
NATIONAL
PRESS CLUB
OF AUSTRALIA

Chris Richardson
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David Speers: Good afternoon. Welcome to the National Press Club and today's Westpac address. Before we get to today's address, this is the first Press Club event since last week's police raids on the ABC and the Canberra Home of News Corp journalist Annika Smethurst. So the National Press Club, as it has done in a statement, wants to offer its support for, along with the journalistic community, for those who were directly affected but, more importantly, for the principle of press freedom and also our support for further protections for that press freedom.

If there's one thing these Federal Police raids did achieve last week, it was in uniting the often fractious media industry. And, to that end, we can also confirm that in two weeks from today we will have a joint address here at the National Press Club titled Press Freedom on the Line featuring Michael Miller, the Executive Chairman of News Corp, David Anderson, the Managing Director of the ABC and Hugh Marks, the CEO of Nine Entertainment. So that will be an address worth watching two weeks from today.

Well, now to today's address, technological change in the workplace is not a new thing, it's not a new challenge. But the pace of change and the rise of robots, I suppose, has some worried about the future jobs market and whether there will be a place for them in it. Fear not, says Deloitte Access Economics, it's today releasing a report showing the sort of skills that will be needed in that future workplace, interpersonal skills, creative skills, caring skills and these are going to be increasingly of value.

And, to tell us more about today's report and the opportunities that are there for the Australian economy if we can get it right, we're going to welcome to the podium Deloitte's Chris Richardson, one of Canberra's most respected economists. When we get to the questions he'll also be joined by Rob Hillard who is Deloitte's Chief Strategy and Innovation Officer and a member of the

global board of directors for Deloitte. Would you please firstly welcome Chris Richardson?

Chris Richardson: Thanks, David. My thanks to the Press Club for having me here today. And I acknowledge that we're gathered here on the traditional lands of the Ngunnawal people and I honour their elders, past, present and emerging.

Today I want to talk to you about what the future will bring. As David called it, the rise of the robots, what will that mean for work and workers in the years and the decades ahead? And to skip to the bottom line, the news is basically good. We have been far too worried about far too many things in and around the rise of technology. And I'm going to go through those myths. Having said that, there are genuine challenges, things where we haven't been as good and where we'll need to play catch up and it's getting increasingly important for us to do exactly that.

I'd like to set this in a wider context to begin with. Off the back of the federal election just a handful of weeks ago, every hard-headed politician in the land is rushing to the conclusion that small target is the way to go, that Australians are uncomfortable with change, that we don't like the boat to be rocked. And it would be unfortunate if that was where that particular debate ended. The world does change and societies do need to adapt to that and, you know, too much no change eventually just become stagnation and Australia deserves better than that.

But regardless of whether politicians are willing to champion those policy changes, we already know the world will change stunningly, it is changing stunningly and a lot of it is off the back of these new technologies. And many of us are worried about that, are very anxious about it. And the simplest way to prove that is to pick up your phone and if you type into it the words will machines then Google races to fill in the gap for you: will machines take over the world, will machines steel my job? And those anxieties are very common.

You know, at the barbecues, at the beaches, Australians are wondering and Australians are worrying whether the rise of the robots, the march of the machines, will see the ranks of the unemployed soar. They're worried about whether all this automation and the rise of the sharing economy means that we're all simply going to stumble from one dead-end job to another through our careers and whether these new technologies will keep our wage growth absolutely fixed to the floor.

Now, all of those fears are entirely understandable and they're also entirely wrong. And I do want to take you through that and, basically, it's not as though the world hasn't been changing massively off the back of technologies for a long time now, it's been doing that for centuries. Sure, the pace of it is speeding

up, but we know what these sorts of changes imply and we shouldn't be as scared as we are.

So I'll take you through some of the myths one by one. And let me begin with perhaps the most pervasive one, the most corrosive one, the thought that technology will steal all our jobs and that unemployment will soar. And that's a very common fear so it's kind of worth just pausing for a moment and looking around the globe and realising, you know, if that's so, why are unemployment rates in the U.S. at the lowest in over half a century, why are they lowest in a decade in Europe? And we're not far off that in Australia.

Even in the United Kingdom, despite all the excitement of Brexit and Boris, unemployment there, those rates are at a 45 year low. So if your fear is that all these new technologies are going to lead to rising unemployment then the simple message is it has not been happening. And nor do we particularly expect it to happen. Technologies are improving what workers do much more than they're replacing workers overall and that the key reason, as my colleague, Rob Hillard, likes to point out, it's not as though the world is running out of problems. And remember, for every problem there's a job.

And so that fear that new technologies will send unemployment soaring, it's a zombie fear. The economists try to kill it, it keeps bouncing back. It's not the only zombie fear in the public debate and it's certainly not the only damaging one. The one that regularly drives me crazy is the talkback radio favourite that migrants steal jobs. That's an oldie but a goodie. It's so old, in fact, that Australia had the same debate back in the 1970s when the evil group who were stealing jobs at the time and who would ensure that unemployment would be permanently higher and that group were married women. It turns out it didn't happen.

All those angry people in the seventies with beards and heavy Scottish accents who told us it would all be a disaster, why not? Because if somebody puts up their hand to take a job, a migrant, a married woman or a Martian, they earn money and then they spend that money which creates the next job. And we have these same fears around technologies and that they're going to steal jobs in all sorts of ways. But it's not true. New technologies create a whole bunch of jobs.

Now, some of them are as simple as – so often we adopt new technologies because it makes sense to do so because it's the cheaper way to do it, you know, the software, the hardware, we can do that cheaper. But doing stuff cheaper is not a bad thing. The money it saves still gets spent, it just gets spent on other things and it creates other jobs. Same deal and a bit clearer when it comes to the new products that technologies are giving us, you know, they create jobs more directly, it's why we've got jobs for solar panel installers or the person on the IT helpdesk.

But the Catch 22 and why we're still scared is the jobs that we lose are incredibly obvious, that job has been lost to technology or the entire firm or sometimes an entire industry closes down because of new technologies, whereas, many of the jobs created are by those new technologies. That's not as obvious, if it's a cost saving which meant a new job popped up, you know, people don't make that connection and we have those fears. And those fears run to other things.

Another myth, you won't have heaps of jobs through your career. It may interest you to know the stats. The stats show that Australians are staying in their jobs longer than they've ever done. Again, that's not what you would think from the national debate, almost half, 45% of all Australian workers have been with their current employer for more than five years. The average is six years, average, across the entire workforce, been with their current employer almost six years. And, compared to a decade ago, that's about five months more than it was then.

So job insecurity is an important debate and we should have it and I'm not saying that there aren't things that are happening, there certainly are, but on that most fundamental measure, how long are we staying with our current employer? Our jobs are actually becoming more secure, not less secure. Again, though, this is a fear that we have.

Another fear, the rise of the gig economy and it's happening and it's real and it's genuine and it's important, all very true, but I hate to dispel another myth, you won't and your kids won't, chances are you won't be an Uber driver. I'm sorry if this was your life's ambition. But a whole bunch of things are happening in the economy, not just the rise of the gig economy. And, as a result of all those things taken together, you may be surprised to hear that casual employment, as a share of all work in Australia, is less today than it was 20 years ago, hasn't really budged in a decade.

Self-employed, same thing. Self-employed as a share of all jobs in Australia, would you be surprised - and we've got data going back over half a century - would you be surprised to hear that it's at a record low. Again, I'm not saying these things aren't happening but to understand the extent to which we should or shouldn't have fears around these things, you know, be worried but don't be really worried.

Or another one, the thought that we'd all be telecommuting, that in the future you'll be programming artificial intelligence routines while sitting at the beach with your work laptop or shampooing the cat at home. And we do, I mean a bunch of people do work remotely, work away from their usual workplace but on any given day of work it's about one in 25 Australian workers. So that's not nothing, but the 24 out of 25 Australian workers are at their workplace.

And nor is it because our employers aren't offering this as an option, one in every five businesses now do offer that type of thing as an option, it is because, even with all the new technologies and, perhaps, even especially because of the new technologies, working in close physical proximity with other people is bringing more and more advantages. It's why, all over the world, you've seen cities become more important to economies, offices become more important to economies.

When we work together there we collaborate better and we socialise, we use the infrastructure of work and the support that it offers. So if you're wondering, no, the office won't disappear.

And, last myth, these new technologies will not crush wages. To be clear, wage growth is weak in Australia and around the world but that's not due to new technologies. To economists, the [underlay] equation is pretty simple, in fact, new technologies raise wages, the better equipped our workers are the more valuable they are and the more they get paid. Two quick ways to check that. If you're looking around the world as a whole and you say which nations, workers in which nations are the worlds best equipped, you know, have the best technology and all the supporting stuff in and around that? Those nations are also the same nations with the world's highest wages.

Or even here in Australia and, again, same story, you look across this century to date, as we become more productive, thanks to technologies and marvellous political driven economic – no, just due to new technologies, we are paid more off the back of that. There are a bunch of things, there are a bunch of things that we're worried about. And not saying don't worry at all but put this in perspective.

And I will say that one implication I think about worries, there may be a connection to the weak wage growth that we have in Australia and around the world. It's simply, however, because we believe the myths too much that workers are too scared of the future and so they're pretty careful in their wage negotiations. And businesses are too scared of the future so they're tougher in their wage negotiations. If we can get past the myths we'll be better off.

So let me clear it up. No, the march of the machines will not lead to rising unemployment, to [crushed] wages, to aimless career path of Uber driver to whatever else or even empty offices. What will it bring? Well, as people began to study this around the world, you saw a mix of results come out but there is a gradual but increasing consensus and it's far from a scary consensus. The consensus is new technologies are creating as many jobs as they're doing away with.

But those new technologies are driving higher wages and, here's the kicker, that combination not killing jobs overall, driving higher wages, the kicker is jobs

are changing faster than ever. And it's that, the way jobs are changing because that, right now, is itself starting to change. You all know the basic story that technology moved jobs from brawn to brains, you know how jobs used to be all about using our hands and then machines got better at a lot of that sort of more physical stuff. And jobs became very much those of the modern economy, those of the head, if you like, using our heads instead of using our hands.

But if you're looking at the changing trends, computers can be trained to be pretty smart. Brains, alone, are not enough to say that this job or that job won't be disrupted by these new technologies. The key is machines are good at the sort of repetitive stuff. The jobs that aren't repetitive, the jobs that are much more around creativity and caring, is already where the job market is starting to head. And we've been looking at that, the report that Deloitte is releasing today.

It steps beyond the surface level of the job market, its economists mostly talk about jobs for electricians or other tradies or bankers or lawyers, you know, how many are there versus how many do we need and that? And that's great, but it's not enough because every job is far more than a job title. Pretty much every job requires a range of critical skills, the typical job, about 18 critical skills. And to understand that requires going deeper into the data than has ever been done in Australia before.

It actually requires looking at all the job ads, what are employers saying we want from our employees? What are the skills, what are the actual requests versus the skills that the workforce has today? And then mapping that, how has it been changing, where is it today and where does it head? Off the back of that research that we've done we've identified a variety of trends, three of them worth mentioning.

By 2030, a bit over a decade from today, by 2030, in between now and then six out of every seven new jobs that are created will be for knowledge workers, workers who use information in a variety of ways in their jobs. By 2030 fully one in every four workers in the entire Australian workforce will be professionals in the likes of health, education, engineering, business and by 2030 two-thirds of all jobs will be critically relied on for their soft skills. When we're talking about soft skills it is the range of what we're calling jobs of the heart, in particular, that dominate there.

I should pause for a moment and say if those are the trends, if that's where jobs are headed, that's not a terribly scary thing. Those trends are far from scary, they liberate. The machines will do the boring and repetitive stuff and everything else that's left behind is the more interesting, sometimes the more challenging stuff. But it is that stuff that will increasingly dominate job markets or, in other words, that shift in jobs from using hands to using heads.

The new trend will increasingly be jobs that use our hearts, use our uniquely human skills, the stuff that computers aren't good at: caring, creativity, design, leadership. There's a whole list of things that computers just aren't good at. And that's the shift, right, jobs, hands to heads to hearts. Now, you may be surprised that an economist is standing before you today talking about jobs of the heart. When the team at Deloitte first identified this trend and they said there's a trend towards jobs of the heart, I asked the obvious question, what's a heart? Now is a moment for me to offer a cheerio to my spouse in the audience. Anyway, I kind of thought it's something to do with caring.

The key point is that jobs aren't disappearing but they are changing. And the speed of that change, because it's happening really fast, is catching our workers, our businesses and our governments by surprise. Remember I said 18 skills, 18 critical skills for a typical job. At the start of the current decade the average Australian worker didn't really have 1.2 of those 18 skills on average. Today that gap is already up to almost two missing skills out of 18. That number across the workforce, as a whole, is rising very fast.

And we're worried about all sorts of things, this is the sort of thing that we should be worried about. You think of the results out of – what do we have too many skills of? We have a whole bunch of people who are good at gathering and processing data. It turns out computers are good at that, we've got too many of those skills. And you might be surprised, but what are the skills that we're most short of, 97% of all jobs in Australia require good customer service skills.

Now, you might immediately think of retail sure, but people, every job basically, has customers. It might be your bosses, it might be the people you're working with, it might be the people that you sell to one way or another and those skills are vital and we don't have enough of them.

And if you want a simple indication of why jobs are headed in that uniquely human direction think of the pain you feel when you're trying to chase something up and so you pick up the phone and you make a phone call and the phone says press one for, press two. And then think of the sigh of relief that you offer when finally a human comes on the line. And there's a reason, right? Because computers are terrible at that sort of stuff and we are good at that sort of stuff.

And understanding that, having – I would like to think, and I would say this, but I think that for the first – now that this analysis has finally been done for Australia, looking at skills then having that detail sheds a lot of light on this subject and what's been happening and where it goes from here. And, again, as my colleague, Rob Hillard, likes to point out, is that the people say well, surely every student should have coding skills, nice. As it so happens we don't actually have a particular shortage of that very technical skill, there is a shortage but it's a [rounding error].

However, we need 3,000,000 workers to have better general digital literacy skills than they have. Rise of technologies requires the people to keep up to work to maximum effect with those. Fairly obvious. Or you think of the 5,500,000 customer service skills that we really need more of and suddenly you start to see offshoring in a different light. It's not so much, sure, some of it's cost savings, but maybe some of it is because this is good customer service is a key shortage and a key skill that we don't have enough of.

All right. Let me get to the implications. And the first and most obvious one was spelt out by Crosby, Stills and Nash a little over half a century ago when they said love the one you're with. For businesses, what are we saying? Add it up. People are staying with their current employer longer than they've ever done despite what people think. But jobs are changing faster than they've ever done and the gap there, you know, how many skills we are short versus what we need, that gap keeps growing and that combination is a rolled gold recipe for business to be doing better on the job training than they are.

And you absolutely, sure, on the job training, it's cheaper, quicker, more focused. And formal classroom training is fine but it is a game of catch up, this stuff is happening really fast, we are falling behind. The business imperative is to get better around these sorts of things. There are some thoughts for government as well and, of course, governments can help more in terms of taxpayer support for some of that on the job stuff, the stuff that we're really missing.

That's relevant, you know, when you think lifelong learning, the Business Council of Australia's been saying some things there. Or think of the simple fact that governments can provide direct leadership in this field. The recognition that the rise of technology needs to be married to the right people with the right skills, the public sector is a huge sector. And, as it champions technological take up, it needs to be championing the right workforce with the right skills to go with it or, although unemployment, as a whole, won't jump, won't soar off the back of this.

Because jobs are changing increasingly fast that actually says any individual person is more likely to have a spell unemployed than before and that underscores the need for governments to pay a decent unemployment benefit.

And lastly and, it's often the most important lesson with governments, is don't do dumb things, don't make policy mistakes. Off the back of the myths, you know, the robots will steal all the jobs, you get well-intentioned but off the mark suggestions. Bill Gates suggested a tax on robots, the European parliament has debated a tax on robots, whereas as an economist would tell you that's not going to do a stuff about saving jobs. What it will do is slow down the rate of wage

increase in a world and Australian where wage increases are something we should be looking to improve.

Let me summarise this. We live in a world of stunning and accelerating change and a lot of people are very anxious about that and we get much too worried. We think that unemployment is going to rise as all these jobs get lost forgetting the jobs that are created. We worry that our wage growth will stay fixed to the floor, we worry that we will simply stumble from one dead-end job to another. We worry about empty and unhappy workplaces. We worry far too much about things that aren't happening and that won't happen.

There are, however, things that are happening and lots of it. The trends are liberating, the robots, the machines will do the boring and repetitive stuff leaving the good stuff. Where the magic will happen will be what's left for us, those uniquely human skills, the stuff that the machines are no good at, you know, everything from design to leadership and creative stuff to caring stuff, the jobs of the heart. Now that is something that's important for workers, it's something that's important for business and it's something that's important for governments.

But, at its heart, it is truly something that is important for the nation as a whole. We should not be scared about those myths but we should be prepared about this future. It is changing fast and we are falling behind. Playing catch won't be easy but if we do it, it will lead to a more prosperous Australia. Thank you very much.

David Speers: Chris Richardson, thank you very much for that. Reminded we have Rob Hillard here as well, Deloitte's Chief Strategy and Innovation Officer. I feel far less anxious about the workplace of the future listening to you. But I do want to kick things off by going to these jobs of the heart that you talk about. By 2030 two-thirds of jobs will be critically reliant on these soft skill jobs of the heart you suggest. What are they? I immediately think of things like childcare and aged care but they're not particularly high wage areas. Why, if this is the future, aren't wages following in those sectors or am I too narrow in my thinking? What are the jobs of the heart?

Chris Richardson: Well, there are those jobs of the heart, absolutely and it is true that the fastest moving star in the Australian employment market at the moment is the National Disability Insurance Scheme and the work that's arriving off the back of that. However, as demand for these skills runs ahead of the supply of them there are, some of these skills that are low wage, they will be less low wage in the future.

One of the interesting results that we found off the back of this analysis is that where jobs are headed are often where women are already in the workforce and have skills. And one of the implications, therefore, is that some of those lower

wage occupations or, indeed, the gap between men's wages and women's wages, it will be improving because that's the way technology is moving.

David Speers: Explain to me how though. Because we had a fair debate about this during the election campaign, childcare workers in particular. And perhaps, Rob, we can bring you in here, how will that wage gap close, how will these particular jobs start to see higher wages?

Rob Hillard: Well, it goes to exactly what Chris is saying, supply and demand. And we've had a long time when there's been a lot more people going into some of those caring professions than actually there was latent demand. But that's going to flip between now and 2030. So if we see that, we can actually start to direct people.

The other thing about the caring type of work is it has been binary, people have said either you're caring or you're doing knowledge work. And these things are going to come together. We saw it with the way people are thinking about teaching for instance. Teaching is changing from being a single teacher in front of a classroom to being far more about curation of content and caring for people through a learning journey. So it's going to be quite transformative over time but we've got to actually change the way that we set these jobs up to be able to reap that benefit.

David Speers: How do you mean? What do we need to do to set those jobs up?

Rob Hillard: It actually goes to what are the skills that are missing? So, you know, what does caring need? Caring needs lots of customer service, it needs the ability to be able to understand. It also needs to be able to understand the problems, remember we said, where there's a problem there's a job. What are the problems of the people that are being cared for actually need?

So if you look at a growing population, the idea of simply saying I'm going to go into a nursing home and be cared for, it doesn't make any sense because I'm almost certainly going to be far healthier than I was and want to be engaged in far more things when I'm older. So the sorts of things I'm going to want to be engaged in potentially include actually doing productive work. And I'm going to need carers who are going to help facilitate me to do that.

David Speers: So this is going to disrupt the nursing home model?

Rob Hillard: Absolutely, in a big way. Do you remember the outcry when there was, I think, 102 year old in W.A. who was forced to retire from his university job because there was no one to care for him to be able to get to university? That was an extreme example but that's going to be far more common. People are going to be looking for care, they're also going to be wanting, say, care in financial services. We saw the Royal Commission really talked about saying we want

our financial institutions to have a heart, jobs of the heart. So is it customer service or is it actually caring for my financial interests combined with caring for my education, caring for my more aged care?

David Speers: I tell you what, if people are worried about married women taking jobs, what about all these octogenarians and folks in their nineties and one hundreds. Boy oh boy. All right. Let's get to some of the questions from the floor. Our first is from Marnie Banger.

Marnie Banger: Thanks guys. Appreciate your address today, Chris. Was wondering, you spoke of how living standards continue to rise with these changes in the workplace, I wondered, over the next sort of several years, do you see those benefits being spread equally or is there a risk that as the changing nature of the workforce that some of that differs by socioeconomic group?

Chris Richardson: ...And there is a risk there, though it's not related, it's certainly not particularly related to the rise of technologies. So if you think of the two aims of any society, the prosperity and fairness, you know, well, it's sustainable prosperity and fairness, the size of the pie and how that pie is sliced up. And there are challenges on both fronts but in Australia and all over the world more of a given amount of growth now shows up in profits and in jobs. That's a part of the story they were telling that we have no shortage of jobs, this is not just an Australian story, all over the world jobs are coming out of our ears. So it's showing up more in profits than in jobs but less in wages.

So you've got two sets of winners, the profits basically mean the better off are indeed becoming better off still, but there are others who are winners as well. In particular, it is those older workers, we are starting to see a sharp shift in income towards people who are working at older ages. Australia and the world, has never seen that before. What we have is a generalised loser. While wage growth is weaker that means a lot for a whole lot of people and it plays to some of the political frustrations of the moment.

You might have winners among the better off, you have winners, you know, people who have jobs who didn't previously have jobs but there is a wide group who aren't sharing. Now, I wouldn't put that down to technology, there are a range of things, with the sole exception that there may be a connection back to those myths that we talked about. If people are too scared of the future then you don't get the wage growth and that would give us exactly that pattern, extra profits, extra jobs, not enough wages.

David Speers: Tim Shaw.

Tim Shaw: Thanks, David. Chris and Rob, great to have you here. Tim Shaw, Radio 2CC Canberra and member of the Press Club Board. It's great to see Secretaries Hartland and Leon here. The Prime Minister, Scott Morrison, sat down with the

Heads of Department of the Australian Public Service. Can we talk about the future of work and delivery of services from the Australian Public Service?

An important lever on the economy is policy, that's what governments do, they get elected or they lose government, but it's the delivery of those services to Australians through the Australian Public Service. We've had Medicare, we had the idea that privatising parts of our public service were on the agenda. Chris, can I get a snapshot from you about the future jobs of the heart in the Australian Public Service?

Chris Richardson: Yeah.

Tim Shaw: And, from an international point of view, Rob, how do we rate internationally? You're sitting on the global board, you're getting to see economies all over the world. Some good news about where Australia sits?

David Speers: Chris.

Chris Richardson :So first thought about [you] is government, you know, federal government, state government, is a social compact, we tax business and workers and we spend it on the young and the old and the sick and the poor. Most of that service delivery that you just talked about, government, the key thing that we want out of our national social compact, we want those human services to be more human, if you like. And that actually says welcome the technologies, now make the use of the marvellous things that are now able to be done across [unintelligible 00:42:13] so that the public service can focus on the caring and the creativity side.

So it comes to the heart of what I mentioned earlier and what we mentioned in the report being released today, government can be an absolute leader here. And the key is to remember that to have a technology plan is marvellous, innovation, marvellous. But it's only ever half a plan until it is married with the matching people plan, it's only then that we get the fuller picture.

Rob Hillard: And we're going to see the jobs of the public service just like the jobs of Australia, are going to change, that's the message here. And there's going to be more and more skills that we need people to have. I think one of the things that we talk about in the report is how many jobs are becoming non-routine? So, in the past, the majority of what you did, the majority of the day, was routine, you know, processing paper or processing data or responding to the same query over and over again. We're saying that's going away. It's all the non-routine things.

The public service, as the biggest employer in the country, actually has a responsibility to lead by example and to demonstrate how it can, not try to protect the routine jobs, but embrace the non-routine and the skills there. And that's actually something that, even though there's challenges, Australia has led

globally. We actually have a very well-skilled workforce globally and we operate in a very stable economic environment where yet there's myths, there's reasons why people are making not necessarily great decisions but they do it better in Australia than they do it elsewhere.

Our lows tend to be higher and our highs tend to be a little bit lower than some of the extremes elsewhere.

David Speers: Just to pick up on that, both the public and private sectors, Chris, you mentioned in the speech that on the job training, business training its staff is the best, most efficient way of upskilling and delivering the skills you're taking about today. Is that a shift that we need to contemplate more in terms of yes, we can have the debate about our schools, universities, TAFEs and so on but what are we doing in the workplace? Is this a big shift that we need to consider?

Rob Hillard: We have to. It's crazy that we're encouraging kids to actually study until their mid-twenties sometimes before they start work.

David Speers: Do you think that's a problem?

Rob Hillard: It's a huge problem because this idea – if I make a massive investment before my career and education and I've created a big debt around it, then I'm going to say well, I'd better realise the return on that debt before I go and study again. So it's a set and forget education. And yet we're saying jobs and skills are changing faster than they've ever changed before so how on earth do those two things go together?

So we think that there needs to be more education throughout, we know that the best teachers are actually people on the job. Interestingly enough, we also know that people who teach actually learn the skill better themselves. So you actually get this –

David Speers: Through the process.

Rob Hillard: That's right. There was a reason why the apprenticeship model was actually really effective.

David Speers: And is that what we need to get back to?

Rob Hillard: Well, we're going to see more cadetships, more apprenticeships and, interestingly enough, we're going to see it in - this divide between professions and manual is disappearing, it's actually almost nonsense now. People are doing work, they're doing interesting work and they're changing the work they do more often through their careers –

David Speers: See, I find this fascinating. What's the ideal model here, finish high school and then find that apprenticeship or workplace environment that you can take on the skills of the profession that you need?

Rob Hillard: Well, some professions are actually – the accounting profession in some countries, they're actually experimenting with not sending accountants off to university first but actually putting them back in and doing a cadetship and doing their professional education at the same time. It's a big benefit, financially and in terms of their learning outcome. We think we're going to see far more of that.

David Speers: And then there's the question about how you fund that. The Business Council, for a long time, has talked about a lifelong skills account. Chris, as you know, where essentially the funding from the taxpayer sits with the individual and you use that through your life.

Chris Richardson: And that makes much more sense in an environment in which jobs are changing really fast and, you know, if anything, that's going to be speeding up – sort of Rob's point, great to have an investment up front and, in some cases, that still includes the university career, the TAFE studies and the rest of it. We just need to realise we're living longer than ever, we're working longer than ever, we're staying with the same employer so the employer has more incentive than ever. Add to that the increasing pace of the underlying change and that is the perfect storm, if we stand still.

If we don't do more of the on the job stuff it is more focused, it's cheaper, it just makes sense. Now, often and, perhaps particularly with discussions in this room, we kind of say well, what can government do? There are absolutely things that governments can do but there are things that workers and businesses can do to invest. If we get the perfect match, we take on these new technologies, but we match them with the workers who have the right skills and the changing skills across the course of their careers, that's a much more prosperous nation than we have.

David Speers: Our next question from Eliza Laschon.

Eliza Laschon: Good afternoon. Eliza Laschon from the ABC here. Thank you very much for your presentation. The media obviously plays a role in how people view the future of the jobs industry, do you think that reporting could be improved to help avoid the [miss] you've spoken of and also help people not be so fearful about their job futures?

David Speers: Who wants to offer a bit of free advice to the media here?

Chris Richardson: If the chicken wire could drop down from the ceiling now. And it is – because when you're talking about the media, it is one of the industries that is more

disrupted by change than anything else. And a really tricky thing for the media is people love it more than ever, you know, anybody with a device and an attitude is a journalist these days. But getting paid for that and this is important, not just to this wider – so, you know, it may actually be bias, perhaps, some of the reporting around what's happening in job markets. Because the people who are doing the reporting are from some of the most disrupted markets of all, but there is a wider implication too and it's getting to the same sort of national imperative that we're talking about.

When I was younger I always assumed that the media would be marvellous at holding power, governments and oppositions, to account, as the business side of the media is becoming an increasing challenge. That says that the marvellous institution of the media, you know, that's a harder thing for it to do now. And we shouldn't just give up as a result of it but what it says is that everybody else has to rise to the challenge.

It might be the challenges that we're talking about with how we get greater prosperity in the future through better workers are the very things that we're talking about today. It might be about the institutions. We saw, you know, the marvellous institution that is the Reserve Bank, Australia's central bank and doing the great job that it does, we saw the very unusual thing of a central bank governor, you know, it was the safest possible moment, immediately after a federal election saying a bit more than they would otherwise do.

Yeah, look, the media is one of the most challenged areas and it probably sees, not so much jobs, but paid jobs, which you might call the same thing, under a lot of pressure and that may have an influence on a bunch of the reporting. We are far too scared about many things, whereas, we shouldn't be scared, we should be prepared. There are genuine challenges out there and we're not responding to them as well as we could.

Rob Hillard: And if we just use one example, the exit of a car industry. The media coverage really said quite clearly we're going to lose a lot of jobs. And that was the early reporting. What actually has happened is that far more workers, far, far more workers, particularly in places like South Australia, actually found jobs in different industries and their skills were more transferable than either they or their employers thought.

But that's a harder story because that's a longer run piece. And the trouble with it not being fully reported is that then other workers who are threatened feel far more nervous rather than starting to embrace, you know, how could their skill be reclassified in another way?

David Speers: So when a car maker shuts down a plant like Elizabeth or Broadmeadows or whatever, should we be celebrating this? Is that what you're suggesting?

Rob Hillard: I wouldn't be celebrating it but even the owners – yeah, when we talked to a number of the small businesses that were supplying into the car industry, even the owners of those businesses, let alone their workers, couldn't visualise how the parts or the manufacturing that they did or the skill that they had in design was actually applicable into the mining and defence industries and, increasingly, actually into agricultural industries as well. Whole new markets actually opened up.

David Speers: But what about for the direct employees of the car maker though, is it the reality that a lot of them are still struggling?

Rob Hillard: Yes, large numbers are struggling but less than was originally predicted. So there were predictions that anybody who was over 50 or 55 was not going to be able to get a new job. And this is where the caring professions really come in is being able to say well, what is it that you know how to do and how can you apply that? The quality expertise that the car industry was actually very good at was highly applicable in defence industries for example. And a lot of those workers did find jobs.

Unfortunately, too many didn't actually know there was an opportunity and just leave the initial position that they weren't going to be able to be employed again and perhaps took retirement earlier than they personally wanted to.

Chris Richardson: It is a good point, David. I mean it's a classic we had too many - economists, including some good economists, were talking about 200,000 jobs lost as a result of car manufacturing in Australia closing down. And we missed the point. We saw autoworkers, we didn't see skilled workers. You know, far too much fear off the back of that about what would happen to the South Australian economy where there are all these Hanrahans running around saying South Australia would be ruined. It wasn't going to happen and it didn't happen. Don't underestimate the importance of skills.

So what we've tried to do with this report is not to say electrician or other sort of tradie or banker or lawyer or autoworker but to actually go and it hadn't been done before, you go underneath, look at the skills. And as soon as you do that you start to realise well, actually, the picture is not as bad as we thought even where there are big changes.

David Speers: Wasn't that largely helped though with a lot of government defence spending in those parts?

Chris Richardson: It helped but it was not absolutely make or break. South Australia has a bunch of things it does well and a range of strengths and the car sector was also closing down over time when the Australian dollar was a bit lower and interest rates were finally falling. That was a really good combination for South Australia.

David Speers: Our next question from David Denham.

David Denham: Thanks. David Denham from Preview Magazine. That really raised a lot of fundamental questions which I'd like to ask just a couple of them. First of all, I like this thing, the word, which I'll take home, for every problem there's a job. Because I'm sure that all the problems that we can generate in this room we've probably all got lots of jobs for life. But the thing is, to get those jobs, we've got to do things like collaboration and trust. And this seems to me to be at variance with the classical capitalistic model that you get from Freedman, whereas we're going to fight to get into the top Forbes 100 list and all the rest of it. So that's the first thing, how does it affect that?

And the second one is we hear a lot of this glib talk about jobs and growth. And it's the word growth that really hurts me because you know and I know that nothing can grow forever. It's got to be if we're going to have a sustainable world then it doesn't matter what parameter you have it cannot grow forever. So those are the two things, how do you attack, is it attacking the capitalistic model and what are your views on sustainable [lies], growth?

Chris Richardson: Two quick thoughts from me. And great point about trust. The currency of the future is not bitcoin, the currency of the future is trust. And our failure to trust each other, to trust our politicians, that's kind of a global slowdown of the moment. Business is worried, they're not sure what politicians will do next so they're pulling back on their bets of the future, the money they spend today to make more money and that's hurting economies and the rest of it.

I don't think capitalism can't have trust, I think society, more generally, some trends are – and institutions are breaking down and that's hurting trust. But we do need to be investing in trust in a variety of ways, even, to use one of my favourite examples, any nation, again, the prosperity and fairness, a better unemployment benefit in Australia. To recognise that we're all in this together and to trust each other that we're moving towards that common solution.

And to your point about growth, I wouldn't be too depressed. Sure, there are environmental limits and there is global warming and we need, as a nation and as a world, to do better around a bunch of things. But don't forget you can have a hell of a lot of growth that doesn't necessarily blow more smoke or require more factories and the rest. I mentioned a phone a couple of times today, you think of how marvellously more productive it's made the world in a variety of ways. There are all sorts – and it comes to the heart of what we're talking about, if we get the right skills to match these new technologies your growth can be entirely sustainable. And hitting that sweet spot is tricky but it's doable.

David Speers: Rob, did you want to add anything on that?

Rob Hillard: No, I think that the technology industry has been grappling with that for years and Moore's law, the law of doubling of transistor capacitor every 18 months has been long predicted to come to an end and hasn't. Chris' point though is there's got to be new models for growth that is not going to hit natural resource limits.

David Speers: Jon Millard.

Jon Millard: Thank you, David. Jon Millard, freelance. And thank you Mr Richardson for your [world rated] and very relevant address. Now, we all know if we want four opinions on economic matters you have to ask two economists. But your opinions are frequently contrary to those of Treasury, Finance, for the bureaucracy generally. Now, this could not, of course, be to ideological differences, perish the thought, or even the working man with the delights of Deloitte, but why do you think that your views on economic [matters] are so frequently differed from the conventionality and so refreshingly so?

Chris Richardson: Thank you. Look, what I would say is that the world is changing and economists have to catch up to that. And the example I gave before, that all around the world, a given amount of growth, more of it is showing up in profits and jobs and less in wages. And the likes of Treasury and Finance or, indeed, the Reserve Bank, have economic models. I mean economic models are based on the relationships that used to hold we assume they're holding into the future.

When it comes, to take an example, Treasury's views that wage growth will bounce back to something rather more typical of times past, 3.5%. Treasury has been pretty slow to change that view, it still has it essentially and that's slower to arrive. I think there is a challenge for economists in the public sector to be more focused on what's – because some of this is urgent.

When growth shows up less in wages it shows up less in inflation which means that the Reserve Bank is suddenly saying well, where's all the inflation gone? And because the Reserve Bank has mostly an inflation target, it says, well, hang on, we'd better cut interest rates. Maybe, just maybe, inflation isn't as marvellous an indicator of where the economy is and where it's headed as it used to be. And maybe there's a case for holding the next rate cut for if there actually is a bigger crisis down the tract.

So, to the key point, for public sector economists, the way things used to work remains a standard benchmark but a bunch of standard benchmarks are under challenge and we do, as a profession, need to [rise to that].

David Speers: Let me follow up on that, Chris. You mentioned there are some urgent things that perhaps government need to be doing. What are they to achieve the sort of growth that you talk about in your report today? I think it's \$36 billion can be

achieved here, what are the two or three urgent things the government needs to do to keep up with the changing workforce?

Chris Richardson: And just a reminder around those numbers in the terms of [workforce], the typical job requires 18 critical skills. You've got to be good at 18 things before you're good at anything basically. And at the start of this decade we were short 1.2 of those 18 skills and today it's 1.9, just about to click over to two. So it's urgent for work and it's urgent for business but the catalyst can be governments. Making people understand that new technologies are great but they've got to be matched by people with the right skills and that Australia has to begin a game of catch up.

Now, we've had governments look at these things before and talk about the potential in Australia, but we have not had the right push, the right commitment and the right dollars applied. And this gap is growing and that task is more urgent than a bunch of other things that we talk about.

David Speers: Would you please thank Chris Richardson and Rob Hillard. Thank you both very much for your address and for taking our questions today. I think you've given everyone plenty to think about here in terms of jobs of the heart and problems creating jobs and, yeah, fairly optimistic so we appreciate that. And a small gift for each of you and a membership card to come back and tell us how we're going on the skills front as well. Thank you so much.

Chris Richardson: Thank you. Well done.