complex conditions – they're definitely not small dogs. So as a cat vet I get to assume the role of cat detective trying to get to the bottom of what's going on. It's like an episode with Dr House but on steroids – and to make it



Jo graduating from Murdoch in 2001.

even harder, your patients can't speak! They also hide their symptoms very well and often have five or more different conditions going on at one time, so it's a real medical challenge. Luckily, I do like a challenge!

When did the idea to go and see them in their home setting come to you?

I came to the UK and worked in local practices around Berkshire and Surrey, including the Oxford Cat Clinic who had just set up a ground-breaking cat-only practice. It was thriving and I really enjoyed working there but it was a long way from home.

I'd long envisaged having my own cat-only practice one day. A perfectionist, I'd pondered how I could make it as cat-friendly as possible. Even, 'what would cats choose?' and the answer was pretty clear – they'd want me to visit them, not the other way round. It was still a pipe dream though as I hadn't a business bone in my body.

I remember after a particularly stressful day at a local practice, I was talking to my husband and he said 'Why can't you establish a practice where you go to the cats?'. I said 'Well, because vets just don't do that'. To which he replied, 'But why? - why can't you do that?' One of those moments when someone comes in from the outside, not constrained by the traditional vet mindset, that then makes you consider something seriously.

People in the human medical world want to become niche practitioners. So why not vets too?

Yes, and it's not just a better experience for the cats and their humans having a vet dedicated entirely to cats either, I enjoy being a vet so much more now that I'm focused on my feline niche. It's allowed me to really hone my skills and knowledge which gives me a real sense of job satisfaction.

By focusing my field even further by visiting cats at home, I no longer see a conveyor belt of stressed-out cats and clients turn up, with just 10 minutes to collect the information I need and formulate a plan. I found that incredibly sad, frustrating and exhausting.

Perhaps unsurprisingly, I've now ended up with a sub-set of very anxious cats on my books – cats who don't just struggle with going to the vet, but with our modern lives in general. These 'scaredy cats' come with a long history of being 'too hot to handle'. But interestingly I find the vast majority of them, are more Tigger, than tiger, in their own environment.

Home visiting overcomes the terror of the 'five Cs': being Captured, put in a Cage, placed in a Car, and then confronted with Canines and a Clinician that wants to prod and poke them. When these triggers stack on top of each other, a threshold is reached. These cats explode with a cocktail of fear and frustration by the time they get to the vet. Others freeze, or are too exhausted, which is often misinterpreted as meaning they're relaxed and compliant.

At home though, that process hasn't started. There's no fear from the outset. I'm just this calm lady visitor that likes cats and piques their curiosity because I bring intriguing new smells and treats.

Some clients seek out my niche clinic because they physically struggle to cage their cat, but most simply empathise with their cat's fearful, panicked state and decide 'I don't ever want to take my cat to the vet again'. They can't bear to see them go into meltdown – especially if it's just for a routine vaccination or treatment monitoring. They're usually overjoyed to find a vet who will come out to them and the difference I can make to each of their lives is palpable.



I imagine there's a lot of cups of tea in your role.

Absolutely. I always say 'Pop the kettle on, I'm round the corner'. It's important for the client to be calm as well - you listen and take in information much better when you're not full of adrenaline. It also gives a chance for the cat to sniff everything and be distracted by the stuff that you've brought in with you, get used to your voice and your presence.

I aim to be like a cat-friendly visitor who hides her prods and pokes in between strokes and fusses, and has been known to slip an injection in while they're taking a treat, before they saunter off again.

When I worked in a traditional practice, I remember home visits being rare and stressful. You're despatched from a busy practice, fly in, do what you need to do, and fly out again - often in your own lunch break. It's not like that at all when you set up a dedicated, home visiting clinic.

Human medicine is increasingly about looking after our own mental health. Is it the same for cats?

Absolutely, so many bodily health problems in cats are triggered or exacerbated by heightened mental and emotional stress levels. When I was at university, the emphasis was on physical health and prescribing medications. We weren't taught about how cats think, or to look after their mind and reduce stress factors. Hopefully it's very different now, because we know that so many cat illnesses are connected to stress. You can prescribe pills and potions repeatedly for certain problems and they will always come back until you make an effort to identify and understand the stress factors in their home habitat, lifestyles and the dynamics between other pets and humans.

When you go into a house then, I'm presuming that you treat the behaviour, you don't treat the breed?

Exactly! First and foremost, you think cat. They are all driven by a common biology first and foremost – African wildcats in designer fur coats as I say. They are all fundamentally the same underneath, in terms of their instincts, their nutritional needs and so on. On top of that, you start to layer factors such as how old they are, what they've experienced in life, whether they live indoors or outdoors etc. All sorts of different criteria go through your mind as you try to narrow things down.

For example, if a cat's behaviour suggests they're really frustrated, then I may think to myself 'Well it's a Bengal or a Siamese and it is cooped up in an apartment on its own all day long.' That's very relevant because they're very people-focussed and very driven to be athletic - to be thinking and doing all day long.

Wildcats need to catch 10-20 small prey a day so they're geared to be preoccupied with seeking their next meal. So, that means moving, foraging and problem-solving all day long. Certain individuals and breeds seem to have that urge 'switched on' even more than other cats.

Some people train cats to go on the human toilet, don't they?

They do [big sigh!]. Some people think it's funny or clever to get animals to do human things. It's not really being true to how cats would naturally behave, which is what I'm all about. Our cats have to adapt to an awful lot more than we realise living in our hectic modern lives. It's better for cats if we respect how nature made them and invest our time helping them thrive, rather than training them against their instincts to do things for our entertainment or convenience at their expense – especially when it comes to something as vital as answering a call of nature.

The key is right there... a cat's 'nature' is to dig before they go, and cover it up afterwards. Human toilets deprive them of that instinctive behaviour. Cats are so prone to getting life-threatening urinary tract issues and bowel problems to begin with, so meddling with their natural bodily routines and rhythm is tempting fate. They regularly slip and fall into the toilet bowl too by the way – that means injuries, plus human toilet bowl germs all over your best buddy – not nice! "I enjoy being a vet so much more now that I'm focused on my feline niche. It's allowed me to really hone my skills and knowledge which gives me a real sense of job satisfaction."

What other elements should people with cats focus on?

Simply being aware of factors that lead to illnesses, or lead to stress and anxiety and unhappiness in cats. For example, being indoors might be ok for certain cats, provided they have access to plenty of 3D space, cat-friendly resource and choice and control over how and when their needs and wants are met.

Anything you compromise on, can be a stress. By not letting them outdoors, that's a stress. Having lots of loud music playing all the time, that's a stress. Using aromatherapy and highly perfumed products throughout the home, that's a stress (and potentially poisonous). If you bring children into the mix, then that's a further stress. If you add a dog, even more stress, and so on. If you start stacking stresses up, you can get over a threshold and cats can start to become quite unwell. Of course, they hide this well, adopting a British 'keep calm and carry on' mentality.





Why do they enjoy scratching things so much?

A few reasons. To decompress, to let out pentup energy and stretch. Just like we do when we play sports, go to the gym, or for a run. It feels good and relieves stress. People often say to me 'What? Cats' lives aren't stressful'. But living with another cat, living with people, living with a dog, just living in this modern world as I keep saying, can be stressful for cats. So, scratching surfaces is a mental and physical release for them.

It's also keeps their claws sharp because the casing from the outside of the claws comes off and sheds, so they need to scratch to encourage that to happen.

Also, it's not just all about the scratching – cats have glands on their paws to scent mark their presence in an environment. For instance, a wildcat would scratch a tree or something solid, leaving visual claw marks to show that they've been there, along with their lingering scent.

People think of cats having their own distinct territory, but in reality, this inevitably overlaps with other cats' territory. As a solitary species, a cat generally wants to leave scent and scratch marks to avoid contact with other animals from other territories because fighting for their territory leads to injuries, infection and potentially death.

Why do they stare into space a lot?

Feline vision is not great close up and it is movement that tends to get their attention. As ambush hunters they are prone to sit and wait for things to happen, wait for that movement, a sign that there's something that they can eat - little creatures scratching around in the grass. So, it's unsurprising then, that they spend a lot of their time watching us, watching reflections, bugs on walls and so on. Anything that's potentially going to move, or they think might have moved, will get their attention.

They're not just predators, they are prey as well, so, they're also looking, and sniffing, for signs of change that might suggest that there's a threat around. So, we are talking again about living in Africa, with bigger cats, wild dogs, birds of prey overhead, that sort of thing.

They're also creatures of habit, so they're always watching for signs of change in terms of 'Oh, is she getting up and going to the fridge?' 'Is she going to give me a treat?' A lot of people say to me 'My cat always stares at me and it's really disconcerting.' Chances are, they're simply awaiting your next move.

When you're feeding them, the classic rubbing against your legs, that is affection, isn't it?

Yes, but like their feet, they've got scent glands in their cheeks which give off 'friendly' pheromones. So, by doing that they are rubbing their familiar scent onto you. Cats that get on well together will rub and groom each other as a social way of distributing the scent around between cats that are 'family'. This is handy for cats who live in colonies, street cats for instance, and looking after each other's kittens. So, when cats rub or lick us, they're probably seeing us as someone they'd like to have in their circle of trust.

Have you seen any kind of consistency in behaviour when a cat is in its final days?

Cats innately avoid letting on that they're feeling vulnerable – it's part of their ancestors' survival strategy, being solitary and living among rivals and predators waiting to pick them off. Whether they've injured a leg that will heal, or are suffering from severe illness, or even dying, they go into this protective mode where they take themselves off and hide away. That way they're not visually giving any clues, nor leaving any blood, or fluids that might attract predators.

Instinctively, whenever a cat is in pain or unwell, they often just become lethargic and quiet and tuck themselves away, and that's the only symptom you might notice. They might simply go off their food. Getting back to what I was saying earlier, that's why I like working with cats - their complicated nature and medical conditions which all masquerade under a similar set of symptoms. It makes it particularly hard to look at a cat and say 'Oh you look like you have got this illness' because most cats will seem subdued or hide away when off colour.

Often if you've got a very elderly or unwell cat, that suddenly disappears, they've usually either been picked off by something that has taken advantage of them, like a fox, or they have taken themselves away somewhere quiet where they'll be undisturbed and collapse in that spot like they would in the wild.

Can you train cats?

Yes, cats are learning from us all the time – we open a tin of tuna, they come running. We give them some, so they naturally repeat their behaviour. Cats can be trained just as dogs and many animals can.

The aim of compassionate modern training is to reward desirable behaviour. When their behaviour is deemed 'undesirable', we shouldn't punish them with a yell or a water pistol, but look into why they're doing it in the first place. Is it normal cat behaviour that needs an alternative outlet that's more desirable to us, or is it a sign of their quiet discontent or illness? Always talk to a cat vet first about changes in behaviour, not Google.

For example, people may think along the lines of "Oh they are scratching that brand new rug that I've just put down - the little s***'!" But in reality, to your cat that rug looks and smells completely different, so they are exploring it and trying to make it smell familiar by putting their paws on it. Also, it may feel the right texture, location and angle for stretching and scratching. That's why they're doing it. They are not saying 'Ah ha, you have got something new, now let me at it!' Cats aren't spiteful, their motivation is completely different. Understanding that is so important. It helps you to train them because you know that they're doing it for a valid reason and can consider helpful alternatives.

Website: www.thecatvet.co.uk

Social media: @thecatvet

(Instagram, Facebook, Twitter, TikTok)





Sitting down with the coach

In Claire Seeber's job she deals with doubt, fear, comfort zones, courage, criticism and the ego. And she absolutely loves it!

An internationally recognised and accredited Career and Leadership Coach, Facilitator, Speaker and Change Driver, Claire (B Commerce 2010) runs a business called *Eating Your Cake Too*, helping employees, leaders and organisations accelerate career growth and helping women (and some men too) define and drive a rewarding career and leadership pathway.

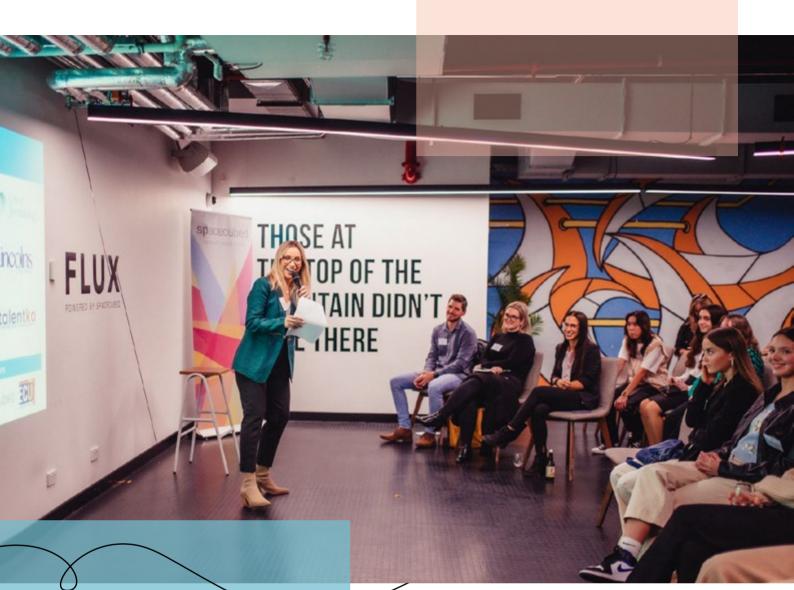
The nature of the work necessitates delving into the psyche – all the elements that make us great and help us achieve, and all the things that can hold us back or keep us small and safe. Analysis of fear and doubt and imagined barriers can be a daily discussion with clients. It is a conversation to which Claire can bring her own personal experience.

Following a few corporate roles in Perth, Claire suddenly found herself in Melbourne, working as the Head of HR for a multi-million dollar national retailer and reporting directly to the CEO. She was just 26. She was responsible for helping triple the business in size, whilst also building the function from ground up off the back of a divestment from the 'mothership' ASX Company the retailer was attached to. The role left Claire feeling in daily overwhelm. Every week felt like swimming to the surface to breathe. Claire didn't ask for help during the first two years of a six-year tenure. She was also often simply too scared to say, "I don't know, I will get back to you." In hindsight, Claire realises now that you only fail when you don't ask for help. Without full honesty, you are likely to just create a bigger problem for yourself.

Various experiences in this high-pressure job became the seeds that gestated into her current business.

For example, during the role she interviewed hundreds of people and noticed a consistent pattern amongst many of the incredibly talented women arriving for job interviews. When asked "What are your salary expectations?' many just replied, 'I will take whatever you give me'. Numerous candidates would also be reticent about outlining their value when greeted with other questions such as 'Can you tell us about your strengths and achievements?'

The behaviour she witnessed echoed the whole philosophy of competence v confidence. The pattern whereby you can build the former – knowledge, skills, technical experience etc, but if you don't have the latter, the world doesn't know what you are capable of, and often you are left unable to drive change. The resulting self-talk then amplifies the situation with people not feeling enough, not feeling experienced enough, feeling like they need to do a specific course to progress, and prone to holding back from voicing their opinion in corporate settings.



"Everyone has their own journey, but that period helped me to build my confidence and the validation that there was a market for what I was offering"

Claire running a corporate training session.

Her experience in the HR role also showed her the flipside, with individuals prepared to stand tall, but not equipped with what was needed.

"I saw terrible leaders and I saw well intentioned leaders who didn't have the right emotional intelligence, or the right toolkits to be able to drive change, or inspire teams," said Claire.

The behaviours she witnessed, coupled with her own thoughts, behaviour and internal dialogue, led Claire to explore the simple question of 'What can I do about this? She wanted to draw on her personal story and help other people to not waste as much time, or sleep, or stress, or tears as she had. The final piece of the jigsaw was for Claire to consider the parts of her job that if she didn't have to do, she wouldn't – namely safety, payroll and dealing with trade unions, and instead focus on the parts that she found the most rewarding. It's common at this point for many salaried employees with business ideas to be too frightened to leap off the corporate ship and start their own enterprise, but a couple of factors made it a smoother transition for Claire than most.

"I think my lens on running your own business was already possibly different to the average person, purely by the fact that I grew up in a family business. My Mum and Dad ran their own company for most of my life. So, I had seen the good and the bad, but also that it could be done," said Claire.

With a window to test the water, she kept her fulltime role for 18 months while establishing a side business and using opportunities to test its services and offerings.

"It enabled me time to prove to myself that this was definitely the path that I wanted to go down first and foremost. But also, it allowed me to trial things in a corporate environment without any pressure. I was able to test ideas, workshops and my coaching while still being paid. Everyone has their own journey, but that period helped me to build my confidence and the validation that there was a market for what I was offering," said Claire.

Alongside workshops and programs, coaching is now a large part of her business and the one-on-one sessions commonly have similar opening sessions, as clients attempt to navigate what precisely the issue is, and what success would look like.

"Often people will come to me and say things like "I'm unhappy", "I don't feel confident", "I feel stuck", "I feel lost", "My career's stagnated" etc. Before we get into any of the work, I start by flipping those negative statements into greater clarity. This begins with, 'Well if you weren't those things what would you be?' and "What is success to you?" The opening sessions frequently illustrate the phenomena where people can usually very easily explain what they don't want but find it harder to vocalise what they do. She believes all too often it is one specific element that is hindering progress.

> "I would say almost every time it's ego. Ego gets in the way of us being able to take action – What if this happened? How would I look? What would people think? What if I fail? Hence, a lot of the work I do with people is three pronged: mindset, strategy and action. There is no point giving tools straight up without covering mindset first. They simply won't use them and what I mean by that is the fear of failure, stuffing up or getting it wrong, and sometimes a fear of success will get in the way," said Claire.

Claire has observed repeated patterns with many of her female clients. When contemplating their possible origins, she had some insightful opinions on how some female corporate behaviour may have its foundations back in childhood and the assumptions underpinning traditional socialisation.

"I think I'm a good example in many ways. I'm a twin, with a twin brother. We were raised by the same people, in the same household at the same time with matching experiences. Yet there was a different way I would often be spoken to about things and different expectations about how to act., "Be good", "Be kind", "Be quiet", and so on. With my brother however, it was more, "Ah he's a boy", "They are grubby", "They can't focus", "Boys will be boys", etc. With conditioning day after day, it is not surprising that it can ultimately lead to differences in the workplace."

In particular, it was the 'be nice, be kind' elements that Claire feels lead women to conclude that that's how you get ahead. The result often being that women attempt to just keep working harder and harder, taking on more and more tasks, because that is how they feel they must demonstrate worth and gain validation. "I work with many women that are trying to juggle a career and children. They place so much guilt on themselves because they feel they are trying to be everything to everyone. As a result, they often feel like they aren't doing any one of those things to the level they'd like. They don't always feel like they can put a boundary up and say 'No, I'm at my bandwidth'. If they do that, they are not being helpful. They are not being kind. They are not being supportive of others. So, they just keep saying yes."

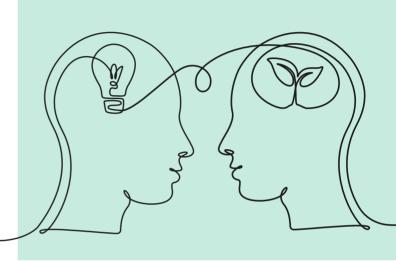
The reluctance to be assertive can also extend to other corners of the workplace.

"I also often see women who are not comfortable to speak up in meetings, to voice a different viewpoint. They may also start emails with sentences like 'I might be wrong but...', 'I'm no expert, but...', 'I don't want to rock the boat, but...' which I also think reflects years of conditioning," said Claire.

It would also be pertinent to note at this point that Claire had many insightful thoughts and opinions on the role that organisations play in supporting women in the workplace and closing the gender equity gap that currently exists, but that is another article for another day.

The discussion led onto the flexibility required for coaching and how different methods and modalities need to be considered when working with people who feel their hard work is going unnoticed, and introverts. Two groups who often struggle to get the appreciation, or promotions, their value merits.

"I actually wrote a little guide that I put on my website called '25 easy ways that you can get noticed at work, even if you're an introvert', for this exact reason. There are many ways we can be visible at work without having to be the loudest person in the room. I have seen some amazingly simple techniques used. Effective meetings for example should be a dialogue, but all too often what we see play out in meetings is just monologue on top of monologue, with nobody listening. A great technique is when someone says, 'It appears to me as though we aren't actually taking any steps forward'. 'What is the problem again that we're trying to solve?" Such short reframes can be useful for those reluctant to speak up. They are not adding their opinion, nor big noting or being loud, merely asking a pointed question that can drive a conversation forward. Many of her clients struggle in the moment to speak up, worrying it may not come out as intended. In coaching, Claire reminds them that there are many ways to become impact players without being a great orator.



"You can piggyback off meetings. Send an email to the attendees afterwards with your additional thoughts and ideas. Focus on the call to action and the benefits to them or the organisation. What do you want them to do with that information next and why? There are ways to quietly have impact without having to go around saying 'Just letting you know I'm fabulous' or 'Did you see the amazing thing that I did?"

Although it is possible for introverts to flourish in the workplace, at some point they will need to work on the skill of being able to communicate verbally effectively. Coaching can be vital in this regard in enabling the individual to tap into the strengths they currently have, and do things they're comfortable with, whilst also helping them build that muscle and the confidence that sits behind that, to stretch themselves as well.

"Repetition and tension are the ways we build that muscle and the way we ultimately build confidence. Repetition being, 'How often am I doing it'? The tension being, 'How am I putting myself in a situation that is a little bit uncomfortable?" said Claire. One of the activities she uses with clients in that position is present them with a diverse range of topics, from say road rage, through to Marilyn Monroe, and they must record themselves talking to that topic into their phone or a computer screen – a different one each day. They do not get to rehearse ahead of time or do any research on the subject.

"They hate it! But by the time they've done it a few times it becomes easier and easier. It is low stakes. They're not doing it in front of a crowd. But it's awkward enough, and it starts to build those muscles around it being ok for me to have a voice. It's ok for me to have an opinion. It's also ok for me to talk, ad hoc, and it's ok to speak up even if it's not perfect. So often people fear saying the wrong thing, but it helps clients to learn that people make mistakes every day and it's ok," said Claire.

She sees positive change in this sphere in that employees and leaders increasingly don't have to be perfect. It is becoming acceptable to have a human moment. "Coaching can be vital in this regard in enabling the individual to tap into the strengths they currently have, and do things they're comfortable with, whilst also helping them build that muscle and the confidence that sits behind that, to stretch themselves as well." "I'm loving the fact that with tools like social media, what we value in leadership is starting to turn a corner a little bit, with it safer now for people to just be who they are. It's ok to make mistakes. It's ok to be on a Zoom call and a child comes in crying. It's ok, because I am human first and foremost. It's ok to say the wrong thing in a meeting and correct yourself. It's ok to lose my train of thought, and then catch back up. That's what makes us human. I think for so many years we felt we had to hide all these things. I'm noticing a bigger shift now, from a leadership perspective anyway, to people just being able to make mistakes. We can increasingly own the mistake, and then move forward quickly. Whereas in the past, I think we spent so much time and energy, and politics, trying to cover up mistakes, it led to wasting time and slow decisions. Opportunities were lost. Real innovation was missed out on, because we spent so much time in the blame game."

Working with emotional intelligence techniques is vital to Claire's work.

"I use it a lot. One common way is a result of a lot of the conversations that I have with clients, or organisations, around, 'How do we build emotionally intelligent people, or emotionally intelligent leaders?

Daniel Goldman, who I like, introduced a framework outlining four quadrants of emotional intelligence. Self-awareness, self-management, social awareness, and relationship management. But then he breaks them down into 12 key competences, that sit under each of the quadrants. What I love about them is that from a leadership perspective, you can start to see how you need to have a balance of all these competences, in order to be effective. Whereas I think often when people think about emotional intelligence, they just think about 'Oh, I'm empathetic', 'I know how to put myself in someone's shoes', and 'I can manage my emotions'.

Examining the leadership perspective, particularly in the relationship management quadrant, which also includes elements like our ability to inspire teamwork, our ability to mentor and coach, and our ability to manage conflict, is integral to Claire's coaching. As well as enjoying the process, she feels it is effective in converting those who may initially perceive El as fluff.



"In order for you to be a truly effective leader, and to be truly emotionally intelligent, you actually need to be able to have the difficult conversations. You need to be able to have people in a room who might have significant differences of opinion and be able to navigate people through that. It's often the space I find I work with clients from a leadership coaching perspective. They will come to me and say 'I don't understand. I am emotionally intelligent. I'm highly empathetic. I genuinely do care about my team and I care about people, and I feel like I know myself. Yet I'm not getting results.'

When we unpack why, we start to find that they lean significantly into some of those competencies around emotional intelligence. They might be highly empathetic and know themselves. They might really enjoy playing the role of coach or mentor, as a leadership style. But perhaps when their team don't deliver on project deadlines, they avoid the tricky conversations," said Claire.

In these instances, Claire and the client will often refer to the results of diagnostic tools such 360-degree feedback. Obtaining feedback from peers, their team, and their direct manager can be really useful in identifying where opportunities for growth may lie, or where there may be a difference between perception and reality. It is a way leaders can receive feedback on their approachability, warmth, way of dealing with the team, decision making and so on. An area that frequently comes up is the skill of handling conflict, an inevitable occurrence in work settings.

"I always think that conflict is interesting. Again, I tie it back to self-awareness and seeing your own patterns. Essentially, there are five types of approach to conflict - competitive, accommodating, avoidance, compromising and collaborating. We all have the ability to do all of them, but most of us tend to lean into one or two more than others. Over the years, I learnt that I have two major styles that I lean into. One is avoidance and the other is accommodating. I haven't wanted to rock the boat or wanted to upset that person, because preserving the relationship has always seemed to be the more important thing. So, my way of navigating that is, 'Well, I will accommodate to your needs'. Or if I can't do that, I may just avoid it altogether. So, for example, when you put two people into a room - one who thrives off conflict because they lean to competitive, and someone who is high avoidance or accommodating, then you're not going to get the best outcome for the organisation at all."

"In order for you to be a truly effective leader, and to be truly emotionally intelligent, you actually need to be able to have the difficult conversations."





L-R Claire with husband Sean, their lounge during the world sailing trip, and at home with beloved companion, Kransky.

Claire's skill in emotional intelligence, and being truthful to where you are at, would, unbeknownst to her, be fully tested in 2020. Leaving their jobs, selling all their possessions, Claire and her husband embarked on a round the world trip together. Plans were made to work overseas, meet friends in Europe and have the ultimate adventure. There was a promising start with trekking in central and south America, before Claire joined her brother and sister-in-law on his 42-foot yacht in the Caribbean. This was precisely when the world was first hit with COVID 19.

Claire became stuck on the yacht for ten weeks. That may first appear a slice of heaven – stuck in the Caribbean, but the reality was very different. They could rarely go to land and were only allowed off occasionally to source dwindling or non-existent supplies on the island of Grenada. They'd queue for ten hours at one paltry shop and often be met with empty shelves. It was a life of relative confinement, powdered food, tinned spam, no showers, washing your clothes in a bucket and sleeping with a constant aroma of fish. With the world rapidly closing, they were trapped in a 42-foot world with all their big plans on the floor and no way of getting home. Having saved and sacrificed for years for this trip of a lifetime, Claire had to confront the reality of it all disappearing from view.

"I remember in that moment just being absolutely gutted by it. Sad and devastated. We quit our jobs, sold everything and uprooted our entire lives. Yet I felt an element of guilt about it, for being sad about it because of course, people were dying. There were people in desperate situations. So, then you almost feel like you must suppress how you feel. But I had a lot of time to think. I realised it was ok to grieve, to grieve the death of the dream. I had about two days where I was devastated and just sat at the front of the boat and then after allowing myself that time, I leant into what was next."

Claire wrote about her experience in a piece for Business Chicks which you can read here. With some help from Australian Embassy staff, and many negotiations with airlines, they spent five days flying to Melbourne and went into two weeks hotel quarantine. It was at this point that Claire had her own experience of the corporate term brought to the fore by Covid – the need to pivot!

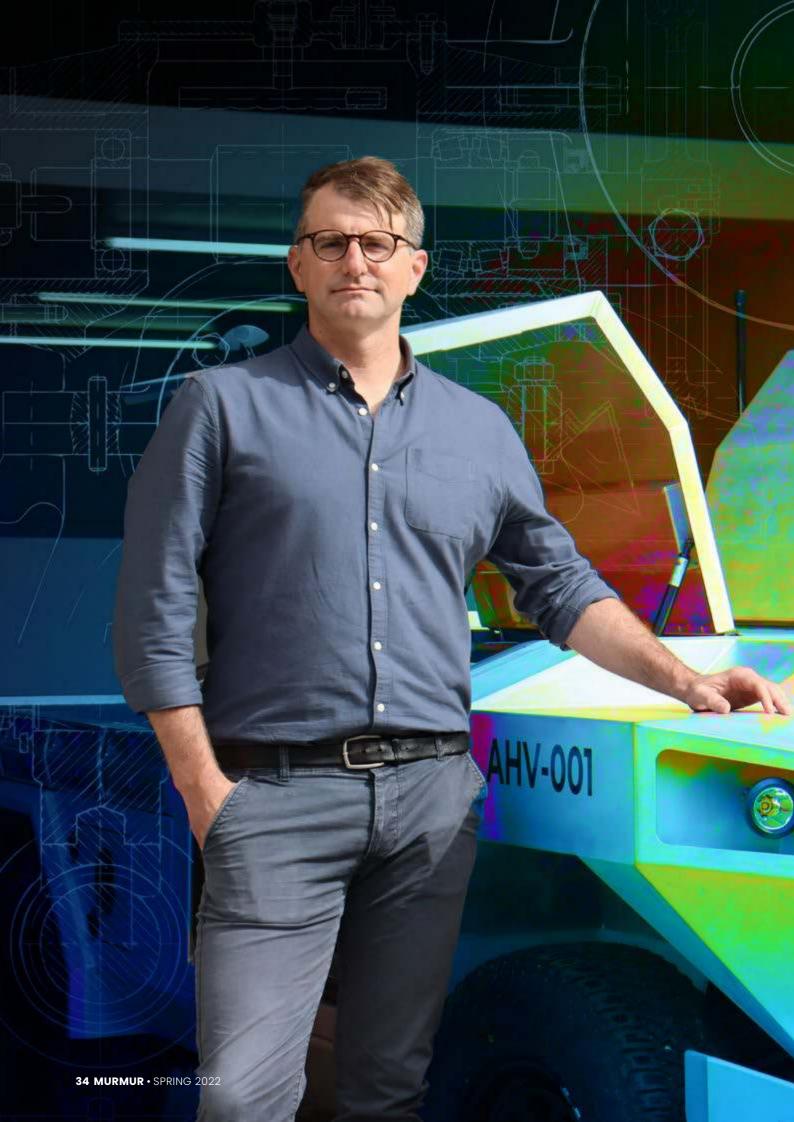


Claire remains a committed seeker – forever in search of new ways to share the lessons she has learnt with other women. Not ready to return to their former lives, Claire and her husband pivoted by buying a second-hand four-wheel drive with a rooftop tent and headed off to explore Australia's east coast.

Nearly two years on, they are now settled back in Perth. Claire's business has prospered. She has just been invited by Mineral Resources Limited to build their first six month 'Inspire' program to develop emerging female leaders. With program content endorsed by MinRes ambassador Julie Bishop, the initiative will empower female employees to achieve their leadership aspirations and career goals. Claire remains a committed seeker – forever in search of new ways to share the lessons she has learnt with other women.

"I want to find ways to pay it forward. One of the things I am most proud of is the Future Female Leaders Program that I now run with co-founder Karen Dennett, and Director Emma Burdett. We are in our first full year of the program and have got some incredible WA high school girls going through it. It seeks to close the gap with leadership and life skills and combines them with a goal. The girls pick a UN Sustainable Development Goal that resonates with them and they turn that into a social impact project and bring it to life with help from amazing mentors from organisations across WA. We have tutorial experts teaching them things around money management and networking and personal branding, critical thinking, problem solving, selfawareness and all the skills we know that are needed to hit the ground running."

Find out more about the above program at **www.futurefemaleleaders.com.au**



NASTERS OF INVENTION OF

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overnment House had never hosted anything like this: a 1½ tonne metallic machine running rings around the rose beds and skillfully dodging the duck pond.

Driverless.

As a former Australian Minister for Defence, WA Governor Kim Beazley was used to demonstrations of complex hardware. But this was an example of homegrown technical innovation developed by an engineer still in his 20s.

The brains behind the Autonomous Hybrid Vehicle – known as AHV-001 – is Luke Beumont Barrett, a Murdoch alumnus (B.Eng. Hons 2018) who combines the practical side of his chosen profession with a strong inventive streak.

"It was great to get the AHV in front of someone like the Governor," Luke said. "We were a little stressed out about the logistics of operating the vehicle in an environment like Government House, but it all went well."

The AHV-001 electric/hydrogen hybrid took 2½ years to design and build, and while it has potentially multiple applications in defence, emergency services, mining, farming and even space exploration, the project was more about demonstrating the creativity and capabilities of Luke's young company – Lycaon Solutions.

"There was no commercial opportunity for it at the time, it was just 'let's build something great'," Luke said. "Having said that, all the mines are automating, all the haul trucks are being automated and we will see that translate to their light vehicle fleets as well.

"The vehicle itself was built to be multi-purpose – knowing there would be a wide range of end-use applications – but it was more about developing capability and capacity for that type of solution. This might not be the product a clients want, but it shows we can do it."

Earlier this year, Luke recognised the need to bring more firepower into the business to ensure it could grow and diversify and Josh Watkins (B.Eng. Hons 2018) – a fellow Murdoch alumnus – was his first port of call.



Luke showing vehicle to former Governor of WA, The Hon Kim Beazley AC KStJ

"Bringing Josh on board was really important because we share the same personal goals and professional ambitions," Luke said. "We want to create an environment of opportunity, where other people can join us and build something that's meaningful not only to ourselves but to the world."

From Josh's perspective, the invitation was irresistible because of Luke's focus and passion.

"There is a significant personality trait that sets Luke apart, that is being able to articulate a clear vision this early in his career," he said. "Its vision mixed with talent – you can have all the ideas in the world but to implement them is an amazing feat."

Both credit Murdoch with their creative approach to engineering solutions.

Josh came to Perth at the age of 18 from California – ostensibly for a three-month backpacking holiday – and never left, working for several years in community development before moving into logistics and procurement. The company he worked for folded, and he had



a choice to look for similar work or pivot in an entirely new direction. He chose the latter, and at the age of 31, enrolled in engineering at Murdoch.

Luke, meanwhile, was a single-minded high school student who knew exactly what he wanted to do and plotted the quickest route to get there. He withdrew from year 12 and enrolled in the former Murdoch Institute of Technology, which provided an early entry pathway into university.

"I just wanted to get on with it," Luke recalls. "I wanted to be in science and technology, and the options at school felt pretty distracting to what I really wanted to engage in. I started my degree mid-year in 2014 and went into the industrial computer systems and instrumentation and control majors."

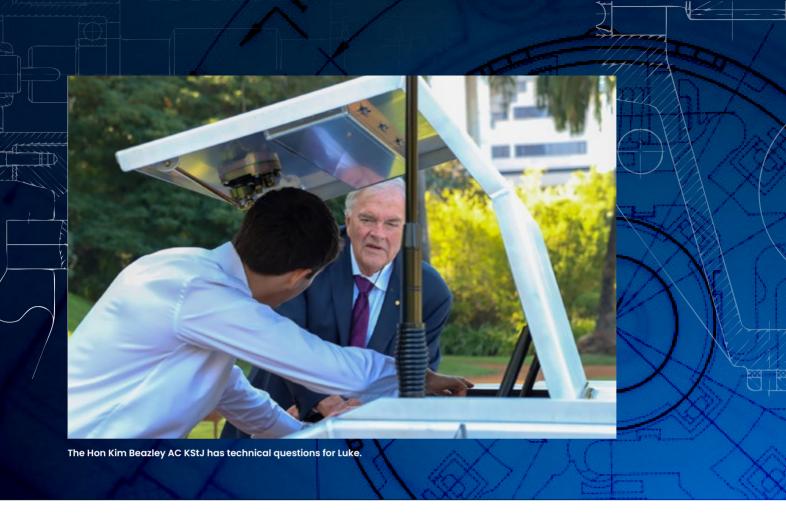
Luke and Josh met in their first year and found the teaching approach of academic staff in the Engineering & Energy discipline fired up their creativity and pushed them out of their comfort zones. Josh Watkins





Luke Beumont Barrett

"We want to create an environment of opportunity, where other people can join us and build something that's meaningful not only to ourselves but to the world."



"The staff at Murdoch really challenged us," Josh said. "It was not uncommon to find students in the labs at 2am grappling with a problem they had set and were determined to solve. This kind of process is tough, but it really sets you up for success in your studies and your career.

"There is also a big focus at Murdoch on ensuring you are industry ready. By the time you graduate, you are able to have conversations with people in industry almost seamlessly. That's a testament to the teaching you are getting and it's a unique skillset that sets Murdoch engineering graduates aside from the rest."

In his final year, along with fellow student Robert Pezzaniti and Alumni Ben Pattimore, Luke developed Geo Risk Systems - a risk analytics platform designed to help clients visualise, monitor and manage risk on a large scale and in real time. Their project was a national finalist in the former Pitch@Palace entrepreneur competition and forecast Luke's commitment to converting new ideas into real world solutions. Luke graduated mid-2018 knowing he wanted maximum flexibility in his career to stretch his creative instincts. That meant going out on his own and within months of graduating from Murdoch, he set up Lycaon Solutions.

"The company has three main areas of focus: renewable energy and electrical engineering; automation – where all the skills we learnt at Murdoch in process control, automated machine assemblies, and really bespoke custom bits of equipment – come into play; and then research and development, where we do a deep dive into the technology and build something from scratch," he said.

Recent projects include the Denham Hydrogen Demonstration Plant, with Lycaon engaged by Hybrid Systems for the development of power generation control systems to manage Horizon Power's 704kW solar asset and plant. Another project has the company supporting the development of Roborigger's autonomous lifting systems in partnership with a Japanese construction conglomerate. "There is also a big focus at Murdoch on ensuring you are industry ready. By the time you graduate, you are able to have conversations with people in industry almost seamlessly."

Academic staff who supported Luke and Josh through their studies see a big future for both. Head of Discipline Engineering & Energy Professor Parisa A. Bahri, said: "As educators, we could not ask for more. While a lot of it comes from their own talent and capabilities, it also shows that we've done something right in engineering which resulted in them using their own capabilities, talents, and creative minds – and with the education they've received from Murdoch – to put it into something that will be useful for the community."

"What blows me away is how far they've come," Dr David Parlevliet, Deputy Head of Discipline, Engineering & Energy, said. "They went from being relatively green to achieving incredible things in their third and fourth year, to what they are doing now."

Luke and Josh are proud Alumni who want to support Murdoch in their careers. They are now talking to the Engineering & Energy team about mentoring opportunities for the next generation of students. Plans are also underway to bring the AHV-001 to the South St campus as a showcase for future and current students.



From there, the sky really is the limit for Lycaon, with plans to continue expanding the business into the key areas of renewable energy technologies, control systems and process engineering.

With growth comes the opportunity to further flex their innate creativity – so ably demonstrated by the AHV-001 – through the research and development side of the business. Proving that Luke and Josh may not be in the driver's seat, but they are in complete control.

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ENDURANCE

While many of us were wrapping up in winter doonas, Murdoch secondyear criminology, forensic biology and toxicology student Fiona Cullinane was busy swimming across the chilly waters of the world's busiest waterway. At the end of July, the second-year criminology, forensic biology and toxicology student completed the 'Everest of open-water swimming'.

Have you always loved swimming?

Yes, swimming has always been a part of my life. From the 'Learn to Swim' program when I was very young. I always did the school holiday programs and nippers every summer.

Have you swum competitively?

Yes, I didn't start competitive swimming until I was 12. However, I had been competitive at the Nippers Surf Lifesaving competitions years beforehand. When I started competitive swimming, I was a pool swimmer. A couple of years later I started doing open water.





How did you find your love for long distance swimming?

When I started swimming at the Rockingham Swimming Club, it was mandatory that each year every swimmer did at least one open water event. I did a 1.25 km swim at Coogee beach as a part of the open water series and fell in love. My coach at the time, Bridget Young, also told us that she used to be a professional open water athlete and that inspired me.

Who are your heroes in long distance swimming?

Bridget was my first hero. I also look up to other athletes such as Kareena Lee, Hayley Anderson and Sharon van Rouwendaal.

L-R Matt Duggan (English support crew and coach), Bridget Young (first coach and inspiration), Fiona, Kate Cullinane (Mum).



What was the swim like?

The English Channel is absolutely unlike any other swim I have ever done. It is so unpredictable, and you have to place so much trust in your support crew and your skipper. For me, the water was a little rough, but definitely not at its worst. I started at midnight, so I spent the first five hours in complete darkness. You are unable to see where you are going or anything around you except for the boat. The currents are also so strong, especially on the French side. This swim tests your mental strength as well as your physical strength. It was by far the toughest swim I've done, but it was completely worth it.

How did you get through the hard parts?

For me, the hard parts were the feeling of loneliness and also the last couple hours where I could see the French shoreline, but it didn't look like it was getting any closer. I was lucky enough to have my former coach Bridget Young on board and she was able to jump in and swim next to me for an hour to keep me company. I also had to give all my trust to the skippers and realise that they would make sure I got through the swim safely.

What was the best part?

Standing up on the French shore and hearing the siren from the boat to tell me that I was done. Standing on my left was a small family cheering me on as I finished the swim.

What was the journey to get there?

The process to become a channel swimmer started three years ago when I put in my application. This is a really popular event, so I was lucky to get a spot even though I was booking three years ahead. I had to choose a registered skipper, complete a medical and provide proof that I could swim six hours in 15° water before I could even register for the swim. This included completing a number of long, cold swims in the Swan River in the winters leading up to the event.

Did you do any 'crazy' channel swim preparation?

Every week throughout winter I would swim in the ocean or the Swan River (no wetsuit, they are not allowed) to acclimatise to the cold. Sometimes the Swan River would get as cold as 9°C. I also did 26-hour swims, as well as completing the Rottnest channel swim as a practice event. In March, I also went to Tasmania and completed the 36km Derwent River swim in 17°C water to practice my feeding plan and race techniques. I trained eight times a week in the pool to build up my power and endurance. Some sessions were as long as three hours.

Who came to support you?

My support crew was made up of my two skippers Reg and Ray Brickell on the Viking Princess II, an English coach named Matt who I hired for his expertise on the channel and swimming, my former coach Bridget Young and my mum!

Did being a part of the Murdoch University elite athlete program help you?

The elite athlete program has been an incredibly supportive of me and my swimming commitments. I was lucky enough to be sponsored by them and they helped me afford this amazing opportunity. Through the elite athlete program, I was also able to get support with my studies, changing some of my units to external while I have been away travelling. I was also able to get deadlines moved for assignments when I had to go away to Tasmania on short notice. Their support has allowed me to continue training and competing at a high level while completing my studies. I can't thank them enough for all the support they've shown me.





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