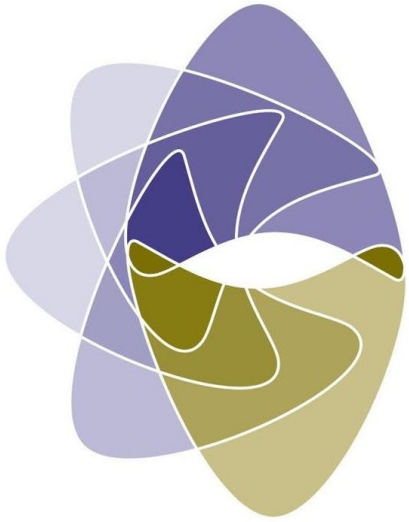
TASMANIAN LEADERS



The future nature of work to 2040

Implications for the University of Tasmania

Tasmanian Leaders Thinkbank

in partnership with

The University of Tasmania

25-26 June 2017

Entally Lodge, Hadspen

The views expressed in this document are those of the participants at this Tasmanian Leaders Thinkbank for the purpose of supporting future thinking of the University of Tasmania and do not constitute a formal view of Tasmanian Leaders Inc.

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EXECUTIVE SUMMARY

This report presents powerful insights and new thinking generated at a two-day Tasmanian Leaders Thinkbank in June 2017, commissioned by the University of Tasmania, on

- the nature of future work in the next 20-25 years
- possible implications for the University of Tasmania (UTAS).

The purpose of the Thinkbank was to inform the University's thinking to the future by considering the future nature of work to around 2040 and implications for the University of Tasmania beyond its current 2025-focused curriculum development initiatives. The Thinkbank participants[1] were 29 graduates of the first decade of the Tasmanian Leaders Program to 2016, all experienced leaders from the public, private and not-for-profit sectors across a wide range of organisations and industries, all of whom employ people, and all deeply interested in the subject matter and wishing to contribute to the University's future and thus to the State's. The diversity of Thinkbank participants would be hard to replicate outside Tasmanian Leaders. They were from the arts sector, mining, agriculture, education, fishing, engineering, medicine, law, public policy, research, volunteerism, surveying and much besides.

Some participants were supported by their employers to attend; the majority volunteered their time as did the facilitator[2]. The estimated collective contribution is more than $80,000 to support the future of the University and Tasmania. The Thinkbank would not have been possible without it being commissioned by the University, the venue and other essential costs therefore being covered.

There was pre-reading[3] and pre-work[4] and three visiting speakers at the Thinkbank[5]. The bulk of time over the two days was in small groups working on five key areas identified by the participants that would have future implications for the University of Tasmania. They were people, 'skilled and unskilled', technology and data, sustainability, and leadership. The participants imagined a future world in 2040 based on trends and assumptions, defined their impact on the future nature of work in each key area, and formed views about the possible implications for the University of Tasmania.

The reader is encouraged to read the full report and delight in the powerful and rich new thinking that emerged from the Thinkbank.

The summary is:

- In 2040 Tasmania is the destination for life-long learning and thinking differently.
- In 2040 people are the key currency.
- Leadership is the key enabler, with technology and data facilitating change for the people of the 2040 workforce.

[1] See Annex 1 for list of participants
[2] The facilitator was Gillian Biscoe AM, a founding and current member of Tasmanian Leaders Board, TL Alumni (by invitation) & Executive Director, the Bellettes Bay Company Pty Ltd
[3] See Annex 2 for pre-readings
[4] See Annex 3 for analyses of specific professions or roles to the future
[5] See Annex 4 for bios: Professor David Sadler and Karen Hayles from UTAS, and Loretta Joseph, the *Fintech Australia Female Leader of 2016* and the recipient of Sancta Sophia College (within Sydney University) *Alumni Award 2016 for Social Impact,* speaking on technology including the transformational potential of Blockchain

- The University FOR Tasmania in 2040 produces creative, solutions-focused graduates with the transferrable skills to achieve success through their various careers.
- The University is in a special position to contribute to the development of Tasmania and Tasmanians
- 2040 will require something different from today, the status quo is not the way forward
- The University's response must start with the student as a client and the needs of organisations and the community, not the University
- The focus will be on knowledge, skills and capabilities, not merely qualifications
- Lifelong learning – the investment in education and development will be spread more evenly over a working career and not all done at the beginning
- The University should engage with clients over the course of their career with a 'case manager' approach that connects with clients at regular intervals not just helping them prepare for their first job
- The world of work and jobs will be more fluid and educational offerings will have to be adaptable and responsive – no 'one size fits all'
- Offerings must help make clients 'work ready' and able to do the job and not just full of knowledge
- Some courses will be more vocational and more similar to current offerings, such as medicine
- Offerings will include improvement in life and work skills not just academic knowledge
- Delivery modes will be varied with an increasing emphasis on off-site and online and may involve an increasing range of people with different experience and expertise, and Thinkbank-like approaches
- That said, the University experience is a combination of education, vocation and the campus experience and all three should be catered for
- Research continues to be important
- The University **for** Tasmania focuses on a smaller number of things it does excellently (such as currently with Marine science) and develops a regional and global reputation for the things it does best, attracting quality clients and staff
- The ability of all to use technology and information increases in importance. University staff will be high quality teachers and facilitators of learning with practical experience, supported by technology.
- The University leads the necessary cultural change around higher learning in Tasmania including acting as a broker with other providers to meet industry needs.

Tasmanian Leaders thanks the University of Tasmania for commissioning this important Thinkbank and it thanks the Alumni who participated and who collectively produced such powerful, insightful, new critical thinking. Tasmanian Leaders is committed to the future of Tasmania through its Alumni - exceptional leaders with impact beyond the ordinary. We commend their thinking as an input to that of the University of Tasmania on its future directions towards 2040.

THE REPORT

1 Introduction

This report presents powerful insights and new thinking generated at a two-day Tasmanian Leaders Thinkbank in June 2017, commissioned by the University of Tasmania, on

- the nature of future work in the next 20-25 years
- possible implications for the University of Tasmania (UTAS).

The aim of the Tasmanian Leaders Thinkbanks is to generate new thinking to support positive change in Tasmania. Thinkbank participants are drawn from the diverse Alumni of the Tasmanian Leaders Program (TLP) - now in its tenth year.

The purpose of this Thinkbank was to provide input to the thinking of UTAS to 2040, beyond the focus of its current curriculum change initiatives to 2025. The thinking generate was new, rich, powerful with the aim of it being a critically useful input to the future-focused thinking of the University of Tasmania.

There were twenty-nine participants at this UTAS-commissioned Thinkbank from all sectors across Tasmania - and from TLPs since the first a decade ago. These thought leaders came from the public, private and non-government sectors, from entrepreneurial start-ups to multi-nationals to government departments to the university sector to social policy and support not-for-profits. They were from the arts sector, mining, agriculture, education, fishing, engineering, medicine, law, public policy, research, volunteerism, surveying and much besides.[6]

As is the ethos of Tasmanian Leaders, the participants and facilitator[7] gave their time voluntarily where not supported by employers or where self-employed, deeply interested in the subject matter and wishing to contribute to the University's future and thus to the State's. The estimated collective contribution is more than $80,000 to support the future of the University and Tasmania. The Thinkbank would not have been possible without it being commissioned by the University, the venue and other essential costs therefore being covered.

2 Methodology

A range of pre-readings were provided[8] and participants encouraged to do further readings based on their own research before the Thinkbank.

Each participant was also asked to research and analyse the nature of their particular work and industry in three time spans - 20 years ago, now, and projections 20 years to the future – and to bring their written analysis to the Thinkbank to generate the beginning discussions.

[6] A list of participants is at Annex 1
[7] Gillian Biscoe AM, a founding and current member of Tasmanian Leaders Board, Alumni member (by invitation) and Executive Director, The Bellettes Bay Company Pty Ltd
[8] See Annex 2 for pre-readings

These analyses individually and collectively provide unique and powerful insights into perspectives on the nature of work in the future by specific professions and roles.[9]

Three speakers provided further context to stimulate thinking. Professor David Sadler of UTAS presented the current curriculum change initiatives to 2025. Karen Eyles also of UTAS presented demographic trends and issues. Loretta Joseph presented current and future digital disruption scenarios driven by Blockchain technology including digital currency.[10]

The Thinkbank participants identified five key areas that have implications for the nature of the future work and therefore have implications for the University of Tasmania:

- people
- 'skilled and unskilled'
- technology and data
- sustainability, and
- leadership.

The bulk of time over the two days was in small groups working on these five key areas – imagining a future world in 2040 based on trends and assumptions, defining the impact on the nature of work in each key area, and forming views about the possible implications for the University of Tasmania.

3 Structure of Report

The thinking generated by each of the small groups is presented below under each of the five key areas – people, 'skilled and unskilled', technology and data, sustainability, and leadership. The words are those of the participants in each of the small groups to preserve the richness of thinking as well as the innovative diversity of approaches including some possible scenarios and hypothetical case histories. Key thinking that emerged is presented in summary form at the end of the report and in the Executive Summary.

4 The Five Key Areas of Focus

4.1 People

People – The Imagined Future

There will be increased opportunity to access knowledge through multiple means.

Day to day tasks will become automated, domestic technology will focus on convenience and efficiency.

The rate of change will become so fast that change will become the norm.

[9] See Annex 3 for a sample of analyses on the future nature of work by participants on their specific professions or roles
[10] See Annex 4 for brief biographies of each speaker

An appetite for change will be essential, which will challenge some individuals. Therefore, change will affect some groups more negatively.

Technological advances may create a greater divide of class. Alternately, they may create opportunities for employment and income production (such as the hiring of your driverless car) which could in fact improve the lot of some. So, technological change will bring great benefit to some and disadvantage to others.

Human relationships will be at risk through the replacement of face to face interaction with virtual communication. The emerging lack of real human influence will necessitate deliberate investment of time to develop human interaction/relationships skills.

Ethical development and adoption of technology will be critical. The increased availability of data will require traceability and accountability.

People will have a more global view of the world. Tasmania will be more diverse in culture and more accepting of diversity.

People – The Future Nature of Work

The focus on reducing waste; sustainability; ethical food production; ethical performance of all work; and improved occupational health and safety will become ingrained in every organisation and thus may create employment opportunities.

Many existing low skilled work options will disappear, while new entry level occupations will emerge.

People will travel and engage in recreational activities more, with work-life balance tipping towards life.

More people will work for themselves, working when required rather than 9-5.

Currently our work defines our identity. However, identity will be less connected to your job in the future due to the part time nature of work and the transient nature of work and careers.

Work and leisure will morph with less clear delineation between the two and flexible work arrangements will encourage a greater focus on leisure.

There will be greater ability to change ‘careers’/jobs, and more flexibility within jobs

Globalisation of the labour force has allowed outsourcing of labour at low labour rates.

People – Implications for UTAS

Learnings will increasingly become more accessible and affordable from a greater number of providers – including free providers such as The University of the Third Age and MOOCs.

UTAS should become more focussed on what is required by the client (student) resulting in delivering the education that the individual requires, at the time it is required and by the means required. UTAS is currently supply driven rather than demand led.

As we lose unskilled labour demand, the 'by-product' could be a large 'redundant class'. University is already divisive of class and will need to address UTAS' relevance to all classes. University may need to become classless and concentrate on making society work-ready. The market may demand that universities provide all work ready programs – including those currently delivered by TAFE for example – for both economic and equality reasons. This would require legislative change.

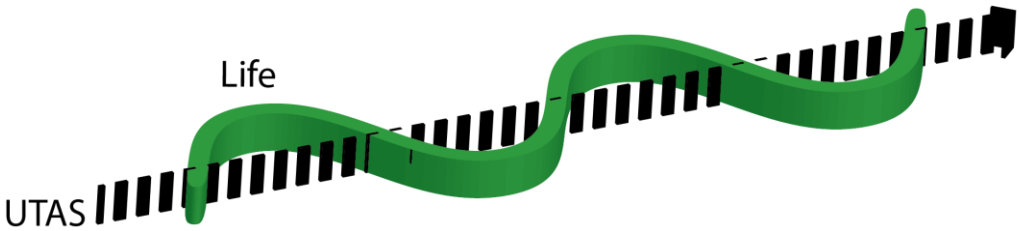
If we only educate people to do what they require at the time they require it (rather than obliging students to complete full degrees containing some content irrelevant to the individual) we could afford to provide this at no cost; thus, removing the perverse incentives to attract students rather than provide excellence in education.

Learning will become more accepted as an ongoing concern. Curriculum will not be in strict structures but more customisable to suit the individual. The traditional bachelor degree will be of less value or redundant. Lifelong learning will become the norm where you regularly re-engage with learning as your skills/knowledge requirement increases. Learning while you're earning.

Outcomes will be measured, and only institutions providing the most focussed and highest quality education (measured against work readiness) will survive.

Studying will be a means of adding to your individual profile – specific units for specific purposes.

Greater acknowledgement of prior learning and an assessment of current skills will become the norm rather than requiring redundant learning.



4.2 Technology

Technology – The Imagined Future

Ubiquity

In 2040, technology will be ubiquitous – it's in everything and simply part of daily life. The Internet of Things means most things we use have sensors in them and collect, use or generate data in some way. Interoperability will be seamless. For the most part, you don't even know technology is there.

Single sign-on

Each of us will have a single ID that allows us to sign on to all the services we need. Whether it's a device or a chip under our skin, it will allow us to unlock our home, pay for items, access government services. It will replace passports, keys, passwords and drivers licenses.

New infrastructure

People like Elon Musk have invested in 'blue sky' projects like getting people to Mars. Pushing for big goals like this has ancillary benefits of producing new technologies that benefit society and also rebuild enthusiasm for technology and science in the broader population. Other entrepreneurs have replaced traditional infrastructures like 'the internet' and energy grids have been replicated or replaced as people tire of waiting for governments and corporations to deliver.

Smart machines are our co-workers and supervisors

In a world of smart machines that can drive cars, beat humans at chess, advise on medical diagnoses and perform a host of other tasks, machines will increasingly make workplace decisions that previously could only have been made by human managers. We will delegate work to machine co-workers. This means fewer menial tasks, possibly more leisure time and greater quality of life. Instead of people having to learn how to use technology, technology will learn from and adapt to us – so the concept of 'digital natives' is no longer relevant. Artificial intelligence (AI) means we need fewer people and family sizes in both developed and (currently) developing nations begin to fall. There's the potential that technology may help us become more sustainable as a species.

Rise of the digital ecosystem

Organisations will still exist but they will be part of a 'digital ecosystem'. In the past Apple created a device (the iPhone) and an entire ecosystem was built around it. Now, we're seeing the emergence of 'digital giants' like Google, Amazon, Tencent and Alibaba already control or 'intermediate' between businesses and consumers. Next, new companies that don't currently exist might own the relationship with your customers too – and you'll need to figure out how to work with them. These ecosystems will be across national boundaries. Organisations in Tasmania may partner and work with those in Israel, China or elsewhere.

Technology – The Future Nature of Work

We are no longer deskbound, but completely mobile. As technology allows us to work anywhere – on campus, in the office at home or in Berlin – our concept of working hours and leave has changed. Data will be anywhere, any time on any device.

People will have multiple careers and jobs over their lifetime. They will also have multiple income streams and different ways of earning money, from selling services online (for example the YouTubers and Instagrammers of the future), investing in digital assets and currencies and freelance work. The 'traditional 'job' has evolved (less 9 to 5) and what is considered 'work' has expanded.

There won't be a corporate value called 'teamwork'. Instead, people will work in deliberately designed small and flexible teams to cope with fluctuating workloads and shrinking timeframes.

They will come together for a specific project or outcome and then disband. Many of these people will be freelance workers and entrepreneurs who create their own roles and jobs.

Technological change will give rise to new careers and new skills needed, including:

- Design – the human element in technology
- Integration skills - how to integrate systems, data
- Service manager or broker – rather than implementing IT, someone will need to bring together elements to deliver a service or outcome. This a more people oriented than technical role.
- Regulation (law) – will be needed to change current governance structures to deal with new technology
- Digital ethics – how technology is used, privacy requirements

Technology – Case Studies, a look into the future

Barry – 42 years old in 2017

- Bachelor degree
- Employee Accountant
- Drives a Kia
- 2 children – Lily, Daisy & Sharon
- Been in the job 20 years.
- He is noticing the role is changing to automation, no longer a need for manual bank reconciliations, clients' needs are changing to more advisory.
- He wants to consider entering into the new career of coding and using his accountancy skills.
- He is considering courses in project management, coding to up skill.
- He doesn't want a qualification, but wants the skills.
- He was made redundant, and with his severance package he wants to up-skill in min time and use proceeds to fund this.
- He finds that his opportunities are limited because he has to fit in with an existing structure, under a semester model, on campus and the awarding of the paper required will take longer than his redundancy payment. He is ideally looking

10 years forward, Barry is 52 years old

- He found some short course through TAFE because the university sector wasn't flexible enough. He worked for a while in IT, but fell back into an IT finance type role.
- Not too many financial concerns.
- He is 50% through his part time specialist computer science, giving him more intellectual fire power re AI etc in his filed, as is looking forward to working the next 20 years of his life.
- He is still going to work for the man full time and see's that's at 62 he will

10 years forward, Barry is 62 years old

- He has now added a teaching qualification and is now teaching a broad age and ethnic (global) base in computer science focused in the finance sector.
- He loves the flexibility of the delivery for him in the virtual classroom. Sharon loves that she now has her man at home more often.

Daisy – 14 years old in 2017

- Instagram following of 25,000+
- Music industry as a career is her preference. Not sure if tour manager, retail, groupie, roadie etc
- Paid by marketing companies to leverage her Instagram following
- School has been part time since age of 14. School has been traditional to this point, but now school is not suited to the way she wants to develop her work life.
- Technology has allowed her to generate income without traditional qualifications. Dad thinks she needs a uni degree, she doesn't agree. She doesn't want to be corralled into a single career focus.
- She works this way for 10 years.
- Leveraging her 'social media platform', unstructured way, building her brand.
- She now see that she might need to enhance her skills to continue to generate an income

10 years forward, Daisy is 24 years old

- She needs to go back to a higher education/skills environment to understand what her next step will be.
- She has become consciously incompetent and she understands she has gaps, but not sure what the gaps are.
- A skills gap will be undertaken online through a HR/uni portal.
- She wants a solution to skilling up to become a marketing consultant.
- She asks the skills gap portal to suggest institutions that will deliver the course. She will then sign up to an/many institutions to have them provide the course, the platform and the collaboration network for her to collaborate and to gain the min competencies to establish herself as a consultant. This needs to be achieved in the min time.
- She doesn't want a piece of a paper.

10 years on, Daisy is 34 years old

- Family started 5 years ago.
- Family and lifestyle is most important.
- Has a partner and child.
- She wants to secure her income future.
- She has a business that has connected in a freelance model to service her marketing consultancies.
- She now wants to go into the aged care and is looking to undertake structured study in the field of Nursing. Course work and on the job training.
- She contacts potential employers

Lily – 4 years old in 2017

- Entering school.
- Absolutely comfortable with technology. She is a 'techno/digital native'.
- Use of technology in the classroom is the norm.
- She communicates with her friends via social media.

10 years' time, Lily is 14 years old

- Maths, science, coding, English, communication, collaboration and entrepreneurship core subjects.
- Career choices are high end professional work i.e Doctor (Neuro Surgery)
- Extension courses offered leading in her direction of study. It is a funded option
- Curriculum is not strict it is delivered via predominantly human means.

10 years' time, Lily is 24 years old

- About to graduate and has been offered a position in a private brain institute.
- Specialisation and ongoing development are being met by global institutes online and virtual.
- She is interested in neural data transfer science and brain transplants.

Technology – Implications for UTAS

UTAS might therefore consider:

- Providing cross-disciplinary study
- Component-based degrees – break courses down into skills needed for a specific or generalist role
- Bring together students to work collaboratively and learn 'on project' – may be physical or virtual
- UTAS could be a 'broker' or central agent of higher education: a Centre of Excellence in certain disciplines such as Marine Science, Nursing, Agribusiness and broker access to other courses from other universities
- Lifelong learning – the concept of the mature age student is dead. However, many more people will need to combine work with study and online/virtual delivery will grow.
- Virtual real-time connection of students to courses and other students around the world, even for specialist study. For example, virtual reality headsets present medical students with a virtual cadaver rather than requiring them to be in the laboratory. Architects and engineers can view their work via VR (technology as an enabler)
- Few 3-4 year degrees
- Universities will still need to provide fundamental degrees like medicine, law, but how the content is delivered and consumed will be different.

4.3 Sustainability

Sustainability – The Imagined Future

Sustainability was defined as *"meeting the needs of the present, without compromising the ability of future generations to meet their own needs"* (Brundtland Commission Report 1987).

Three scenarios were developed -

- Business as usual – no substantial change to trends in existing condition (2017)
- Dystopic future – major societal disruption resulting from climate change
- Utopic future – societal advancement based on achievement of United Nations 17 Sustainable Development Goals (SDG's)

Discussions on the three scenarios are presented under nine subject headings, chosen because they represent a holistic coverage of sustainability based on systems thinking and the three pillars of sustainability of environment, society and economy –

- population
- food
- energy
- transport
- connectedness
- education
- commerce (business and transactions)
- resources (water, biodiversity, waste)
- governance and leadership.

	Population	Food	Energy	Transport	Connectedness	Education	Commerce (Business and transactions)	Resources (water, biodiversity, waste)	Governance& Leadership
Scenario 1 **Business as usual**	Tas gradual increase, aging population	Development of niche local food industries. Boutique industry. Current bulk commodities	Slowly changing from fossil to renewable Still arguing about energy target Government decision making non existent Private sector taking the lead Energy poverty developing	Non-integrated public transport Slow changes – sharing economy for transport Some advancement in active transport	Community overlap One state government Interconnected local government No civil unrest High levels of social media use – technological use Acceptable levels of aged care options. Acceptable levels of childcare options Access to education provision Access to residential care for the ill Unreliable global connection due to high dependency on basslink	High levels of low numeracy and literacy Recognition of this is an issue Structure, accessible K-12 Public technical and skills lifelong learning education cut back University commits to breadth and debt and appropriate courses Articulation is difficult and pathways unclear	Central focus Capitalist based system Level of government intervention to protect those in need	Good regulations and structures to protect and manage resource base Scrutiny of practice Some disconnectedness – acting in silos	Stable Low sovereign risk Democratic

	Population	Food	Energy	Transport	Connectedness	Education	Commerce (Business and transactions)	Resources (water, biodiversity, waste)	Governance& Leadership
Scenario 2 **Dystopic future**	Tas substantial increase (climate refugees))	Unable to produce Climate prohibits crops Input cost of food of higher Opportunities for appropriate new markets (cold climate) We can feed ourselves but minimal exports	Locked into high price diesel, stay focussed on fossil fuel. Energy prices out of reach, people suffering illness and death due to lack of home heating Energy poverty widespread with no assistance	More active and public transport due to oil shortage Increasing t'port Disadvantage. More expensive to transport goods and products Highly vulnerable to supply chain impacts Isolation	Civil unrest Loss of common identify and values Minimal access to technology use through lack of funds No international connection for internet and energy Isolation	Only difficult to access available to elite – high cost What is pubic Extreme levels of low literacy Slave labour	Controlled be elite Back to Barrons Own wealth – no sharing of resources No sexual/ gender acceptance or equity – Re-masculinised world	Peak usage No security of supply (quantity and quality) Toxic waste Contamination of other resources Resources controlled by few Lack of regulation of natural environment Poisoned food sources Extracted approach controlled by few Widespread environmental damage and societal infrastructure destroyed Homelessness	Corruption Unstable Required to be focussed on collecting outcomes not individual wellbeing, for the greater good

	Population	Food	Energy	Transport	Connectedness	Education	Commerce (Business and transactions)	Resources (water, biodiversity, waste)	Governance& Leadership
Scenario 3 **Utopic future**	Steady state population-demographic more evenly distributed	More speciality crops. High nutrient focus. Cropping land at a premium so crop yield is high High sustainable productivity	No energy poverty Complete distributed energy Energy equity All renewable Completely integrated supply, use, technology's, (batteries, hydro-storage)	Bike lanes highly used Cargo bikes No fossil fuels Equitable access to infrastructure Connectivity all pre-planned	Not limited by physically constrained by connections Fully integrated node to the global network Full ownership of identity Self-managed connectedness	Fully integrated pathways and articulation Full societal literacy Targeted individualised learning Diagnostic learning High ROI for government Multilingual focus Valued diverse skills and learning	Fair trade ???	More integrated, long term management based on science Optimisation of land use/ planning Recognised value of biodiversity Fully valued eco-systems services	Full franchise Democratic Uncorrupted Inclusive

Sustainability – The Future Nature of Work

Scenario 1 – Business as usual – Some Choice

Our worker needs an environmental awareness, triple bottom line focus and the support of others. Low skilled workers may transition to other low skilled industries but will still need retraining.

Low skilled workers moving to emerging markets will need breadth of skills, ie IT knowledge, Contract intelligence.

The pathway of this transition to different work will entail -

- Awareness of skill deficiency
- Access to higher education / training ($, contacts, resources)
- Peer or professional support ((guidance)
- Commence re-training with an applied focus (relevance)
- Application of new knowledge
- Evaluation and monitoring
- Succession planning / change of pursuit

Scenario 2 – Dystopic future – No Choice

Our worker will have predetermined work choices based on the requirements of the community. Limited opportunities determined by geographical and genetic and societal factors. No skills are required other than what is needed to do your job, narrow scoping of skills and education. Power is in balance in the workplace. There is low innovation, low productivity, low incentivisation, no self-motivation or actualisation.

This will entail -

- Meeting basic needs
- Return to manual labour
- Highly regulated workplaces
- Intergenerational households
- Refugees admitted to State only to fill particular roles
- Low childbirth rates
- Return to traditional gender based work places
- Education providers will receive direction on courses

Scenario 3 – Utopic future – Unlimited choices

Our worker will be able to follow his or her passion. S/he will have a high level of self-awareness. Innovation and curiosity are essential, in a forward focussed, multi-disciplinary workforce with the aim of self-actualisation.

In this scenario -

- Highly connected – socially and technological
- Data driven
- Competitive but collaborative
- Minimal waste
- Highly contextualised
- Artificial Intelligence used at the disposal of humans whose tasks focus on development of strategy and compassion
- Minimal healthcare is required due to a healthy and active population
- The focus is on meaningful, good work with equal time spent between work activity and leisure
- Relationships vital
- High birth rates

Sustainability – Implications for UTAS

Scenario 1 – Business as usual

- Continued regional presence
- Depth and breadth of offerings
- Research intensive
- Focus on teaching quality
- Financially sustainable

Scenario 2 – Dystopic future

- Highly regulated operating environment
- Focus on applied learning and skilling
- Loss of breadth in learning
- Fewer campuses with more specialisation
- Balance shifts in favour of VET over University education
- No international students
- Work integrated learning programs is institution centric

Scenario 3 – Utopic future

- The university is part of integrated life long educational journey
- Flexible delivery
- Individualised learning
- New campuses that are innovation dense and demonstrate leadership in sustainability
- Carbon neutral
- Work integrated learning is student centric
- Global leader in attracting international students

4.4 Skilled and Unskilled Workforce

We are rejecting the traditional definition of people being un-skilled as we recognise that all people have capabilities. People who have traditionally been classed as skilled have formal qualifications however all people have capability that could be recognised in a formal assessment methodology.

Skilled and Unskilled Workforce – The Imagined Future

The future in 2040 will be a more automated, technology based world, faced with disruption and change at a faster pace that we experience in 2017. Many roles, careers that we have today will not exist or have been automated. Many new and different role and jobs will have been created.

Skilled and Unskilled Workforce – The Future Nature of Work

Some skills may become non-existent and many more may be created because of a divergent and fluid environment.

People will still have the ability but not the qualification.

People will need to be more flexible, resilient and adaptable to change and disruption.

The world will be more flexible.

Skilled and Unskilled Workforce – Implications for UTAS

With an expectation that employment opportunities for 'unskilled' labour will contract, there may be greater scope to provide 'qualification occasions' - short bursts of education, training and development - for experienced workers displaced by industry disruption, which could result in new windows for engagement with tertiary study.

These occasions are likely to be phased, reflecting the work experience and life stage of the learner. We also anticipate an increasing emphasis on partnerships with employers whereby academic pathways complement and supplement workplace learnings.

This model could represent a succession of engagement that genuinely results in life-long learning.

The future will see diversity of a multi-generational workforce that is reflected in University and vocational training. The distinctions between institutions may be less significant; what will be more important is their understanding of the role they play in education and partnering with employers.

Universities will benefit from providing shorter and more dynamic course offerings that attract a wider cohort of students, with a higher proportion of candidates completing their course of study. This greater relevance will both protect the funding universities receive from government, and attract new investment from employer partners.

Skilled and Unskilled Workforce – Scenarios

Scenario 1 – Status Quo

Under this scenario there is no action for UTAS, however the environment is reviewed in five years.

Opportunities	Risks
No change and associated issues	Losing market share and academics

Scenario 2 – Moderate change

- Under this scenario UTAS makes moderate changes over time to adjust to the new environment. The overarching principles are:
- Demand for specialisation
- Unsustainable funding for property development
- Focus on core business
- Don't be everything for everyone
- Focus on quality outcome and what UTAS is especially good at (competitive advantage) eg marine (IMAS), health research (Menzies)Focuses on the specific needs and personal skills (eg emotional intelligence)
- Reflects actual Industry needs
- Be best at what UTAS does
- Integrate courses with industry
- Integrate courses with soft skills – communication, presentation, writing for work etc
- Streamlined
- Benefits mean that **qualifications = capability** so the student graduates ready and skilled
- Student clearly recognised as a client
- Campus life is part of the student experience

Opportunities	Risks
Recognised regional/global specialist in particular fields To be the best of our type Leverage off current success	Other universities have greater competitive advantage in the areas UTAS identified We don't get it right in the type of university to be and specialise in
Opportunities to increase presence where emerging demands: - IT - Data analysis - Change management	Reputation and capacity/capability of the academics to support Administrative processes to improve the student's experience
Integrating work ready learning into courses.	Entering in markets that are better placed to be delivered by other organisations.

Opportunities	Risks
New markets: - Add on courses to keep *students for life* and facilitate career change (eg short post grad course) - Soft skills - Mature aged learners	Identify the right courses Structure courses so that they suit the demands of clients face to face online
Attract and retain the staff who want to be here (Tasmania is home) not a springboard to elsewhere	Competitive attraction strategies from other universities (particularly salaries)
Reinvent the alumni concept as life learning members of UTAS with personalised case managers who regularly contact and engage Personal relationship with past and present students about emerging opportunities	Capacity to meet expectations of all current and past UTAS graduates.
Invest in Academics and facilitators of learning to be engaging and great lecturers, able to transfer knowledge Students engaged in learning	Fun aspect erodes the reputation

Scenario 3 – Extreme Makeover

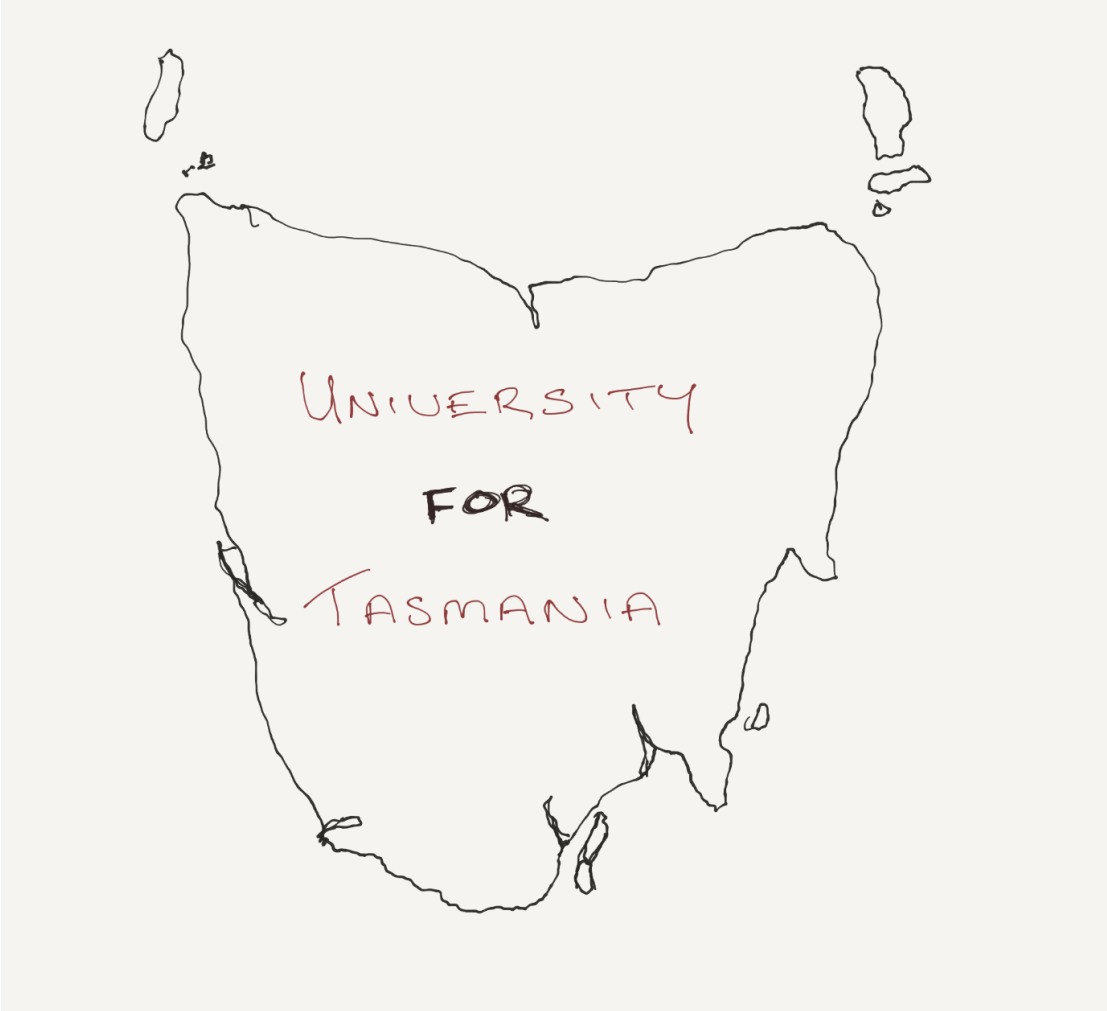
In this scenario UTAS responds with significant change to structure and how the courses are offered. The changes include

- A new model to deliver university courses with a predominant on-line presence, and integration with other learning institutes and private sector in the design and delivery
- Significant restructure of UTAS to align new course with significant integration of work ready skills
- Restructure of the academic staffing structure to separate teaching and research
- Globally competitive market
- Individually tailored, digitally delivered learning
- Campus life does not exist across most universities

Opportunities	Risks
Online services and reduced number of courses, frees up resources to deliver more	Mobility of resources, staff and clients
Recreate campus life as a purpose in itself. - Reinforce the interaction/life learning benefits of being part of an institution - Growth as people	Not seen as core university function
Be world leaders as the norm	Increased competition and pressure to maintain services

4.5 Leadership

Leadership – The Imagined Future



Vision

A University **FOR** Tasmania that produces creative, solutions-focused graduates with the transferrable skills to achieve success through their various careers. Tasmania becomes a destination for life-long learning and thinking differently.

Our broad assumptions about this future include -

- Resource (un)availability – scarcity of global resources (food, water, energy), how to we ensure we can meet local needs whilst also positioning Tasmania as a food bowl to feed the world.
- Education – there is increased competition in the higher education sector – with courses accessed globally not just locally and a myriad of providers in the marketplace.

- Skills – Tasmanians need different core and transferable skills to enable ongoing workforce participation. Employers will place less value on traditional Bachelor degrees and there will be a greater emphasis on courses that are flexible, short, problem-based and interactive.
- Employment - increased automation, reduced jobs in traditional industries (manufacturing) and in all sectors.
- Increased access to data and information – more than ever before
- A workforce and student cohort of i-generation learners
- Traditional degrees won't exist, there will be substantive HE sector reforms and an emphasis on problem-based learning.

Leadership – The Nature of Work

- People will be working different hours – the traditional working week structure will be redundant
- Less hierarchy - more people fulfilling the role of leaders – greater individual responsibility, greater risk-taking with people feel empowered to solve problems.
- Portfolio workers – mix and matching jobs and activities
- Mass entrepreneurialism - we operate in an environment that enables more innovative thinking due to reduced regulation, greater sharing and use of technology
- A knowledge economy – continued expansion of technologies that disrupt and change traditional models in our economy
- We have increased numeracy and literacy and digital skills in school age students and then in the workforce
- People continue to have multiple careers and jobs across sectors
- Values-based and community led decision making with an emphasis on diversity and equity
- Tasmania continues to harness natural and competitive advantages
- Tasmanians are thinking (and working) globally
- Ever increasing volume and velocity of data and information for us to process, analyse and interpret
- A reformed higher-education sector with a funding model that enables Universities to be more agile and respond to demand

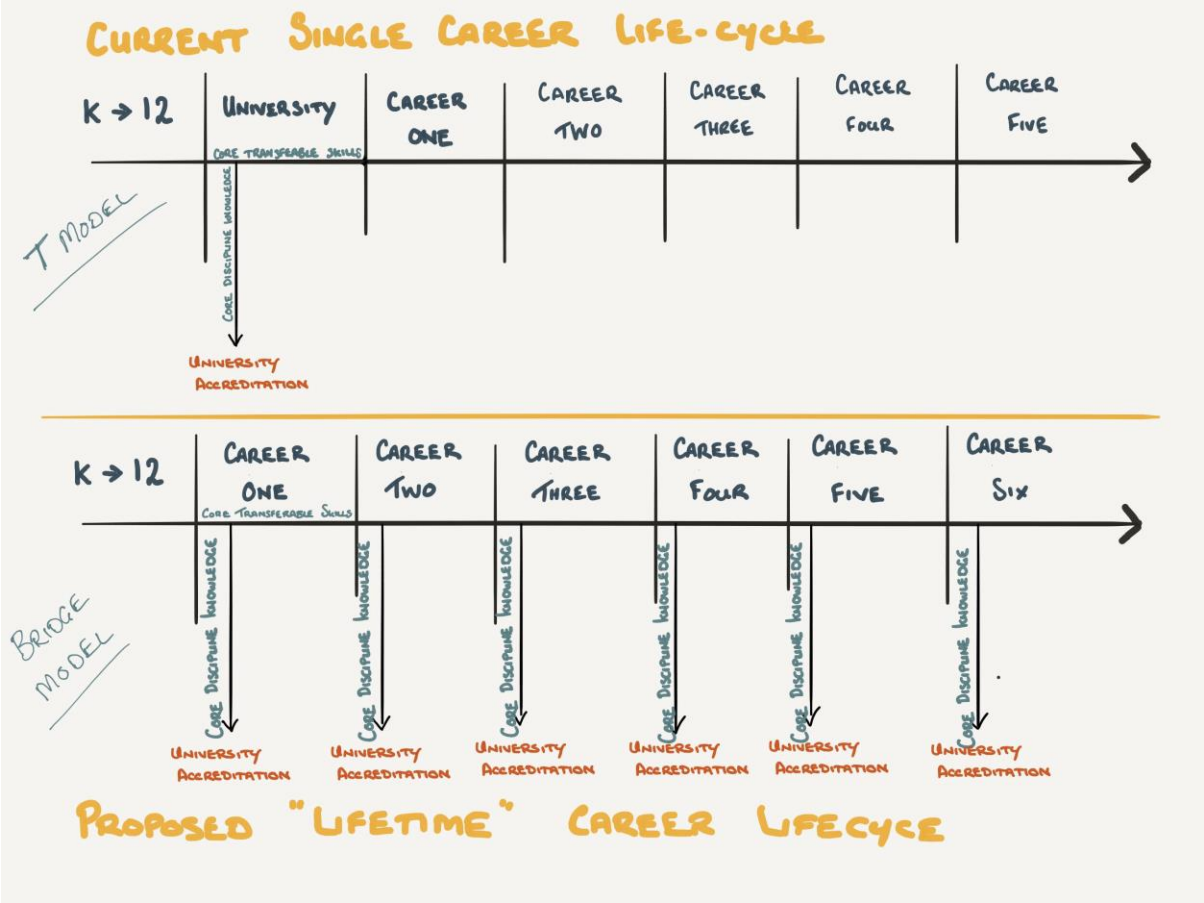
Leadership – What sort of leaders will we need?

- Greater emphasis on 'change leaders' that are authentic, ethical and connect remote teams
- Bringing order to uncertainty, making sense of an ever-changing world
- Leadership style needs to be more about co-designing our future with our people
- Still a role for decisiveness and clear direction, but requires more inclusive, facilitation, connected approach
- Role of the leader is help others make sense of more and more data

- Empower and enable people in the decision-making structures of Tasmania and the University
- As leaders we need to help our people to be problem-solvers, to adapt and develop solutions and be able to do that quickly.
- Emotional intelligence is even more valuable than work experience
- Understanding of technology to assist us to lead and manage

Leadership – Implications for UTAS

We propose a new disruptive approach by the University **FOR** Tasmania that acknowledges the multiple career trajectories of students and the broad transferrable skills required for workforce participation in their life-time.



- This requires a shift to a more 'student-centric' approach to curriculum development and delivery that is agile and flexible whilst retaining quality standards
- The University of Tasmania becomes known as a destination where people come to gain the skills and knowledge that are relevant at multiple points in their life – not just in the tradition post-year 12 pathway.

- User experience / needs of students and employers must drive course design and how it is delivered in the future
- Applying knowledge back in the workplace is a crucial part of new courses
  Re-framing the 'place' of Universities in our society – you come to University to learn and grow not to learn what you need to know to get your first job. We need to develop ongoing relationships with students is important eg don't just teach them for the first career, but re-engage them for the second, third, fourth careers
- The University will need to work within the government policy settings of the day

What will UTAS deliver?

- Acknowledge that there are some fundamental 'horizontal' core transferable skills that are now required
- More skills in analysing, interpreting and making sense of data
- Digital literacy is essential
- Problem-based learning is embedded across all units and degree programs
- Solutions-focused lens and applied learning opportunities, including work-integrated learning
- Multi-disciplinary
- A system that enables and encourages a life-long relationship with the University
- Core competency – horizontal skills that supplement the vertical specialisation

How?

- Applied learning opportunities in all degree programs
- Different type of learning informed by 'thinktank' research/ thinktank style classrooms such as this Thinkbank
- Provide a place for connected conversations and innovative thinking (teaching and research)
- Design the infrastructure so it provides 'bump' spaces for the unplanned conversations
- Flexible teaching spaces to facilitate conversations and creative teaching methods
- Part-time, shorter courses that are designed in partnership with workplaces and employers
- Active learning supported by technology to connect
- Invest in high-quality teachers that are knowledge experts with practical experience
- Have teaching staff that have skills in facilitating
- The University leads cultural change within the Institution and in Tasmania around higher learning.

5 SUMMARY

In 2040 Tasmania is the destination for life-long learning and thinking differently.

In 2040 people are the key currency.

Leadership is the key enabler, with technology and data facilitating change for the people of the 2040 workforce.

The University FOR Tasmania in 2040 produces creative, solutions-focused graduates with the transferrable skills to achieve success through their various careers.

Other key thinking that emerged from the Thinkbank included:

- The University is in a special position to contribute to the development of Tasmania and Tasmanians
- 2040 will require something different from today, the status quo is not the way forward
- The University's response must start with the student as a client and the needs of organisations and the community, not the University
- The focus will be on knowledge, skills and capabilities, not merely qualifications
- Lifelong learning – the investment in education and development will be spread more evenly over a working career and not all done at the beginning
- The University should engage with clients over the course of their career with a 'case manager' approach that connects with clients at regular intervals not just helping them prepare for their first job
- The world of work and jobs will be more fluid and educational offerings will have to be adaptable and responsive – no 'one size fits all'
- Offerings must help make clients 'work ready' and able to do the job and not just full of knowledge
- Some courses will be more vocational and more similar to current offerings, such as medicine
- Offerings will include improvement in life and work skills not just academic knowledge
- Delivery modes will be varied with an increasing emphasis on off-site and online and may involve an increasing range of people with different experience and expertise and Thinkbank-like approaches
- That said, the University experience is a combination of education, vocation and the campus experience and all three should be catered for
- Research continues to be important
- The University **for** Tasmania focuses on a smaller number of things it does excellently (such as currently with Marine science) and develops a regional and global reputation for the things it does best, attracting quality clients and staff
- The ability of all to use technology and information increases in importance
- University staff will be high quality teachers and facilitators of learning with practical experience, supported by technology.
- The University leads the necessary cultural change around higher learning in Tasmania including acting as a broker with other providers to meet industry needs.

6 IN CONCLUSION

Tasmanian Leaders thanks the University of Tasmania for commissioning this important Thinkbank and it thanks the Alumni who participated and who collectively produced such powerful, insightful, new critical thinking. Tasmanian Leaders is committed to the future of Tasmania through its Alumni - exceptional leaders with impact beyond the ordinary. We commend their thinking as an input to that of the University of Tasmania on its future directions and thank them for commissioning this important work.

Annex 1 List of participants

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Annex 2 Pre-readings

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Annex 3 Role and sector specific analyses

Provided as a separate document.

Annex 4 Speaker Bios

Professor Davis Sadler
Professor David Sadler is the University's Deputy Vice-Chancellor (Students & Education) and heads up a large Division whose vision is to*enable quality learning and student experiences at the University of Tasmania.* The Deputy Vice-Chancellor is responsible for the development and implementation of strategies aimed at achieving the Divisional and broader University of Tasmania vision and priorities.

David joined the University of Tasmania in January 2011 from the UK where he was one of the Directors of the Higher Education Academy (HEA). The HEA has responsibility to develop excellence in learning and teaching and works to achieve the best student experience. David had responsibility for the UK subject centre network.
He led many initiatives in the areas of student engagement; education for sustainable development; open education resources (OERs); technology enhanced learning and increased social inclusion in Higher Education. These remain his passions and will inform his approach to a student-centred focus to learning and teaching at the University of Tasmania.

David is a former Dean of Social Sciences and Director of the UK Subject Centre for Sociology, Anthropology and Politics (CSAP). He is a UK National Teaching Fellow in recognition of his work on innovative role-play teaching techniques in the social sciences and held two *Jean Monnet* awards for his teaching. David's research areas include international relations, with a particular specialism on international crises: one of his role-plays gets students to participate in a reconstruction of the Cuban Missile Crisis.

In November 2011 David was appointed to the national Strategic Advisory Board of the Australian Government's Office for Learning and Teaching (OLT). He is also Deputy Chair of the OLT Grants Committee. In 2013 OLT invited David to act as Master of Ceremonies at the national Australian Awards for University Teaching ceremony and again at the 2014 national OLT conference with the theme: *learning and teaching for our times – higher education in the digital era.*

David was published in The Conversation in 2012 on MOOCs (Massive Open Online Courses): *How Australian universities can play in the MOOCs market* and in 2014 will have a shared chapter on MOOCs published by MIT Press.

David is also a member of the Universities Australia (UA) Deputy Vice-Chancellors (Academic) executive group, the UA Standing Group on Quality, and the UA representative on the Higher Education Equity Group.

Karen Eyles

Karen is a population analyst and demographer, with experience in a wide range of academic and professional roles with the University of Tasmania behind her. She has undertaken numerous applied research projects for Federal, state and local governments as well as organisations and businesses. These projects have included regional, spatial, social and economic profiles; and focused on place-based workforce planning; community health and wellbeing; retirement living; Tasmania's agricultural workforce; educational participation; community learning; the rural-urban divide; older Tasmanians; and the social and economic impact of Tasmania's major cities. She is experienced in all aspects of research including utilising multiple methods of primary data collection, as well as identifying and evaluating secondary data sources. Data analysis expertise incorporates quantitative, qualitative and spatial methods to provide the most complete and nuanced explanations and solutions. In her work, Karen aims to provide grounded evidence as a foundation for informing and improving policy and practice.

Karen has worked at the University of Tasmania's Cradle Coast Campus in Burnie for the past 18 years, since completing a first class honours degree in Applied Science. Like many professionals working on the North West Coast of Tasmania, Karen has worn multiple hats in her working life and in the local community. At the University of Tasmania, she has undertaken a variety of teaching, research and project management roles and currently works as Aspirations and Evaluations Coordinator for the Peter Underwood Centre for Educational Attainment. In this role, she is responsible for state-wide coordination of the Children's University program, evaluation of the Centre's aspirations programs and contributes to research projects. Karen enjoys being involved in her local community, including current and past office-bearer roles with a variety of local organisations including Slipstream Circus; Western Schools Soccer Association; North West Coastcare; and Zodiacs Gymnastics Club.

Karen is a 'first-in-family' university graduate and a mother of three, and lives in beautiful Northwest Tasmania. She is passionate about lifelong learning, young people and Tasmania and enjoys photography, walking and reading in her spare time.

Loretta Joseph

Loretta is a dynamic and skilled banking, financial and consulting professional with over 25 years in financial markets and related sectors, including international and multicultural environments. She has worked for major investment banks at board, senior executive and senior management level throughout Asia and India including for RBS (India), Macquarie Group (India), Deutsche Bank, Credit Suisse and Elara Capital (India). She now works as an advisor with numerous organisations including the Sydney Stock Exchange, Aims Capital, Brightbridge Capital (India), the Australian Digital Currency and Commerce Association Australia (ADCCA) and Apt Associates (Asia Pacific). Loretta sits on the advisory boards of the University of Western Sydney (UWS) Business School and Blume Ventures (India). She is also

an adjunct fellow at UWS (Australia), Director of Market Development at the Sydney Stock Exchange and chairs the advisory board of ADDCA.

Loretta is the Fintech Australia *Female Leader of 2016* and the recipient of Sancta Sophia College (within Sydney University) *Alumni Award 2016 for Social Impact*.

Loretta has wide exposure to global financial markets, multiple asset classes and emerging market environments and thinking on future trends. She has advised many international banks, global hedge and pension funds on managing portfolio and exposure to derivatives and related products. For the last decade, she has been paramount in successful transaction facilitation for foreign investors in India and other emerging markets. She is a leader in strategic thinking on the future of digital currency, framing her views and advice within future-oriented thinking on broader socio economic trends and issues.