

Craig Wilkins ([00:00:00](#)):

All right. I think we might like kick it off. Hello everybody. My name's Craig Wilkins and I'm the chief executive of the Conservation Council of South Australia. Welcome to the 2016 Adelaide Festival of Ideas and today's session, which has the intriguing title of sustainable jobs in sustainable communities. And I'm proud to say that my organization, which is the state's peak environment, body is the the partner of this event with the festival ideas. I noticed that today we are gathered on the traditional lens of the Ghana people of the Adelaide Plains. We recognize and respect their cultural heritage, beliefs and relationships with the land. And we acknowledge that these are of continuing importance to the Ghana people living today, and that we respect their elders past and present just a little bit of housekeeping before we begin. Please turn your mobile phone phones to silent before we begin.

Craig Wilkins ([00:00:59](#)):

But don't lose your your thumbs and, and digits. There's lots of hashtags and Twitter and Instagram and Facebook activity you can be doing with the with the various handles of ADL FOI. Also reminder that unauthorised recordings of any kind are not permitted and today's session is being audio recorded by those fabulous people, that radio Adelaide for broadcast and a future podcasts. So today Joel jobs, it seems to be a very constant part of, of, of the dialogue in Adelaide at the moment. And fair enough too. The sense of today's session though, is actually going a bit further than just what we can do as an immediate response, but actually cast our minds a bit further into the future and look at where we're going and seeing if the choices we make now around jobs are actually shaped by the direction we want to go.

Craig Wilkins ([00:02:00](#)):

Can we actually shape that direction you're going in? And it's actually then just looking at jobs on its own. Do we need it need to actually look at what's the relationship of jobs to the broader community? Do we need to think about concept to do with time and money? What is a productive life? What's her as a citizen and actually subsea employment has nested into that broader conversation. So I am looking forward to a very fascinating conversation with three cracking speakers. And I'll introduce them to you now. Firstly, we have on my immediate left professor John Spoehr his long history in economic industry, industry and workplace research formerly just across the road at the Australian workplace innovation and social research centre. And he's now at Flinders University at the Australian industrial transformation Institute, basically trying to sort of work out what we can do with the closure of our manufacturing.

Craig Wilkins ([00:03:02](#)):

And I've always found we with John, there's a fantastic calm, reassuring wisdom on, on this issue, which is often dominated by, by, by shrillness. So thank you John for coming today. Next we have Heather, Heather has a background originally in electrical engineering but she's worked in state government in policy, which industry, and she's also been active in the community sector as well. And in particular about the the idea of, of, of, of energy ownership, energy transition, community energy, she'd just come back from a whirlwind, fantastic trip around the world with on a Churchill fellowship and has come back, I think boosting with, with, with ideas and concepts and who already large brains is just swelling as a result. And last of all, that sort of bookends to the to the, the glasses wearing booties is Sean Williams, who is one of Australia's most accomplished, and best-known authors an author of a 14 novels and a hundred stories, including parts of the star wars and a doctor who oeuvre if I can use that word and has that fantastic title of number one New York times bestselling author, which I think is an author must be

quite an quite a nice it's also proud to have Australian active and supporting emerging authors and and other good causes.

Craig Wilkins ([00:04:27](#)):

So please welcome our three, three speakers today.

Craig Wilkins ([00:04:34](#)):

And in terms of a format we're going to keep this very relaxed

Craig Wilkins ([00:04:37](#)):

To won't be a lectern kind of thing. It's more of a conversation with us all and and looking forward to some great questions at the end. So I'll start off by asking John a question, which is there is clearly a short term crisis facing South Australia. This week, the latest jobs figures showed that we have the highest formal unemployment figures in the country. So can you get a sense from you first, what's going on, what's driving it, what's the real story behind those numbers? Well, but my starting point is things could be a hell of a lot worse, and I go back to the global financial crisis and I recall the Australian government's response to the crisis at that critical time in our global history when other nations were facing the prospect of double digit unemployment, fortunately we intervened early, we intervened in a very substantial way and that to ensure that investment levels stayed up and and job growth remained reasonably steady.

Craig Wilkins ([00:05:38](#)):

So Australia became somewhat of an outlier internationally, strangely and South Australia, which normally suffers very, very badly when there are global economic downturns rode this really rough wave, much better than I expected most commentators expected, but nevertheless it was a rough time principally because of that very high Australian dollar, which acted like a wrecking ball really on Australian manufacturing. And of course at the same time commodity prices went down demand from China and India really put a lot of pressure on, on our export industry. And those two factors alone have had a really negative impact on parts of the South Australian economy, particularly manufacturing employment. We've lost around about 30,000 manufacturing jobs in the last decade. So that's a lot of jobs on the other hand we've gained in excess of 25, 30,000 jobs in health community services and education.

Craig Wilkins ([00:06:39](#)):

So we've got growth in the services sector, but we've got substantial job losses in manufacturing, but we must remember that the manufacturing sector is a very substantial part of the south Australian economy and labor market. There are still around 70,000 manufacturing jobs. So it's around about the fifth largest employer in the state and will remain. So, but in 20 the end of next year, we've got some serious economic headwinds to face the closure of the auto industry, probably going to resolve in roundabout 12,000 jobs lost directly and indirectly. And we also faced the prospect of the wireless steelworks closing if that were to happen in a small town like Whaler that takes about half the workforce out and could well lead to a terminal decline in that very small town. So employment growth has remained relatively steady. The unemployment rate relatively low by international standards, but high by national standards, the underemployment, right, which we must focus more attention on because you have the labor force figures come out every month.

Craig Wilkins ([00:07:48](#)):

And we always hear that headline figure there, the seasonally adjusted unemployment rate ran about 6.7%. It got as high as 8% last year for miles, but the underemployment rate is double that. So those people who are, who prefer to work more hours who are, or who are hidden, not employed a very substantial in the South Australian economy as a consequence of the substantial rise in part-time and casual employment in South Australia. So almost all the jobs that we've seen grow here in South Australia have been part time and casual and for miles full-time employment is going backwards and that's a very serious problem as we go into the closure of the quarter.

John Spoehr ([00:08:33](#)):

Thanks Craig, for that overview. And there are lots of things we can, we can jump into around what you've just said, but maybe I'll, I'll just jump into perhaps giving everyone a chance to sort of say a few words first, and then, then we'll go into some of these other underlying themes. So Heather this is actually this, the second forum on this theme that that's we've actually held. And Heather was part of that as well, which there's one early on in the year. And it was a deliberate attempt to, to start the conversation then and continue it today. And at that previous conversation around sustainable jobs, there was a big focus around energy and clean energy in particular. So I'm keen to find out from you, Heather, about what is that link between jobs and clean energy. What did you discover on your Churchill fellowship in terms of what's really happening in the rest of the world and has your confidence been shaken a bit by the activities of the last last few months in South Australia?

Heather Smith ([00:09:33](#)):

Thanks, Craig. And just to recap what we S what I said at the last forum, you know, we underestimate how much energy underpins our economy and empowers those manufacturing industries. And what I was surprised about as I traveled, I went to a lot of regions that are in decline. So a lot of community energy is happening out in towns and villages, and they've been in decline for ages. They used to have booming agricultural economies and obviously over the years that's not where the jobs have been. So they're very much talking about what they can do in their local economy. And I heard a lot of language. Like we spend a million dollars a year on energy in a community. We can make that money, stay here if we do more locally. And so that's one of the big drivers for for local energy in in the U S someone reminded me that for every million dollars spent on solar energy, there's one job, but for every million dollars spent on energy efficiency, there's 10 jobs.

Heather Smith ([00:10:49](#)):

And that energy efficiency savings stays in the community because it stays in the pocket of often low income people. A lot of the energy efficiency programs are targeted at low-income people, and they spend that money back in their communities. So there's a, there was a really strong theme of my trip around local economies. After we had a very land, most the jobs were where the land and climate was. We went to where the jobs are, where the factories are. And when I was in the Highlands of Scotland, I was reminded that they had their Playford era as well. They had a big decision where all of the people in rural Scotland were coming back down to the cities and the jobs, and they made some big strategic decisions to build hydro power up through the Highlands of Scotland and bring the manufacturing up to those places.

Heather Smith ([00:11:47](#)):

So again, this theme of energy can underpin access to energy, can underpin our economy. And I also went to some places that are leading. And so this is really interesting for me, that places have started to define themselves around energy. So I got to Samsø that over a decade ago, won a competition to become Denmark's first, a hundred percent renewable energy island and admired in this relatively small community, their energy academy, the amount of consultancy and work they pull in from around the world, because they have put their stake in the ground and said, we will be a leader. We will have a community hub. We will recognize our energy industries. We booted energy industries out from our leadership as renewable energy sort of place in the world. So that sort of welcome to visitors like me and that showcase to the world they saw as an economic advantage.

Heather Smith ([00:12:56](#)):

So I think I'll end your question about the blackout. Absolutely not. You know, I, I wrote a, a blog straight after the blackout and said, is this a New York moment? Because in New York, the driver is a micro grids for resilience, micro grids for local economics in New York, in the biggest city of the world, and just walking distance from Manhattan, they had people during Superstorm, Sandy that were out without power for two weeks, right. So they've had their moment, maybe this was Adelaide's moment to go. We could do energy so much better than we do at the moment. And that's an opportunity for us.

Craig Wilkins ([00:13:37](#)):

Thanks. Thanks, Heather. Yeah. So to Sean technology energy the choices around transportation, all those know highly technical things other stuff of science fiction and the stuff of of, of, of your books, but often through your books, there's actually a more interesting exploration of the culture behind that and the choices behind that. So I'm keen to get you to sort of, I suppose, comment on that sort of examination of culture and, and what do the choices around energy and technology mean for those cultural choices? And, you know, especially for those, the, the, the, the concepts we take for granted today, like employment

Craig Wilkins ([00:14:24](#)):

That's right. As a science fiction writer, I'm really interested in technology, but not just technology itself technology in my books as a value neutral thing that exists in a world, or changes in a world just like it is today. I personally think. And my latest series, the twin maker books expose the idea of the teleporter, the, the magic transmitter that is in star Trek, you know, beam me up Scotty, which seems like a wonderful fantastical idea. But for me personally, and for other writers, the more you look into it, the more you realize that having access to that kind of technology changes everything. And in the course of writing the books, I, I sort of explored the way this, this one idea, which is which when you think about it is kind of the intersection of three present day technologies.

Craig Wilkins ([00:15:08](#)):

It's the, it's the scanner, it's the internet and the 3d printer. I mean, these are the technologies that are still developing and becoming more and more powerful today, and will potentially have a big impact on manufacturing even in their present form. But when you take it to the further point where you can stick something into a scanner, and it can be taken apart at a molecular level and then rebuilt from scratch somewhere else exactly as it was whether that that's a person or a roast lamb dinner, or anything you can imagine, anything made of matter that changes, that changes culture in, in really deep and profound ways. For instance, if you no know if you can make a a tool finally machine tool and then scan it and then make it as many times as you, like, then there goes your manufacturing industry.

Craig Wilkins ([00:16:01](#)):

And if your manufacturing industry goes, there, goes all your jobs. And if, if you have a machine that you just can push a button and it'll make anything you like a a copy of the Mona Lisa, or, you know, your sister then there goes the need for money and and arguably identity as well. So, so just this one simple idea that we kind of take for granted in the present day in our fiction changes the possibility of how our future world would work, which leads leads me to sort of ponder the idea of what is work, what is a job? What is money? What do these things mean to us as people? Because the people in the future are still going to be asked. They're just going to be us with different technology. And and I think these kinds of stories give us an opportunity in the present day to kind of turn the color up on present day problems.

Craig Wilkins ([00:16:52](#)):

So what does it mean if, if 70,000 people suddenly don't have jobs in South Australia, you know, how do you absorb that kind of impact economically? Do you give them all universal income? Do you put them on employment lines? Do you expect them all to take up creative jobs in the creative industry? Or how do you manage that transition? And and how do you, how do you also, I mean, the big problem with my world in twin makeup books is, is energy. All this stuff that that I've just described, being able to take people apart, build them, move them around, take incredible amounts of energy. And in any book that deals with this particular trope, there's always a bit of a hand-waving around where the energy comes from. So it, my books, they have lots of power satellites that are sort of soaking up the sun's rays and beaming it down to earth.

Craig Wilkins ([00:17:38](#)):

And at some point somebody gets hit by one of those rays, just to demonstrate that I have thought about how powerful those rays must be, but, but, you know, it takes incredible amount of energy without which that world doesn't work, just like our world doesn't work with that energy as well. So I'm sitting here with these amazing scientists and thinkers who are analyzing present day problems, feeling like a little bit of a fraud. Although I do know that I think we need the cultural metaphor of science fiction too, to help us pass these enormous problems. They give us, they give us metaphors to, to deal with change. And, and they, they, they, I, I like to think that they are climatized us to the idea of change, necessary change, to become aware of what's in, it will be going to happen. But I think there's also the science of psychology as well. That that is, is just as important, whether you define psychology as

Heather Smith ([00:18:26](#)):

A science and they explore the cultural issues too, don't they, so that you know, in my journey, I think we've got the technology sussed and the cultural issues are so the co socio-technical transition, the idea that we have social systems wrapped around our technical systems that have to transform as well, is far more challenging for someone who's done an engineering

Craig Wilkins ([00:18:51](#)):

One one scariest statistic that you probably hear in going around at the moment is that around 40 to 45% of the jobs susceptible to automation or in particularly as a consequence of great advances in artificial intelligence. And that's pretty scary. We can talk a little bit more about that. I have a a more sort of cyber view about that. I don't think it's going to it's going to trance a bar in that way, because there are all sorts of reasons for that. But you probably hear more about that from Tinder Tim Dunlop Dunlop, I think this afternoon at four o'clock, so it's all happening here at festival. It is w w we are talking about driverless cars and in terms of a taxi driver job is, is potentially yeah. So interesting, Sean, you

were saying about that sort of, you know, forecasting the future, or trying to imagine what that would look like.

Craig Wilkins ([00:19:41](#)):

And I'm always struck by so much of that sort of you know, tween fiction or that sort of a young adult fiction. When they talk about concepts like, you know, climate change or changing climate, it is often quite a Dyer and, and dark sort of your future. They are imagining which I have set some questions around that sort of that's. Are we sort of almost forecasting that kind of negativity into the future, but, but with, with that sort of qual question of of a, of a changing climate, I mean, is, is there actually a, a jobs impact in terms of our robust response to climate change? And is that something that we should actually be looking at right now? I'm not sure who wants to, well, there absolutely is. I mean, a robust response to climate change, including a whole range of adaptation and mitigation measures could generate as many as 500,000 jobs, half a million jobs in a relatively short period of time.

Craig Wilkins ([00:20:39](#)):

And some of the numbers that I've been looking at recently suggest around 130,000 jobs could be created in South Australia as a consequence of a robust response to climate change that included a range of mitigation and adaptation measures. But of course that requires the right sort of policy environment to stimulate that. So, but a lot of that's already happening. It's already happening. We just need to put in place the policy measures to, to accelerate that. So it's not as if there's not enough work to be done. There's lots of work to be done. It's a question of whether or not we invest in it and whether or not we pay for it.

Heather Smith ([00:21:12](#)):

And they say, you know, South Australia has a great water industry, innovative water industry like Israel, because those are two regions of the world that are incredibly challenged by a water. So if we really do grapple with our challenges, there is that turn it into opportunities. I know it's easier to, to say I I'm quite struck by our climate will change and it will become more challenging. And part of my journey has been about how rooted in place we are. So people do move place at the extremes. My interpreter in Japan was living in a completely different region because his house had got destroyed by the tsunami. But most of the time an incredible number of people are wedded to place. We care about this place. We care about the people, our people are here at the moment. And so we invest in at time and effort in making Adelaide as successful city, even if it becomes a hotter city or a wetter city, you know, I think, and let's face it. We have a fantastic climate to compare to most places in the world. So let's hope it's still fairly fantastic.

Craig Wilkins ([00:22:31](#)):

That's right. I visit map online where you can look at what the coastline will look like. If you raise the water level by X, meters and headlight looks pretty good where we're not going to get flooded, we might stifle in the heat. I think it's easy to imagine these sort of catastrophic futures. And I think it's healthy in a way to imagine that the worst case scenario, so that way, when something not quite that bad happens actually occurs. We go, oh, well, it wasn't as bad as in, you know, X, you know, we, we still have, we can, we've been moved from this job to that job. Or we, we still have food or my family is still alive. We're not cannibals, you know, so, but I think it's fascinating from a narrative point of view that at the one hand we have, we have automation increasing, which could put vast amounts of our population

out of work at the traditional work, but potentially potentially, you know, who knows how it's going to pan out.

Craig Wilkins ([00:23:20](#)):

It's it's happening very quickly. It's a fascinating thing to study, but at the same time we have the climate changing, the climate change, creating opportunity for new jobs. So just at the time, we will need smart, intelligent, hardworking people to move into this new sector, to to create a new lifestyle for people. There will be people leading jobs that no longer exists potentially, or so I can see as long as there's an ability to move mobility from between the workplaces, then, then it may work out very well. And it strikes me as if I believe there was an author to reality. I think this is a little bit convenient. You know, we need X, oh, here it is. You know, thanks very much, God. Okay. Let's

Craig Wilkins ([00:24:04](#)):

Tease that out a bit further about in terms of what are the sort of the, the, the sectors, the areas, the that those are parts of our society, which you guys think the jobs of the future will come from it, is it health is education is it energies or transport? Is it culture? Is it, where's it come from? And also who will do the driving and the main driving? Is it the sort of smart texts that the Googles and the Facebooks? Is it that, is it, is it government, is it uni universities? Is it community sector? Like where, where will actually, where will those big decisions being made and who should be driving it? It's a modest question, isn't it? Yeah.

Craig Wilkins ([00:24:48](#)):

Public, I'll be talking more about that this afternoon. Look a starting point for that is that there's relatively rapid growth in those jobs, which are so-called knowledge, intensive, creative. Those jobs that are relatively routine are more subject to being automated or replaced by artificial artificial intelligence. Although increasingly artificial intelligence can also replace quite complex comp quite complex tasks. Having said that my view is that there are many thousands of jobs that are going to be generated in a whole range of sectors as a consequence of a few things. Let's just take a demographic change, for example. So while we think about aging as a cost to society, what we don't really appreciate is actually it's a major driver of changing demand for goods and services. Particularly in manufacturing. I know that one of the fastest growing industries is the medical devices and assistive technologies industries.

Craig Wilkins ([00:25:44](#)):

It requires very creative people, researchers working together with manufacturers and service providers on all sorts of novel goods and services, and it's labor intensive at the services end. And this is one of the fastest growing industries in the Asia Pacific region around about a trillion dollars worth of savings washing throughout east Asia that will flow into into the purchase of a range of goods and services designed to help you age. Well, if you like to, to empower you to put you in a position where you have a greater degree of independence in terms of climate change, we've touched on that. And I've sort of coined this term, the adaptive economy. I believe that there's enormous benefits that we could derive from a much more robust positive response to climate change in the way that his has described it, you know, turn it around as a major driver of innovation using government expenditure to, to, to create knowledge intensive goods and services in response to climate change.

Craig Wilkins ([00:26:49](#)):

And in so many other is the education sector, of course, is the one I'm involved in is one of the most rapidly growing sectors in Australia and will probably continue to be so as the demand from overseas to undertake a Western education is sustained. That's not sustainable forever. I don't think they might indeed be a higher education, boom, that ends up in bust. I don't know, but I think there are enormous range of opportunities that that will require a government to play a lead role in. And we don't have what I'd regard as coherent economic industry policy in this country. And we desperately need it at the local level where we have some impact over how we can shape that. But the lion's share of policy settings must must or dependent, I should say, on national government intervening,

Heather Smith ([00:27:41](#)):

I've been looking a little bit further over the horizon. So one of the reflections of my trip, as I said, was the jobs used to be on the land than they used to be where the manufacturers were. Then I got to Japan and the movement of people it's like the jobs of where the people are. And that's that's at the heart of Adelaide's decline is that the jobs are in Sydney and Melbourne. People are moving out of the country, into the cities, out of the little cities, into the big cities. So what comes next? You know, we've seen those three transitions, boom, boom, boom, let's work towards something that works for Adelaide. Doesn't not, doesn't work for Adelaide. What, what is, how can you do the jobs are where the lifestyle is, right? Because that's a sales pitch. Well, maybe you do have to move a blend, the paid economy and the unpaid economy.

Heather Smith ([00:28:34](#)):

Maybe you do have to say Adeline. We only have to work 30 hours a week and work out how to support our society for the rest of the time. And it won't be that we work 30 hours a week, 30 hours a week for money, and I'm an abundance of hours to spend on other things that we value and other things that we want to produce in our lives for community value, for personal value family value. So I find it really interesting that w w we should be well positioned. We're going to have an abundance of energy, which means we can have the tele transporters of the future, perhaps. So what can we do here? Because as I said before, we care about this place and we'd love to make it really work for us and our families then add grandchildren.

Craig Wilkins ([00:29:24](#)):

Yeah. I'd like to live in an Adelaide where it was mad March all the time, maybe without the race. There's no bias in that mid October and October, because I think one of the great things about med matches that Adelaide is full of this immense creativity that people flock from all over the world to be part of. And it's not just because we have a big opera, it's not just because of a big race it's because the whole vibe of the town changes completely, and it becomes really extraordinarily vibrant. And and I the optimist in me thinks that, you know, if we did have a low working week, that people could still live, live comfortably in head and head space and time and energy to be creative and innovative in, in their, in their vocational life, as opposed to their work life, if they're not the same thing.

Craig Wilkins ([00:30:06](#)):

And they aren't the same thing for most people, I think. And I think, I think the tipping point for me, look, again, looking over the horizon might be the development of not just an aging sector that can live better, but live as well as the young sector does. So, and this is very speculative. We don't quite know what the medical advance will be. That will mean that somebody who's 80 is as healthy and as creative as somebody who's 20. But, you know, some people say it's coming. Some people say it could be with us

in 20 years. And if that happens, then that creates an enormous class of people who are at the moment dependent but have an enormous amount of wisdom which is, which is absolutely priceless. And if, if those people become even more active in the community and in the economy and in the acetate artistic sector and their creative sector than they are now, I think that changes everything.

Craig Wilkins ([00:31:04](#)):

If somebody can live to be a hundred and be creative and engaged right up to the moment of their dear, who knows what Adelaide will look like, who knows what anywhere will look like. So I'm getting passionate and bashing the microphone because, because you, you get I think that the, the con the general consensus view is that somebody who's old is conservative and doesn't want things to change. But I think if somebody is 40 and has 60 years of healthy life ahead of them, I think they're going to be more embracing of changes. And there, and somebody who's 80, who has 60 and or years of experience, and still another 20 years to live, you know, what, what will they be open to? What will they think of that somebody who's 20 or 30 or 40 won't think of? And I think that is potentially an amazing future for everyone.

Heather Smith ([00:31:49](#)):

And there's plenty of work to do. Isn't that the theme of this panel is sustainability. We are so far away from sustainability and making things better. So the work is there to be done. One of the other things that resonated on my trip was how much community energy represents people, building the solutions that are right for them. So you sit there and go, why do you have solar hot water to run your district heating plant in the middle of summer when you might not need heating? But of course, in the north of Denmark, they do need heating. So this idea that we're all, we all have unique needs, and there's value in building the solutions for us, certainly in energy world, it translates, yes, we're going to, to technology from all over the world, but there is a level of designing. Our own solutions will give us the most appropriate solutions, and that has to happen at a more local scale. So we, we have challenges in south Australia that other places don't have. They don't have these long grids are out on the edge of the system, that we, we have things that we could tackle. Let's, let's grapple with our unique solutions. And so there's the whole jobs and sustainability demands to some extent, some real local engagement with what we need. That's

Craig Wilkins ([00:33:16](#)):

What somebody who has lived here for 60 years will, will, is engaged in that sector. Can bring that experience to the problem in a way also that artificial intelligence might not too, because depending on the data you pump into a, a neural network or an AI, you, you may get a global solution. That definitely does not work here.

Craig Wilkins ([00:33:32](#)):

Sorry, I took it. No, no, no. Look, what's not well understood is the sustainability benefits of the four day week where it's been applied and it hasn't been applied in too many places in the world, but Sweden are experimenting with it France experimented with it for a while. It has enormous environmental benefits because it reduces travel times. It reduces congestion in cities that you know, billions of dollars aside as, as a consequence of reducing working hours. So it's not understood in those terms. And we need to rethink, I think that perhaps Adelaide could become the first part Australia had the four day a week that might attract

Craig Wilkins ([00:34:10](#)):

A lot of people. Hmm. Yeah. Okay.

Heather Smith ([00:34:13](#)):

And I'd like to go back to artificial intelligence because I want to tackle your Sean on no values in technology. Technology is rich with the values of the designers that designed it. And, and we had an example yesterday where someone who was working in Aboriginal communities pointed out that the smartphone has password locks, which are targeted at an individual ownership, not a kinship sharing a culture, right? So the culture is embedded in the technology in the way it's designed. And you sit there going, okay, I'm catching Uber. Uber is fantastic in San Francisco, works the trick. What happens when we get to the edge of this system and who decides which taxi driver, cause that's all they are, is taxi drivers with a better platform, which taxi driver gets the work and which customers have to wait the longest, an algorithm. I want democracy to have a say in how the fairness of this system works. I don't want someone who designed an algorithm and he's busy tweaking it to to dictate my democracy. So I think there's a really interesting idea there where we have to remain masters of the systems and there's work to be done

Craig Wilkins ([00:35:36](#)):

In that those algorithms, you know, dominates, which feeds you, you know, like which bits of information you get through your Facebook feeds or other parts of social media. And I noticed Sean smiling in terms of, in, in, in your twin maker book, those algorithms make choices around how people are recreated once they go into that, that that's a, that, that transmission to a different place.

Sean Williams ([00:35:58](#)):

Okay. Oh, that's right. I mean, I think you're absolutely right. I mean, it's, it's a, it's a partly depends on how you define technology. So, you know, the where and how it's applied is where that the technology and the application people get in the way, and people are waiting to step things up and, and, you know, by not thinking, but by not thinking about passwords, but then, you know, then they might encounter that problem and they add an option to have a password or not to have a password. And then maybe that solves that problem, but it creates another problem somewhere else. And what I think one of the, there are two core things that drive science-fiction. One is the sense of one day, you know, would it be fantastic? Wouldn't it be amazing if nobody had to work and everybody could be created for the 150, you know, that'd be awesome. But then the other thing is the unintended consequence and a life, of course, it's full of unintended consequences. So when you build a building, any kind of machine that fixes one problem, it'll create at least one other problem, either immediately or down the training. You know, it's finding those and

Heather Smith ([00:36:56](#)):

To unpick and work through those other problems, you need this messy time consuming thing called democracy. When I worked in state government, my boss used to say, I used to say the noise is on, but I'm being swallowed by the machine. I have to write ministerials and she'd say, that's not noise. That's democracy. That's, that's the price. We pay to have a system that fairly represents people. So there's, there's work there. You know, we know that the machines can't replace any of our connective jobs as social caring jobs, because we want to be cared for, by a person. They can augment our capacity wonderfully, you know, but we should all have technology sitting, these automation, AI sitting on air shoulders, making us 10 times being able to be 10 of us. You know, what a wonderful idea I can do

everything. I want to do it 10 times as fast sort of thing. But but that connective stuff how we determined our values and society's part of that. Mm.

Craig Wilkins ([00:38:01](#)):

Now I bet you're busting with questions of around. So if you do want to ask any questions, please head towards the microphone, which we set up in the center of, of the room. But as we do that, though, I'm keen to ask one last question for me, which is, I suppose, picks up on this, this idea that almost, it felt like a a number plate, a slogan of, of the lifestyle state that what is, or what should be our state story, if you, if you if you look at our tradition of, you know, we were, were founded in terms of the essay colony was was recently came from religious refugees from Europe. Then we we've had eras where, where, where mining has been the savior of our economy. And, and the sort of, part of our myth was around that savior.

Craig Wilkins ([00:38:50](#)):

There was the sheets back and, and the, the role agriculture, then there was the Playford area era in terms of manufacturing, all of those eras had their own jobs story. So casting ahead, it feels, it feels like at the moment we don't, we're not really quite sure what our story is, but understand from your, your trip, Heather, that, that the places that are doing well are the ones that do have a clear sense of the story and their unique niche in the world. And you look at examples like Tucson in in Arizona and the U S w w which is sort of perched on the edge of a desert, relatively small town, but it has a very vibrant culture, lots of young people, rich activity around music. And the reason is because they've got a that, that the become the, the lens manufacturer of, of the U S.

Craig Wilkins ([00:39:43](#)):

And so there's been a whole constellation of, of industry around manufacturing of lenses. That's their unique niche and contribution. So what's South Australia is currently or should be in the, in the future in order to get that, that jobs benefit. Do you want me to start, go on three words were just rushing through my mind as you were talking and you know, one is innovation, the other is diversity. The other is creativity, and, and you might add to that or a fourth word and, and, and that's, you know, inclusivity, I suppose inclusivity and in all those ways we shouldn't cringe too much because South Australia has a great history and all those dimensions. And we should be very proud of that. And, you know, when you look at the history of innovation, you look at the history of it across social, economic, cultural, and other domains.

Craig Wilkins ([00:40:37](#)):

It's a very proud history. So I'm a little concerned that we looked so often to other places for inspiration. When in fact, actually we can find much more inspiration from looking within not to say that we shouldn't look for it, you know, look externally and build on that, but build on it in a much more aggressive way. You know, they might argue with, and I'll talk a bit about this this afternoon is we've privatized too much. We've privatized, you know, we've given up too much responsibility. And I mean, privatization in the widest sense, I don't mean privatization of our electricity industries. I mean, privatization our, the responsibility for determining the sort of future that we might like and debate those futures in the way in which I think we've begun today, you know, really creative, why we had many choices. But I don't think we are engaging all that intelligently at the moment in shaping choices. Mm Hmm.

Heather Smith ([00:41:35](#)):

Yeah, you're right. W we think of ourselves as different way, often stop people and say, we're not like the rest of Australia dinner free settlers, you know, but that's what struck me as I went around, I went to the places in the world that had a high noted themselves as community energy leader leaders around community energy and what they were trying to do with their energy systems. And one of the early things you find is people telling you why they are different, why it happens to them. Right. So understanding SOS is a great resonance. I've been looking for our stories since I got back thinking what resonates one of the things was we were founded on a utopian vision, know people came here for a better life. And I think that reach for a better life could be something that really serves us.

Heather Smith ([00:42:26](#)):

And Barbara poco talked yesterday about our industrial policy being quite progressive in, in the way that we define land ownership and, and scotched speculation in the early days, you know, and you could say that with the votes for women and, and some of the pro socially progressive legislation we've had is that we did the work to get it right. And, and to make sure that we understood what we were getting there. I think that pioneering is, is something that we should be proud of. And our energy transition so far has been done on the cheap, you know, we're not the richest stress state in Australia, and we haven't thrown money at this. And I think making do with what we've got doing the best with what we've got is, is possibly a theme that we can really rise up to and be proud of.

Craig Wilkins ([00:43:23](#)):

I'm going to agree largely with Heather and John and three words went through my mind as well. And one of them was the same as yours, John in innovation. But I also independence and I think not just on a state level, but on a, an individual level, having the independence to, to be innovative. I think those two kind of create this lovely little feedback loop. If you have the time to think about problems, you might find solutions for them. And but if you don't have a time, then the solutions don't arrive. So but the third, the third word is also starts with I, and I think the third word is a really important one and that's indulgence. And I think we have a great life here in South Australia, you know, largely, you know job threats of job loss aside.

Craig Wilkins ([00:44:06](#)):

We have, we have fantastic food. We have fantastic wine. We have largely fantastic weather. We have the best chocolate, one of the best chocolate teas in the world. And I'm very thankful to live just up the road from you know, we have this incredible lifestyle here that is quite a contrast, I think, to the lifestyle that's advertised in the biggest cities. So people often think there'll be happier in Sydney cause there's more much going on or happier in Melbourne cause there's better coffee there. I think happiness is the great sort of Western myth that a lot of people go elsewhere seeking, whereas they could just stay here and indulge baser ne you know, that's made possible by innovation and independence, you know, the three I's, you know, maybe that could work the South Australian Australia. I don't know. I don't plan to go anywhere else. It's too fantastic.

Craig Wilkins ([00:44:48](#)):

That's great. That's great. So let's, let's open up to questions and just, if you could keep them short and please note those statements and let's see if we can continue this great conversation,

Speaker 4 ([00:45:01](#)):

An example, a real life Adelaide example for climate change adaptation required. And just wondering how you think they, they might be translated into jobs. People Martin know that Martin conservation reserve on the port river, just north of Adelaide submarine Corp is now part of the river. The levy bank has breached in two places and it's a, the rush of tides in there is quickly eroding all of that area. How would you actually translate that into jobs rather than saying let's wait for the federal government to support us with funds to do something about it and unlike what you were saying earlier, in fact, the coast, particularly little fever peninsula, and the port is very, very prone to flooding from climate change. And we've just seen that from the recent months of storm offense.

Craig Wilkins ([00:46:00](#)):

Mm. Who wants to tackle that one?

Heather Smith ([00:46:06](#)):

How do you mean maybe it comes back to my theme about some of these jobs at the moment aren't paid but you know, clearly getting in there that there's multiple benefits to us having better understanding of the biodiversity we need to protect and how, how we can protect it. And obviously other species are going to adapt slightly differently to ask bases and species have put their stake in the ground and said, we want to stay in Adelaide. Other spaces are going to my great how we, how we hope the migraine, that sort of thing. So I would argue that at the, in the longterm, the economic benefits for South Australia, after our, out of the knowledge that we gain from making mountain Cove work again even in a D in a different form from what it is today,

Speaker 4 ([00:47:04](#)):

The only current hope it's got is it is a gigantic power pylon. That's been surrounded by water. I think they weren't really liked the idea of that folding over

Heather Smith ([00:47:18](#)):

And creative business models is, is part of the thing we talk about about economy of the future is how business models might change and how creative we might get there, bring on the creativity

Craig Wilkins ([00:47:29](#)):

We can make giant pylons part of your creative expression as well was Iceland that dressed up to their great big power things as giant statues. Yeah. And that was the most extraordinary thing. It's not a solution to Matton Cove's problem, but it Hedley and there will always be casualties of climate change or any kind of change. And not that I want Martin Cove to be a casualty, but

Speaker 5 ([00:47:53](#)):

Obviously we need industries to underpin our lifestyle. And I mean, I see sort of small high tech industries and perhaps adaptive industries of a mirror manufacturer who is now planning to make mirrors for solar thermal station power stations, so forth. But perhaps we haven't really looked hard enough at the stuff that you don't get paid for, but contributes to our lifestyle. Versus you worked 30 hours a week, you might be able to grow some of your own vegetables, visit your grandchildren, and I'm naturalised members in the society write poetry, play music, and just doesn't necessarily translate into money, but it certainly enhances our lifestyle. And in a way our wealth is not entirely measured in money. And not that we want to look at that

Heather Smith ([00:48:51](#)):

I did a quick look at time about a decade ago, and the time we spend earning money and the time we spend in other productive roles as a whole society, we're only measuring 50% of what we produce. We made we're measuring the money side, but we're not really measuring all those other rich things we do across the whole of air population

Craig Wilkins ([00:49:18](#)):

And, and, and John, as I understand in terms of, you know, the, that you talked about the underemployment, but there's also I understand that roughly equivalent amount of over employment by, by, by, by so people who, who are working too many hours for their paid employments and sort of you kind of yearn for that, that solution whereby those who are working too much and yearn for more time can then balance that with those who actually want more work. Yeah. Certainly sharing the work around would be, be good for all of us, for those who are overworked. You know, they don't enjoy it. They suffer for it. They health suffers, the family suffer for it. We suffer as a community from it. So the greatest sharing of the available work makes a lot of sense, but also to go one step further to value unpaid work, or currently unpaid work through some sort of remuneration is a question that we need to ask as a community. I know Tim Dunlop in his talk today will no doubt to pick that up. And he's, I think he's advocating for universal basic income. And I think we've got to engage with that in some way. We've got to be careful about that too, because we don't want the society of insiders and outsiders. Those that are on a universal, basic income, which is very low and those that have access to rewarding well-paid work. So we have to think that through carefully, but nevertheless it's debate with heading, mm.

Craig Wilkins ([00:50:40](#)):

I think all those things, the question mentioned, sure. When she's gone, I would class them all in my idea of the indulgences that that we should embrace and try and create space for. And these are things that aren't traditionally evaluated, valued in monetary terms. And maybe we did differently different economic model, and there are different economic models.

Heather Smith ([00:50:58](#)):

And I was listening to Michelle bans yesterday, talk about the sharing economy. And at the heart of it was the importance of ownership because he was saying, look at all this work that people do in a pro bono form. So it has some value, but it's got more value to themselves for making it free. But then two people out of that group go off and sell it, and that's clearly wrong. So how do you own what, something that might have monetary value somewhere in the system, but at the beginning, you create it for free for yourselves. But how do you make sure you capture the value if it generates value for others and they're prepared to pay for it somewhere along the line.

Craig Wilkins ([00:51:43](#)):

All right, it looks like we've got about three more and then we will probably hit towards the end of our time. So that thank you.

Craig Wilkins ([00:51:51](#)):

On Thursday I was at the bus Smith library doing some research for my PhD, and I stumbled across a 1981 booklet by a group I'd never heard of environmentalists for full employment. And it was here in

South Australia, connected to the conservation council and the book that was called something like jobs, energy, and environmental harmony. And it's it even talks about climate change, 1981. That's not bad going, wow.

Craig Wilkins ([00:52:22](#)):

Now my point is

Craig Wilkins ([00:52:25](#)):

They knew what we needed to do, and they either came up against strong vested interests, or in the way of social movements, they crashed and burned. I don't know. My question to the audience to the panel is what's to say in another 35 years there won't be a PhD student. He probably won't be having to go to this shelter, but he'll be able to Google a PDF all look in 2016, they knew what they needed to do. Great question. How do we make it happen?

Craig Wilkins ([00:53:05](#)):

Look, the vested interests are enormous should not be underestimated. And and my view is that we could bold strong civic and social movements are going to be necessary to force government's hands to make the decisions that we need made. So it's it's, you know, there's nothing new in that. I don't think the history of change or political and economic and social change tells us that we require strong social civic movements to put government in a position where one, they, they they feel put on a sufficient pressure to make the decision, but to they have few choices, but to the consequences for them will be serious if they died,

Heather Smith ([00:53:51](#)):

I'm on a mission. I've come back from my fellowship going, right. We can do this. I think we all need to understand that the system cannot change itself. It's stuck in its paradigm and it needs the external influences to provoke it to change. And this is why community energy plays such an important role. Community energy helps people across the spectrum and involves those activists that are going to go the political route to change. They're going to booed, booed community awareness of this new better, so that people demand it through their political processes. But I'm also really interested in the middle spaces where the other people that hold the system tight and stop it from changing believe partly that it's the best system they have, but they're also constrained in how much they can imagine a new paradigm. And we need to draw those people out of the system.

Heather Smith ([00:54:54](#)):

And we need to work up the detail, right. You know, we've had this big argument about the bike out, but most of us, aren't going to engage with the question of how do we solve the less than one second response to Micah, a system stay live instead of falling over under certain circumstances. We're going to have to get the engineers out and we're going to have to get people outside the system because innovation doesn't happen inside the system. Incremental change happens inside the system, and we need a paradigm shift and that's for all our systems. And you spoke about transport and water and waste and food. And one of the conferences I went to the keynote stood up there and said, look, let's talk about electricity because amongst all of our systems, this is the one that we're furthest progressed on. So let's understand it through this lens and this transition and quickly jumped to understanding, therefore, how are we going to transform some of the other systems

Craig Wilkins ([00:55:54](#)):

Dealing with vested interest? It's really, really difficult because obviously there are people involved and people want to be the hero of their own story. And if somebody come up to them and says, you've been doing this completely wrong for 25 years, and they don't feel like a hero. So if you, if there's a way for activism for, if there's a way for population to say to somebody, Murdoch say, you know, you're, you're, you're everything you're doing is wrong, but in a nice way, and make them feel empowered in my fantasy land. But but it's a really interesting time at the moment. I was just reading a new scientist, an article about the new institutions that are, are already major global players. And we don't know what they're going to do because 10 years ago, Microsoft fake Facebook, Google word, as big as they are now.

Craig Wilkins ([00:56:39](#)):

And weren't as far-reaching and pervasive and have didn't have the incredible potential to screw everything up or make everything better, or just continue things as they are. And the thing I like about Facebook and Google in particular is that they're both very participatory. You know, they wouldn't exist without us giving away our information and our, and us being part of the process. We are intrinsic to their, their very existence. You know, the, the billion users of Facebook are what makes Facebook so powerful as well as their algorithms and all that kind of stuff. So, and it's interesting that both Facebook and Google have been accused of being very left leaning and very progressive. And I, and partly that's driven by the people who were at the top of it, but I think it's also partly driven by us. And yes, there are people who conservative that are part of Google and, and part of Facebook use both of those things.

Craig Wilkins ([00:57:29](#)):

But I think the general consensus, and this is me being a wild optimist, the general consensus of people is that they can see that there's a problem and they'd like to fix it. Everybody on every side of the political spectrum can see that and that these, these organizations are filtering that feeling through and slowly making it happen. And I hope that they will have enough of an interest, an effect to shift those vested interests slowly, or he'll just buy them and take them over. I mean, look at Elon Musk, who's trying to, trying to get us to Mars. You know, he is basically creating an, a zone space industry right now just because he really wants to, you know, of course, if he was a secret villain, he could just do the world at that time. Then that's a good model, but Facebook and Google, maybe who knows where we'll be in another 10 years, once they're even bigger and more powerful or the exact opposite.

Craig Wilkins ([00:58:20](#)):

All right. Let's quickly get through these last two questions. Okay.

Craig Wilkins ([00:58:22](#)):

Thank you. Just briefly following on from what John and Heather said about, there are lots of jobs in adaptation and mitigation of climate change. I'm sure there'd be also a lot more jobs in infrastructure. For example, like building more train lines, railways, improving roads, water recycling, and all of those areas. And also of course, in the environment with you know, tracking down feral species and plants and removing those, the question is how do we pay for those people to do those jobs? And my question basically is could we do that by closing all the tax loopholes that big businesses exploit and also high income earners, or maybe increasing the GST? I mean, the jobs are there. It's just, we've got to find a way of paying for them. So how do we do that or superannuation?

Craig Wilkins ([00:59:02](#)):

Absolutely. Well, there's this strange thing called public debt. It's very unpopular, but well, historically it's been unpopular, but in recent history anyway, but it is the main mechanism for paying for major infrastructure projects across the globe. And when interest rates extraordinarily lie, it makes an enormous sense for governments to borrow for long-term investments and infrastructure. So I'd be advocating that as the starting point, because, you know, it's not for one generation, this is for multiple generations and funding it through public private partnerships is a much more expensive way I think, than funding it through public debt. So it doesn't have to be funded off the budget. It can be funded through debt and that's the cheapest most efficient way of going about it. That's the way we've done it up until really the 1980s. So that all the great infrastructure of this state and the nation was built off the back of smart patient public debt.

Heather Smith ([00:59:57](#)):

I was struck by how much sovereignty the Americans had over their democratic systems that really local levels. And we might laugh about American politics, but I met the mayor of a village, literally 3000 people. Who'd had the conversation with her town about borrowing money for economic development and, you know, they all tax it, state, state levels. So one of the other models that I saw were community shares and and communities, but investing in businesses to generate funds for their communities. So we, we need to be creative about how to fund these things is probably the answer.

Craig Wilkins ([01:00:43](#)):

Fantastic. All right. Last, last question.

Speaker 4 ([01:00:46](#)):

Probably following on the same thing, we are moving from manufacturing to more services. So we need to consume those services to create the jobs for Mr. Consumer services. We need an income. And at the moment the model, our economic model is that wealth is being concentrated in certain areas. It's not being evenly distributed. So how do you see us solving that problem if we're going to be able to consume the services, which will be the jobs of the future.

Craig Wilkins ([01:01:15](#)):

So essentially Harry pay for it is that, well, it goes back to one of the early comments. I think that when that was made, I mean, we do obviously need a fairer tax system in Australia and the the constant refrain we hear again and again, and again, is reduced the corporate tax rate reduce income sorry, taxes on income owners. But you know, low tax states are not sophisticated modern United States. You just look at the Scandinavian experience, look at where they are at relative to relatively to us in terms of their sophistication, economics, sophistication, that technological sophistication, that the depth and breadth of knowledge and skills, and those nations are the foundation for their prosperity over the next 20, 30, 40 years. We're not doing that in the same way here in Australia. So a good progressive tax system is the foundation of it. And then alongside that using public debt for long-term infrastructure investments.

Heather Smith ([01:02:22](#)):

And if you think about the economy is a bubble where if we buy things from outside, we need to sell things outside to balance that equation, the local economies discussion is about that import replacement. What can we do ourselves to sort of create that value and get rid of the the sort of debt obligation that trade obligation that we have outside. So I think that's becoming a richer conversation.

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Craig Wilkins ([01:02:54](#)):

Hm. That requires a certain amount of being brave, I think at a legislative level, at a popular level, I think there are big changes coming that require big changes in response and short of storming the ivory towers with pitchforks. I think we do need to consider fairly radically different taxation models and, and trade models. And I think we need to be willing to embrace the risk that comes with that to be brave, be brave, be brave Australia

Craig Wilkins ([01:03:28](#)):

Or the creation of a great big machine

Craig Wilkins ([01:03:30](#)):

Where it just happens when it would do that magic one.

Craig Wilkins ([01:03:37](#)):

I'm a Friday. Tom has come to an end. Could you please join me when we were thinking these [inaudible].