**Sustainability Safety and Health at Brookfield Multiplex Australasia**

Professor Dennis Else  
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**Kylie Emery:**

Hi. I'm Kylie Emery, Group Manager of the Workplace Relations Implementation and Safety Group in the Department of Employment. I'm also the Commonwealth Member on the Safe Work Australia Members board.

Thank you for joining us today for a presentation by Professor Dennis Else as part of the Virtual Seminar Series on the Australian Work Health and Safety Strategy. Firstly, I wish to acknowledge the traditional custodians of the land we are meeting on, the Ngunnawal people. I acknowledge and respect their continuing culture and the contribution they make to the life of this city and this region.

I am delighted to introduce Professor Dennis Else as today's presenter. Dennis was formerly Dean of Engineering and Science and Pro Vice Chancellor responsible for organisational development and change at the University of Ballarat. He was the Chair of the National Occupational Health and Safety Commission from 1996 to 2002, a predecessor of Safe Work Australia. As the NOHSC Chair, he was instrumental in the development of the National OHS Strategy 2002 to 2012, which is the precursor of the current Australian Work Health and Safety Strategy 2012 to 2022.

Dennis's contribution to work health and safety is truly inspirational. He developed the first Australian standard for OHS management systems and improved the quality of auditing processes and performance measures. Since 2006, Dennis has combined his academic position with a strong business focus, as the Group General Manager Sustainability Safety and Health at Brookfield Multiplex Australasia. His role consists not only of increasing the focus on safety across Brookfield Multiplex, but also representing the company as a board member of the Cooperative Research Centre for Low Carbon Living based at the University of New South Wales.

Please join me in welcoming Professor Dennis Else.

[Audience Applause]

**Professor Dennis Else:**

Thank you Kylie.

Thank you very much and it's a great honour to be able to reflect on the progress that we've made as a community and the opportunity is quite rare that you get asked to sort of do this reflection on the past, the present and look into the future, and then highlight some challenges and where the opportunities may lay. And in doing that preparation, it was really quite rewarding to see the progress that has been made by us as a community and that's a vast number of people, putting their effort, over a long period of time to improving the health, the safety of people at work.

Now, I think probably what I should just say that is that I've looked at the data and of course, the data is not necessarily very good for working out what we've achieved in the health area - it's much stronger in trauma and in the area of fatalities. I think we've probably in the last 30 years reduced the fatality rate by around about 70% in this country and that's about as good as I’ve seen elsewhere in the world. I think the German Berufsgenossenschaften over 30 years got about the same reduction and that was from the '60s through to the '90s and that was a period in which they had this wonderful combination of focus on health and safety, but also productivity and that all done within industry sectors and it was a lovely model that their structure enabled them to use.

We may have achieved a lot but there is still much to do. I mean, if we look at the moment, we've probably got a couple of hundred traumatic fatalities per year in this country. We've probably got about three times that number - 600 new mesothelioma cases per year and we've probably got 10 times the number of traumatic fatalities that are occurring as work related fatalities due to occupational cancers, respiratory disease and other matters that we would put down as 'occupational disease'. So, there is a huge amount of work still to be done. And I think it's really important that the successes that we may have had in targeting trauma are reflected upon and then applied to the real challenge ahead which is in the occupational disease arena.

So, a lot of people have contributed to where we are today and they've contributed over many, many years. If we look at the sort of timeline, for me I don't actually go back to 1830s to reflect, but for me the industrial revolution and then in the wake of that, starting to have inspectorates with a few people riding around on horseback paid for the hay, but other than that, it was appalling amongst those people to do good work, and those early factory inspectors in the United Kingdom, the work going on in Germany and in the United States - very, very important work.

And in those days, there were also a lot of sort of interest in health matters and I wonder why we've not made as much progress in health as I think we have in fatalities, and I think part of it are the difficulties of measurement. And as a Physicist myself, I got into occupational health and safety via physics and an interest in noise and occupational deafness. So for me, the sort of grand old man of occupational disease is Thomas Barr - a Glasgow ear surgeon. I’m married to a wonderful Glaswegian woman - so I can imagine how he may have sounded, but in those days, he couldn't go out, as I was able to, and access specialised equipment for measuring hearing and noise, so he had to improvise.

And the improvisation was to use his pocket watch, and he would just use a pocket watch and a yardstick, wait 'til the person could say they could hear the ticking of the watch, out came the yardstick and measure the inches of hearing, right? So, he had three groups of workers. So it's early epidemiology and he had letter carriers, iron moulders – foundry men - they would be called in those days and most of them were men – boilermakers. In actual fact, it's interesting. I don't think the language was as sexist then because the jobs were all going to men, so you didn't have to specify, use the letter carriers. It's not postmen – iron moulders. It's interesting I think, anyway. But, now the letter carriers, that's not 5,674 inches of hearing for one postman. That's distributed across two ears and 100 people, so you're talking of – what's that - about 28 inches away or 70 centimetres. By the time you get down to the iron moulders, you're down to about six inches - 16 inches rather, or about 40 centimetres, and by the time you're getting to the boilermakers, you're practically squashing it into some of their ears which is about three and a half inches away on average, sort of nine centimetres.

Now, back in those days they had earplugs. They had disposable earplugs. They had this new material called plasticine that they mixed up with cotton wool and made themselves disposable earplugs. But what they didn't have was real controls of an engineering type of controls at source. It was all down to the individual.

As I say, the letter carriers were probably all men, but the factory inspectors were also all men and over here, it was the same. By about 1893, the first female inspector in the UK was appointed. South Australia of course, always at the lead in innovation, by 1894 had appointed our first female inspector, Augusta Zadow and she was an advocate for women. She set up the first women's trade union over in Adelaide and really did a vast amount of work on the clothing trade and the sweatshops, and she died about 1896 while preparing a report on the early Factories Act. Now, she's still commemorated by South Australia's Augusta Zadow Scholarship which is sort of introduced on her centenary of her appointment I think, and for anyone that is wishing to apply, it has an interesting sort of requirement that is, it’s for individuals who have contributed to women's health and safety. So, a very, very powerful advocate and I think the trade unions have, over the years, had a very important role to play as advocates of this subject of health and safety.

Now these early pioneers, they were quite quick to recognise that you really wanted to find a control that was sort of upstream and was going to be technical in nature rather than just trying to rely on people to change what they do. And the earliest example I've got is in the work of Sir Thomas Legg who was the first Medical Inspector of factories back in 1897 in the UK, and much later back in the 1930s, so he was probably giving the equivalent of this lecture. They give you the opportunity to speak on these issues before you fall off the perch, you know. And, anyway - he came out with a number of axioms and it's really interesting I think to see what he was wanting to tell people about.

The first one was, "Unless and until the employer has done everything - and everything means a ‘good deal’ - the workmen can do next to nothing to protect himself, although he is naturally willing enough to do his share." So it sort of shows that both need to be playing their part. Secondly, “If you can bring an influence to bear external to the workman, that is one over which he can exercise no control, you'll be successful and if you cannot or do not, you will never be wholly successful.” And so there was this push to go upstream and engineer out problem, and you then had - that got expressed in a number of different ways. By the 1930s it was within occupational hygiene. It was called, well, a hierarchy of control and we tended to use that term, and it's embedded in our legislation today.

Now, I think this is really important because it's a lasting legacy of that sort of period of focus on the technical side.

So now, so the idea is that if you are controlling things by eliminating, substituting, isolating or engineering out, then you've got more effective and more robust controls. If you're relying on administrative controls of personal protection, then you're less robust and you’re going to need more supervision in order to make sure that that works. I mean, it’s fairly obvious but it's central to much of what we do. And there's a paper published last year by Michael Bem who actually attributes Australia's National Strategy and its involvement - its focus on safety and design as changing the US in their approach to health and safety because he says he could get no interest whatsoever in safety and design in the US until we became so open about its importance at a sort of a government level.

Now, Michael last year published a paper in which he looked at – what was it? It was something like 250 investigations of incidents across about seven organisations and what he found was that if we were to go and look at the administrative and personal protection area down at this end, then the recommendations of 80% - 80% of the investigations - had focused on that as where to control. Of these 250 or, I think it was 247 from memory, but anyway - of these incidents, there were only 20% where the focus was up here. Now, that's a challenge for us I think, a real challenge as we go forward. And that technical emphasis or focus has been followed by a focus, I think given quite a push forward, through the 1950s after -the Second World War and the involvement of a lot of engineers getting involved in engineering problems out of the workplace and doing the right thing in that sense.

I think the engineers started to focus on the human factor and I think they started to see people as a problem and you've got to engineer around those people. I mean it's a good concept in one sense I think, and it reflects what Thomas Legg had been saying about taking the control away from the individual. But I think there's also a bit of a problem. I mean, I ran a department at one time at a school of engineers and I remember the joke at the time was, "How do you detect a people centred sort of engineer?" and the answer was, "Well, he's the engineer that looks at your feet rather than his own feet when you say 'hello' to him." Now there's a tendency for engineers to be quite sort of compliance minded and focused on the engineering. I, at one stage, tried to change the nature of engineering and then we found research that really showed that many engineers have chosen to be engineers at very, very early ages. So in fact, you can't really do it - change the nature of engineering after they've joined engineering because you've already got a self-selected population.

But anyway, in this period of human factors research, it's all about error. How do you stop error? Wonderful work being done. Wonderful work being done by people like James Reason with a model – the Swiss cheese model in which you have defences in depth and layers of defences and you try to make sure that the little holes in the Swiss cheese don't all line up and such, that there's a sort of accident trajectory that runs through all those defences. It also deals with the challenges of the sort of, not just direct pathways of causation, but also latent pathways where perhaps the failure to do something on behalf of somewhere in the system means that the defences are not there when you want them. So lots of really important work done there.

And I remember one experiment which really is quite thought-provoking that was done by the Psychology Department at Harvard University. And it's actually – it's really important to the point where we, sometimes at Brookfield Multiplex, use it with new groups of young cadets to give them a sense of how they should not rely on human beings being able to recognise the growth of circumstances and problems. Many of you will have, I'm sure, seen this before but the experiment is something which, for instance, we would have a group of say, the one I can remember would be a group of 28 new cadets.

They've come fresh to your industry. They're really keen to be successful. You're briefing them the first time. They're going to be working with senior managers and getting to know the business, and working with each other, and they're really, really trying to impress one another. And you play them a video produced by Harvard which is two groups of three people - one dressed in white, one dressed in black and each team has a ball and they’re passing the ball between their respective team members and bouncing it on the floor. And you give the people a difficult challenge and that is that you want them to count the number of air passes and floor passes - bounces - that occur whilst the video is playing, and these two teams are just sort of passing this ball around a net, a basketball net behind them.

And at the end of the little experiment you ask them, "How many air passes?", "How many bounce passes?" Some of them get it right, phenomenally accurately, but then you see a bit of unease in the group because - the example that I see in my memory is - out of the 28, there were only, I think it was two, that were showing unease, and with great temerity, one puts the hand up and says "What? It – but, but the gorilla?" and the other sort of 26 turn around saying "What gorilla?" and in the midst of this video, it turns out there's a woman in a gorilla suit has walked in front of the camera and is waving her arms like this. You cannot believe that people could have missed it. And that – in actual fact, I remember this particular circumstance because we had another course of entries about a year later. We redid it but I couldn't make it to the first day of the program. So we did it on the last day of the program. They now all knew each other. They all were comfortable being in the presence of senior managers and each other, and probably, given it was a Friday morning, they'd had some drinks the Thursday night. So they were very, very comfortable and about half of them saw the gorilla.

So, it's a good way of getting across to young people that some of your best and most focused workers might be the ones that are going to miss things, and that video has been - was used in part of BHP by one of my master students, increasing the near miss reporting because you changed a near miss from being something that silly people are involved with, to a 'gorilla moment' and that language was used within the site, "I've had a gorilla moment," and the reporting went up. So, psychology has a lot to offer us.

But around probably the 1980s as was mentioned in the introduction, I probably have to own up to having been involved in helping to set up the Australian standard on management systems. To many senses, I think it has helped us to go into a little bit of a side branch and move a bit slowly with a great focus on paperwork and bureaucracy. It doesn't have to be that way, but I think it has probably been a bit that way. So, it was meant to be all focused on continuous improvement. It was the era of improving productivity and quality. Anyone that was alive then like I was, you probably had been to events where you felt you were in a Billy Graham sort of revivalist movement, and you were going to be asked to come up to the front and affirm your belief in quality at any moment.

There was this huge interest in quality and people started to put quality, that plan-do-check-act thing together. The whole idea was that you had lots of focus on continuous improvement - that wheel in the middle - and minimal but enough of a chock of assurance to make sure that gains in performance that you'd achieved, didn't just slip away. But I think what we have delivered to our community, is that image which is a huge chock of paperwork and hardly any time left over to get on with talking to people and continuously improving our systems.

So, I think we have problems in this country. We have safe work method statements still that are 28 pages long. The concept of a safe work method statements started as something which was one page and had three columns, and got you to think about and plan what you were going to do, understand what the risks were and what the controls should be and focus on them with that hierarchy of control in mind to get controls that were robust.

And I suppose, I'm suggesting that there then came a sort of realisation that it's not one or the other of any of these. It's really the integration of them all and trying to get the right mix. And that means – it's a bit like – I remember my mother, at one stage, sort of - I was crowing about how I was quite a good cook at the time and she said to me, "A test of whether you're a good cook is on a Friday evening and there's nothing that you've bought, but there are scraps in the fridge and you can make a beautiful meal. That's the test of a good cook," and I think that's the test of a good health and safety person.

A good health and safety person advising organisations is not one that brings in new products from the supermarket. They're the person that looks in the fridge, sees the scraps that are there from previous attempts to improve the performance of the organisation, but then can weave them together in one - blend them in magnificent ways to produce a meal that will improve the performance of that organisation.

And I think that - so with respect to my mother, her words guide me still, and I think with integration, that's what we're about. We're about recognising that you do need the suitable organisation and management systems:

* you need the well-designed physical environment,
* you need the competent, knowledgeable workers, and
* you need fit-for-purpose equipment being brought in and suitable rules and procedures,

and those all go together. And I would just like to acknowledge David Borys. I think he's appearing in another one of these virtual seminar series for the authorship of many of the ideas that bring that together. He was also instrumental in our thinking as we started to realise that really with human beings, adaption takes place and I think that we're now in a time period when we ought to be admitting more to the fact that human beings constantly adapt. If they didn't adapt, nothing would actually work. They need to be adaptable. They've been designed that way by that great big designer in the sky.

So, I would argue that what is coming is a bit of a shift and I think the shift is from the human being as a problem, to the human being as a wonderful part of the solution - in complex systems. But, the only way we're going to get the benefit out of that, is to communicate with people in a far more honest manner about the reality of working lives and workplaces and stop making out that everything is perfect out there, and it all works to a wonderful system. Everything out there is a first approximation and – you know - when once the battle begins, all the plans are out the window. We hit reality again. So, in fact, life is constantly replanning, constantly changing and the human beings are our sort of biggest opportunity there.

So adaption, I'm suggesting, is inevitable and that means that you get - perhaps that adaption can take place and there's probably a boundary beyond which you get a bit worried when people are adapting because they may now go to the point where you're not comfortable that those adaptions are taking place. And very easily you can get a shift between the work as you are imagining it’s being performed and the way the work is really being performed, and you get this drift occurring, and it happens over time. And it happens for the very best of reasons because people are trying to perform, and they're trying to perform well.

Now, as we do this, I think really what the challenge is going to be for us - to surface where adaption is taking place and I can assure you it's happening everywhere, right? But surface that adaption, and then have the conversations to find out which bits of adaption you want to actually learn from because it improves performance, and which bits of adaption you want to find ways of damping down because it's a bit risky.

And that means that we're really in the realm - and acknowledgements to David Borys again - something he's produced this year - which has really come down to I think, admit that the sort of conversations that take place, are the very lifeblood of health and safety in our workplaces. And so - and storytelling really, is the sort of food on which we grow the organisation. We are elastic or as he tends to be now calling, sort of plastic as you start to shift, but what you're trying to do all the time is surface this drift that may occur into failure which, in most of our organisations, we have no processes for picking up that drift. No processes.

And out of this, I think, what we've got is a shift which is demonstrated in the workings of Holnagel and it's quite instructive when he starts to demonstrate it in an image like this. That in fact, failure is occurring very infrequently and success is there most of the time. So why are we only learning from the failures? Why aren't we learning from the successes and then applying all of that opportunity into reducing the failures?

There are a couple of books that I would like to mention because I think they really are a worthwhile read as we start to look to the future. And one of them is the book by Holnagel which is *Moving From Protective Safety to Productive Safety* and argues for a reframing. So, instead of in safety one, thinking of as fewer things as possible going wrong, we start to think of as many things as possible going right. In the way that we manage, we become much more proactive and much greater focus on anticipation of developments and events.

In our explanation of accidents, we recognise that these things are going on all the time. The adaption is there pretty constantly. So let's face up to it and understand it. And in terms of human error, shifting from that problem - the view, which I suggest was early in that human factors sort of focus of the human as a liability, to now humans seen as a resource for getting system flexibility and resilience, where resilience here is very much a system sense of resilience, not what sometimes is being talked of in individual people being resilient. This is about a system being resilient.

And the role of performance variability - instead of being harmful and that we should stop it and constrain it, what we move to is a view in which we are saying that it's inevitable, but it's also most of the time useful, so we should monitor it and manage it. Holnagel tends to present this as a little sort of continuous loop with the focus on the work not as imagined, but what's actually being done out there. Let's focus on what variability is occurring. Let's look at success and failure, and learn and improve. And in that I think it's - a challenge - is that we should be applying that, not just to trauma but to occupational disease factors.

So, for me, that's the historical sort of past, present and I think where the future's going to take us.

When I come to challenges, I think there's - when I started writing the challenges down, most of them turned into opportunities anyway, so I ended up with really only one that I could only see as a challenge and not could turn it around into an opportunity. So, I'll go to really one strong image and I think, myth that is pervading our society. Not in Australia particularly, it's around the world - in the Western world anyway, and it's an image that – it's a real demonstration of how, if you can think of a diagrammatic form, it can take on a whole life of its own, and this is the safety pyramid.

A former colleague, Andrew Hale wrote a lovely paper about it 20 years ago I suppose, in which he used, not in the title, but he used in the text the words, "the myth of the safety pyramid". And this myth goes the following way, and that is that if you focus on the first aid injuries, you'll reduce lost time injuries. If you focus on the lost time injuries, then you'll eventually reduce the fatalities. Now, that's a total misrepresentation of what the early researchers were doing. All they were doing was saying "We've been out there and we don't get anywhere near as many fatals as we get lost time injuries, and we get an awful lot more first aid injuries." They didn't make any causal links between them, but once you put these things in a triangle or a pyramid, other people do make the links. And much of our community in Australia is still so – no, it's much in our global industries it's the same, is this focus on lost time injury rates. Now, there is so much evidence about to say that that’s not what they should be doing because there aren't causal links there.

If they want to express something in a triangle, and people often do, then at least express something that you might get the right story out of, and that might be this one which is, "Okay, why don't we learn from every near miss that relates to our critical risks, and that might stop some fatals?" And plenty of papers as mentioned there - but just consider the importance of what this diagram is doing.

If you take the very, very important work that Andrew Hopkins has done over many years now, taking disaster reports and commissions of inquiry that everyone wants to just put on the shelf and forget, and pulling them out and tilling them and taking the learning from that and forcing it back into our community, it's a wonderful thing that he has done, Andrew Hopkins. And you just go back through his disaster reports and how many of them have these sets of circumstances in which people have been convincing themselves that they have got risk under control, and they go out rewarding people for getting risk under control. And because they haven't got many sets of data that they can use to give them a sense of fatality risk, they're using this minor injury risk.

And studies that - if you take countries that probably are more invasive than we are in terms of insisting on data collection - if you take a country like Finland, I always think that the Scandinavian countries almost sort of put a barcode on your body when you're born so that they can keep the data well, but there are some great benefits from it. So here, runs of data on fatality rate in the construction industry in Finland over, I think it was 15 years, and look at what looked counterintuitive to start with, that when you've got the lowest fatality rate, you seem to have the highest reported injury rate. Now you can go in all other sorts of places to get similar confirmation of that.

A little bit later than this, data from the airlines industry came out and showed that the same is true in terms of reporting rates for different airlines. "All the correlation coefficient shown in table one…" I'm reading from a flight safety report, "…are negative which means that carriers with higher rates of non-fatal accidents/incidents had lower mortality risks. Furthermore, the correlations shown become increasingly negative as the events become more severe," …

If you look at the - in the United States and you look across the quite recent paper 2013 - that states with low non-fatal injury rates have the high fatality rates and vice versa. How weird. Well, it's because of reporting, I think, but I don't know.

If we look at reporting, a study of a sort of closed system where you had all the - you had both what people were reporting as companies and you had what the actual was because you were running the insurance records as well, so you could actually look at what the real data were. So, and what they did was to classify the - I think it was around about 100 subcontracting companies in terms of whether they would be perceived as having a good safety culture or a poor safety culture, and surprise, surprise - they had exactly the same injury rates.

Now I don't find that surprising because if the poor safety culture company was saying it had very high injury rates, it wouldn't get any work. So of course it's going that, but it may be that that's what was coming through to them directly, I shouldn't be unfair. But if you now look at what was unreported, even the good safety one, there was about an equivalent number of cases that went unreported but you had five times that unreported in the poor safety culture. So, most of these measures are more about reporting than anything else.

So beware the safety pyramid and I think it's a challenge which I would encourage you all to accept to go out and champion to get rid of the use of lost time injury rates in the way in which you assess organisations and make decisions on subcontractors or decisions in the supply chain and so on, otherwise we are promulgating this lie.

So, let's turn to opportunities and I think the first one is, there's an opportunity, I think, for leaders to be focused more on critical risks. Help them to move away from lost time injuries and put their focus up there on permanent incapacity, sort of class one, class two type injuries and fatalities, but bear in mind the elephant in the room. We're talking fatalities here. Probably people's minds are going to trauma fatalities, but how about all the occupational disease that's up there? That's the big one. So we need to make sure that our learning from traumatic fatalities where it's a bit more obvious, is really honed and sharpened so that we can apply it with great gusto into occupational disease.

And one of the ways that certainly, I must pay tribute to my colleagues on the executive board of Brookfield Multiplex. They've accepted having an idiot academic present with them for the last eight years in all their decision making in relation to the board. So it's not just health and safety - it's about everything we do because we have a strong belief that the health and safety flows from the decisions that you make as a business and so I'm there through all of that lot. And they have taken on board these things seriously and then taken on board the old adage of "What interests my boss absolutely fascinates me". So that unless they're prepared to put time and effort into something and cascade it through the organisation by virtue of the conversations they have and the interest they show, then nothing new is introduced. We don't introduce things off the supermarket shelf down around the business. If it's important, we'll buy into it and cascade it through the organisation.

And for instance, the first one of those was probably safety and design, which I'll come to in a moment, but the second one was really getting this push to learn about variation that's taking place and learn about the significant potential incidents that are out there. But in the old world, in the safety one world probably, the strong culture of a project would be tested by, "Does any bad news leak from this project?", "How tight is this team in holding in bad news?" And the cultural change required by the senior management is to demonstrate a different world in which a complaint is a gift. There's learning in this, and that in actual fact, we want to hear bad news, and we want to hear bad news to the point where we are prepared to come to the board table and share our problems and take the other members of the board through significant near misses that we ought to learn from, and then cascade that as a culture through the organisation.

And so when you do that, you can get remarkable changes in the amount of information that flows up. And your challenge is not now to get hold of the information, it's to run the systems that can live up to the invite you've given to people to tell us about things that are going on out there, and that is an organisational challenge because you need to be able to triage that and focus on that, which has the most learning in it, and then transfer it around the whole organisation. That's not an easy thing to do but we all have to face up to it and do it, and so that's just that the growth of those things.

And it's interesting that you see challenges for people in this because, you know, if you're part of a large group, then you start to raise concerns in the larger group because suddenly, it could look as though you've got lots of significant problems out there, but really all you're demonstrating is that you are more open perhaps than the rest of the group or the norm, and that requires strong leadership to be able to take that message and take it to your parent and fight to change their view of these things as well, and change the industry. And I've been pleased to see the way that the organisation that I've had the chance to sort of spend a lot of time with, has been up to that challenge.

So, we're still on opportunities. The big one - the big, big opportunity that I see, is actually going upstream. And I would characterise this in sort of saying that we have tended to look at health and safety just where the daily work is being done, but the work may be being done there but it has been planned and organised often somewhere else. And it is in that planning of an organisation, often upstream from where the work is being done that is your biggest opportunity to have an impact on trauma risk and occupational disease.

And I liken this to - there was an old sort of joke about the person comes out of the pub and sees someone under a lamppost scrabbling around looking for a coin and it shows how old the little anecdote is because it was a Sovereign that they were looking for, so another person gets down to help them. Then a few more people come out of the pub and they're all scrabbling around looking for the coin. And then the last one comes out of the pub and says there's probably not enough room for them to get down there and they asked the question, "So, where did you drop it?" and the first person says, "Well I dropped it over there, but the light's much better here," and I think that is what we've done, or are in danger of doing, in health and safety. We put a lot of effort into the area where the work is being done, but we really need to go upstream, and once you do go upstream, you get some very positive outcomes.

This is going back in Brookfield Multiplex - 256 of our past sort of projects, and you realise that once you start working upstream, that's the area where you can get maximum reduction for lowest cost in terms of the maximum improvement in performance. And we've got lots of studies going over 30 years in different industries showing that the front-end loading of a project or the setting up of a business makes a huge difference to the performance outcome, and it's where you can get the biggest return.

This of course fits quite neatly with safety and design. If you put buildings up like Brookfield Multiplex does this one - Shelley Street in Sydney - it's got this weird external skeletal framework, now that would be originally planned to put that up in sort of - in the air, as it were, but thinking behind it was, "Well actually, should we be changing this? Should we be going off site, much more fabrication off site?" because bear in mind, that the moment you make the decision to move from doing this in a construction area to doing it in a manufacturing, you sort of halve the fatality risk.

If you take into account what the risks are, for instance this is US data, but for steel fixers, you're getting a sort of probably fivefold reduction in risk and that means that we can, quite dramatically, reduce the hours that are on site, move it into a factory environment, reduce the risk and probably get something of the order of 75% fatality risk reduction. And bear in mind - the elephant in the room - is that you can control the exposures of people to the chemicals - products from welding fume and whatever - so much better when they are in the factory environment.

So, the storyline for this really is look, we've got a huge opportunity but we've got to get that conversation going between people and in all of those areas upstream, it means lots of people talking to one another and I think that old saying, "You've got to walk the talk." Well I reckon that you've almost got to reverse it and you've got to sort of talk the walk, and the fact is that we need people whilst they are walking around, doing much more talking and listening to people as about the real conditions. And doing this is quite, quite consistent with getting higher performance out of our organisations.

If you look at the sorts of studies that have been done on what makes for a high performance workplace, they're very strong and other sessions in this seminar series go into that in much more detail, but there is such a wealth of experience now showing that getting the sorts of things that we're arguing for here in this more listening version of health and safety, is consistent with higher performance.

The example I'll use is a study by Darryl Hull in which they went out and got companies to put forward within their organisations, workplaces that were good and workplaces that were exceptional. And so they then looked at the exceptional workplaces and saw what were the differences between just having a good workplace and a really high performance workplace. And they then - this diagram what it's trying to represent is that the further you are or the closer you are into the centre, is a greater importance explaining more of the variants.

And so what you find is that good working relationships, way above anything else, are what produces the exceptional performance in the workplace and yes, feeling safe is a really important part of that. You're a little bit further out but it is still part of that importance and having a well-built environment where people have thought about kitting you up to be able to do the job well is really important, as is learning, etc, etc. I won't go any further with that, but just say all of that comes together. It means that companies that actually do this are going to outperform the rest.

And here in Australia, there was that lovely study which Westpac kindly sort of got their analysts to do which was to take - construct a portfolio of companies with good OHS arrangements across all sectors of the all ordinaries and then rerun the data as a back test. If you'd had a portfolio of those good OHS performers, would you make more money? And yep, you would.

So, there is a good association between good OHS arrangements and good financial outcomes. I'm not saying one causes the other or whatever, but it does mean that there are a lot of people that are now starting to produce reports for investment analysts so that they can actually use the health and safety arrangements of a company as an indicator of how well strategically managed that company is. As an indicator of its ability to deal with risk, and Westpac staff coming forward was even more powerful.

So I would just like to sort of draw this together and indicate that the strongest message probably is the one that isn't up on the screen because I've emphasised it time and time again, is the shift in terms of us being able to do fatality risk well, but now apply that to occupational disease. And within that, I'd see that the opportunities are - we need to understand critical risks and the critical controls that have to be managed for those critical risks.

We have to understand and articulate how workplace health and safety can actually add value to a business and the particular business - understanding this particular business on what does health and safety have to offer, because it does and it's just a case of looking hard and being able to articulate it. We need to integrate the health and safety with the other business decisions and we need to, I think, provide a sort of ‘roadmap’ that aligns with where a business is hoping to go. It's really trying to understand strategically, where an organisation is going or an enterprise is going and then map the health and safety within that journey, and focus on social processes not just paperwork.

And I think all of us get involved in going out into organisations and most leaders now in organisations, do try and get out into workplaces, but I think we've got to cascade that through all the organisation and make sure that managers in the middle of the organisation are having the conversations with the people doing the work:

* finding out what worked well,
* what did not go according to plan or was difficult or frustrating,
* what could have gone better, and
* what can we do to improve things around here.

And I think if we take an interest in the understandings that people in the workplace have and take as much of an understanding as those early players like Barr, Legg and Augusta Zadow did, then we'll be all right and we will make a big difference.

Thank you.

[Audience applause]

**Questions and Answers**

**Kylie Emery:**Thank you Dennis.

We have time for a couple of questions. So if anyone has a question, if they could raise their hand. Yes, down the end here. If you just wait for the mike and introduce yourself please.

**Audience Member:** David Segrott, Australian Health and Safety Services.

*Dennis, I'm interested in your move forward just from the management systems approach into adaptation, yet what I'm seeing happen is a resurgence of the management systems approach, where there is a significantly high level of focus on the paperwork, audits, compliance, rather than the focus on the actual identification and management of hazards and risks in workplace more so. And I'd be interested in your comments on the challenge that that presents in actually making the move forward.*

**Dennis Else:** Well, I think it is a big challenge because we have a society that we've managed to lull into a sense of comfort that having all these paperwork systems is making a big difference. I'm not trying to imply that it hasn't been important, I'm sure it has but it's the ability to now simplify, to reduce the amount of them. Now the hard work starts because you've actually got to make the hard decisions as to how you can make this more effective which things are you prepared not to have a lot of rules about, how do you resist the temptation to respond to an incident by adding to the administrative arrangements around that job when in fact you really know the job will get done the way the job was done before, but you can walk away feeling comfortable that, "Well I've tried." Now, I think it's harder, this area of accepting that there is adaption and the safety too, is actually harder. But I think we'll find that people in workplaces will be surprised that we are talking about reality again.

**Kylie Emery:** Thank you. Another question? Yes.

**Audience Member:** Hello Dennis. Mick Peterson.

*Dennis, just a question about how we can share our successes and our failures better across industries and within industries, and who should be driving those sorts of processes?*

**Dennis Else:** That almost sounds like a Dorothy Dix.

I've spent years trying to get a process whereby there is a sharing of the innovations between organisations and I think that I'm almost coming to the point now of realising that perhaps things don't – it's more what happens within an organisation than seeing something come from outside. I think now having worked for the last eight years in one organisation trying to effect change, I have lesser belief that codifying and producing good ideas amongst people that are already very busy, will actually get picked up and used. And so I put much more effort now into teasing out the ‘few’ from the ‘many’, and then putting a lot more effort into how do we get the conversations to take place around these learnings? And I think that's been a shift in me over the last eight years whereas before I thought, "If we could just capture all these good ideas obviously, people will pick them up and use them." It's nowhere near as easy as that.

**Kylie Emery:** Thank you. I think we have a question over here.

**Audience Member:** Yes. Wendy Alford. I’m a Futurist and Ergonomist.

*My question is about wellness to illness as a continuum and if it's context defined. So, if you're looking for zero harm, we're going to have a problem I guess, shifting people towards understanding that if you're not sick, how well are you? And how can we put the resources in when everybody's trying to close the system, through I guess, missing injury when promoting wellness is actually quite an expensive thing as well. There's a lot of gains to be made and zero harm I think is going to be something that we'll have to be realistic about.*

**Dennis Else:** Yes. I think the words you used there, "zero harm" is something we have to be realistic about is really important because I think laudable, as the aims are, and I think there are proponents that we'll have - able to articulate the strength of it. I find that there is a challenge of people not believing that that fits with the reality of the lives they see on a daily basis. I remember there was work done by Dunphy and Stace looking across many Australian organisations and they came to the conclusion that health and safety was often used as the litmus test by people in the organisation as whether the mouthings of senior people about, "People are our biggest asset," or whatever - whether it was real or not because they could see, "What am I being delivered on a daily basis compared to what I'm hearing?" And I think that that's one of the issues with zero harm, that you're often expressing a view about it, but what people are seeing on a daily basis, may be a bit of a dissonance there.

I think it's more important that we focus on sort of very serious harm because I think that resonates more with people. And I think the other part of your question, in terms of how do you have an impact on some of those other wellness issues, I would not underestimate how important ‘being heard’ is in terms of wellness, and just listening honestly to people about the real work they do and valuing them as specialists in whatever it is they do. They're always specialists in some small part of the business processes and ought to be recognised for that.

I think we often miss a huge opportunity to increase the wellness of an organisation and certainly in the Brookfield Multiplex organisation we run opinion surveys every couple of years, and I've inserted a whole range of questions in there which relate to whether people feel that they're being listened to, and if they have issues, can they rely on someone acting on them because if they can't, I don't think we're living up to some of the value statements that we make.

**Kylie Emery:**

Terrific. Well, thank you very much Dennis for that interesting and challenging presentation.

I was particularly fascinated by your discussions about the different ages in health and safety and the advances that have been made.

I think it's really important that we look back at the technical and scientific developments and the human factors and management systems which have contributed to improvements in health and safety. But I think you've also reminded us that we need to engage with the adaptive age, and that is how we tackle health and safety issues in the workplace. And we must always increasingly constantly evolve to meet the challenges of an increasingly complex world, but importantly you have talked about the importance of communication. I think that's always a good thing to remember.

So, to all of you out there, don't forget that you can view this and other videos that showcase the latest work health and safety thinking, research and innovations during the Virtual Seminar Series on the Safe Work Australia website.

Thank you.

[Audience applause]

[End of Transcript]