Transcript

Safe Work Australia

Fun, exciting and safe: WHS in major events

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[*Opening visual of slide with text saying ‘Safe Work Australia’, ‘Virtual Seminar Series’, ‘Fun, exciting and safe: WHS in major events’, ‘Dr Aldo Raineri’, ‘Stephen Woolger’, ‘Tony Williams’, ‘seminars.swa.gov.au’, ‘#virtualWHS’*]

[The visuals during this webinar are of the presenter and panellists seated at the front of a room in front of an audience]

§ (Music Playing) §

**Stephanie Brantz:**

Well hello, and welcome to all of you here in our studio audience, and also to those watching online. My name is Stephanie Brantz. I’ll be facilitating today’s discussion on work health and safety, and fun, exciting and safe work health and safety in major events.

I would like to start by acknowledging the traditional owners of the land that we’re meeting on today, the Gadigal people, and I pay my respects to their Elders past and present.

Today we’re going to explore some of the behind the scenes challenges of putting on a major event, from music festivals to sporting events, cultural celebrations. These events are fun and exciting. We’re going to discuss the challenges in meeting your WHS obligations while keeping it fun for the audience.

Of course it isn’t possible to estimate the number of people who’ve attended a major event per annum, but Safe Work Australia’s research has found that between 2003 and 2016 there have been 29 fatalities related to an event of some form. Ernst & Young in its report published in February 2014 estimates that the output of the live performance industry is just over $2.5 billion, and the full time workers in that industry at around 19,000.

Just to clarify what we mean by a major event – and this definition of course rolls off the tongue – Work Safe Victoria have defined an event as a planned short term activity undertaken in a building or structure or series of buildings or structures and/or covering an area of defined open land. This includes trade shows, general shows, fairs, concerts, sporting events and public gatherings, for example demonstrations.

So today we’re talking to three leaders in event management to get their insights into how we deliver a fun yet safe event. And these gentlemen, esteemed gentlemen, their qualifications are so great that I cannot do them justice in the introduction so I do direct you to our website where you can read their full biographies.

But for a brief introduction, firstly here on my left is Dr Aldo Raineri who’s currently the Discipline Leader in Occupational Health and Safety at Central Queensland University. Prior to commenting that role, Aldo was the Director, WHS, Policy and Legislation with the Queensland Work and Health Safety Regulator. Aldo is also the Managing Director and Principal Consultant for Event Safe, which is a health and safety consultancy specialising in the live entertainment sector. So welcome to you. Dr Raineri, good to have you here.

Stephen Woolger, our gentleman in the middle here, is the Health and Safety Manager for the 2018 Commonwealth Games. He’s worked in numerous positions in health and safety roles, and as Manager, Health and Safety for the Comm Games he is of course highly motivated and committed to ensuring that the Gold Coast 2018 event is delivered in a safe environment, ensuring a positive experience for all constituent groups.

Our third panellist, Tony Williams, who is the Group Director, Regional Operations and Sector Initiatives for Safe Work New South Wales. Now Safe Work New South Wales has Australia’s largest inspectorate – 315 inspectors servicing nearly 300,000 workplaces across New South Wales. Prior to this role Tony has worked in both the private and public sectors. So gentlemen welcome to you. Great to have you here.

As I mentioned my name is Stephanie Brantz. I’m a sport and events host. So I’ve been the beneficiary of the hard work that gentlemen like this do to stay safe at big events, and I’ve seen the results first hand at events like FIFA World Cups, Olympic Games, Paralympic Games, New Year’s Eve events, cultural celebrations, and most recently at the World War I Centenary commemorations both at the Gallipoli site and across the western front.

So my role as a broadcaster and a live MC is on the fun side. Today we’re going to find out what happens behind the scenes and what has to happen to make sure that everyone can have fun at major events. So gents what we might do is start by getting a picture of how major events are put together and who’s responsible for what. Aldo you’re closest to me, so I’m going to start with you. You are first cab off the rank.

The planning and design of major events, it’s an enormous and detailed undertaking. Can you perhaps maybe briefly outline and walk us through the main stages of planning?

Aldo Raineri:

Yeah. Thanks Stephanie. Can I start by saying that I’ve been called many things in the past, but esteemed is probably the first time.

Stephanie Brantz:

Did you like it?

Aldo Raineri:

Yeah. I did indeed. Look, I think I can answer that question. There are a number of levels to that question. I think firstly at the broad strategic level there’s probably four phases to an event, starting off firstly with the concept stage, and this is when you’re kind of dreaming up what the event is meant to achieve, what the outcomes are. It involves the whole socio-political context around events and all of that sort of stuff.

From there you move to the planning stage, and I’ll talk a little bit more about that shortly. Then I think the third stage is the implementation stage where you put your planning into effect and basically you’re holding the event. And then fourthly I think there is an evaluation stage, and this is where you kind of reflect on the event and you take learnings from it for the future. It’s a stage which is often neglected but I think is a fairly critical phase or stage of an event. It’s where you ask yourself or you look at what went wrong and why did that go wrong.

But equally as importantly I think you need to ask yourself what worked well, what went right, and this is in line now with a more contemporary view of the safety paradigm and what we call safety two. So we’re moving from safety one, what went wrong, to safety two in terms of let’s have a look at what worked well, what went right, and can we apply what we did there to other phases of the event.

Then I think at an operational level there’s probably five stages of an event, which is probably what people who are involved in events are more familiar with. Firstly I think there is the build or construct stage. If you’ve got a greenfield site, nothing there, a paddock, or even sometimes you might have a football stadium but you need to construct stages, temporary stages, perhaps grandstands, things like that. So this is basically a construction phase pure and simple.

That’s then followed by what’s called in the industry a bump in, and bump in is where the things that are needed for the event actually arrive. So for example in the context of a music festival, it’s where the lighting and the sound equipment arrives and is set up. Then you have the event itself, show day, and show day might actually extend to quite a number of days, or in the case for example of the recent Vivid Festival in Sydney – you locals would know – it lasts for a couple of weeks I think. So there’s an extended period of time potentially there.

And then after the event the reverse happens. There’s bump out. So they take everything out. And then the final stage is what you might call the deconstruct or the take down stage where the temporary infrastructure is actually removed.

Now it’s also I think fairly important to consider things like the spatial and temporal dimensions of an event. In other words when does your event start and where does it actually start. If you think about this strategically, the event doesn’t start at the gate of the venue. The event starts way out somewhere at some undefined point, and it also starts at some undefined time before show day basically. And it’s important to consider that, because that’s critical for the logistics of getting people to the event and also dealing with the public authorities and the stakeholders who have responsibilities around transport and public order for example. And also it’s important for the provision of public information to people to ensure the smoothest possible approach to the venue and also their dispersal after the event.

So I might just leave it there at this stage.

Stephanie Brantz:

Sure. And Stephen for the 2018 Commonwealth Games you would of course already have been through a number of these steps. Specific to the Games, has Aldo broadly covered the steps that you go through, and can you also tell us who’s responsible? Who makes it happen on time, on budget and most importantly safely?

Stephen Woolger:

Yes. Definitely. And Aldo’s right. We do go through the same processes loosely around those bits. You know, our infrastructure is a little bit bigger than normal events, because we’re sort of one event happening 18 times. So it’s a number of concurrent activities that need to go on. We need to engage obviously with the state regulators, also the Queensland Police Service and all the other emergency services that have a function within that. Because it’s not only staging an event, but the impact you have on the community. And if you can imagine building a set of stands that would take you probably three or four weeks to build, that extends your event time somewhat significantly. So the minor disruption that local people might see around an event actually extends a little bit further on than where we are.

And I think people get focused on just the event. So a concert happens on a certain day. The Games will happen from the 4th to the 15th of April. But there’s actually a big tail either side of that, and actually the pull down at the end is probably our most dangerous part in a health and safety bit, because there’s a lot of time pressures to give stadiums back. Some of those stadiums are actively in season at the time, so you’ve got to take out everything that it does for an athletic event and give it back to a football event. So it takes those bits around. So you have to do all that not in isolation of what’s going on in the community around.

So we can’t afford not to engage. We can’t afford not to be involving those people through that process. Sometimes it needs some decisions to be made at state level and higher to decide on funding and other things that go through that point, but also the decisions to be made about rerouting normal transport routes, how you then get through roads that are closed, how you then get traffic flow in an environment where there will be more buses than there are at the moment and more people, and Easter holidays. So it’s a little bit of a challenge.

Stephanie Brantz:

Now for the interesting side. Tony, who’s responsible legally and what are the requirements?

Tony Williams:

So certainly the organiser as the person conducting the business or undertaking – the undertaking generally in this case – holds the key responsibility. So they really have the responsibility to keep people safe, so whether they’re workers, whether they’re volunteers, whether they’re the patrons that are attending, whether they’re contractors. So there’s a huge range of people they need to have ultimate responsibility for.

However the world of the major event is very interesting. It’s huge. It’s very diverse, as was said. So we have what are called shared concurrent responsibilities, so where other businesses or other people may be undertaking roles to bring that package together, and they also have responsibilities and they need to live up to those responsibilities. And as has already been said, it’s absolutely critical that those responsibilities are clear, that people know where their responsibilities start and stop, and that that organiser as the person with the key responsibility, it’s quite uncompromising in terms of making sure that those various parties deliver up on what they should be doing.

But look, rest assured, worst case scenario if we have an incident, the reality is for a safety regulator that we’ll be talking to all the parties in that chain. So you can think of it as a supply chain, however you want to think of it. All of those parties that need to play their role and should have done something to prevent what has occurred, we’ll be talking to them and we’ll be trying to identify what they should have done and did they do it. But absolutely the organiser will have that key responsibility.

Stephanie Brantz:

Thanks gents. Well let’s move on and have a look at some selected risks and perhaps practical risk control. Aldo I’ll come back to you. At any entertainment venue or event all these protocols might have been adhered to, but of course on show day you deal with something called the public who might not have read your Safe Work handbook. Now in Australia and overseas there have been some well documented disasters around crowd control. Can you perhaps talk to those and what we’ve learnt, what the biggest challenges are?

Aldo Raineri:

Yeah. Sure. I might just start by making the point that the 29 people that were advertised as fatalities relate to workers. If you’re talking about members of the public for example who have been injured or certainly killed at events, you’re talking thousands, and again depending on what time span you look at, even tens of thousands.

I guess when you look at events worldwide, their major issues tend to cluster around certain types of events, and in developing countries these are generally religious festivals and folk festivals. So for example the big ticket item is the Hajj pilgrimage in Saudi Arabia. That seems to claim several thousand people nearly every year, and certainly a concerted effort has gone into trying to make that safe. But there’s a behavioural element there that is ingrained if you like as part of the fabric of that event.

In developing countries the issues tend to be more around sports events, particularly football – and by football I mean the round ball one, soccer.

Stephanie Brantz:

The world game.

Aldo Rainer:

The world game. Exactly. As our dearly departed Les Murray would say. And rugby to some extent.

Stephanie Brantz:

The game they play in heaven. There you go.

Aldo Raineri:

I can’t wait then. And certainly around music festivals, outdoor music festivals. Unfortunately we’ve had one fatality here in Australia back in 1990 at a music festival. But internationally there are lots of examples, and people might be familiar with the Hillsborough incident which was a football stadium. There’s plenty around to read on Hillsborough, and when you look at that you can just see so many things that were wrong with what was going on there, and they all just coalesced together.

More recently in the early ‘90s the Roskilde Festival in Denmark claimed six young people. More recently in Germany, in Duisburg, the Love Parade – which was only in probably I think 2013, maybe 2015. I can’t quite remember – claimed the lives of 19 odd people. And again you look at those and you see there’s so many things wrong with what was happening there.

There are hundreds and hundreds of hazards to look at at events, and they all need to be considered. I think the big four for me are – and in increasing order of importance – firstly what you might refer to as dodgy infrastructure.

Stephanie Brantz:

Is that the official term?

Aldo Raineri:

Yeah. It’s a technical expression. This is a grandstand that might collapse or some temporary staging might collapse, or as we’ve seen on a number of occasions throughout Australia, an amusement device or a ride will fail, and as a consequence of that people get severely injured or die. And I’m sure my colleagues here will have more to say about infrastructure, particularly from a regulatory perspective.

The second big one for me is weather, and obviously if you’re talking about an outdoors event. Not such a big issue if it’s an indoors event. But if you’re talking about an outdoor event then the weather is a fairly major consideration, both in terms of inclement weather, lightning strikes, hail, that sort of stuff – and there have been a number of examples out of the United States where people have been killed from lightning strikes and lightning strikes actually affecting infrastructure – and more particularly though on a nice warm summer’s day there’s the issue of hydration and dehydration. That needs to be considered.

From an event organiser’s point of view you say ‘Well what can I do about that? I can’t control the weather’. Absolutely true. You can’t control the weather, but you can make provisions to minimise or lessen the affect that the weather has on participants. So in other words you might have water stations throughout your venue that people can access, and not charge them $8 a bottle for water but really make it accessible to them.

The third thing, and regrettably these days, is the potential for a terrorist incident, and we’ve seen that sort of fairly recently in Paris. It’s another risk. I don’t want to make too much of it. The terrorist issue is well dealt with by the authorities, and I think in that regard event organisers, venue owners and operators really need to tic tac very closely with the authorities and take on board any recommendations that they have.

The fourth one, which for me is the highest priority and the biggest risk of all – and it is unfortunately the least understood and therefore the least managed aspect of an event – is the crowd itself and the dangers that are inherent in having a large number of people together.

I can talk more about the crowd issues I think a little bit later and give my colleagues a chance to say something. But when you look at events worldwide, the underlying fundamental cause is either poor planning or an absolute lack of planning. So the whole issue of planning is critical for events. And in the context particularly of crowd management, there has been a fundamental lack of understanding and indeed information about the dynamics if you like of crowd behaviour, or what we’re now starting to call crowd science. So there is now an emerging discipline called crowd science which looks at the aspects of how to deal with crowd management.

Stephanie Brantz:

Yeah. We might talk to that in just a moment. But Stephen it is a blight on modern society, and Aldo did touch on it, the terrorism aspect. Forward planning for the Commonwealth Games, how much of your energy needs to go into that, or is it just on the list?

Stephen Woolger:

Look, I think it’s one of those things that’s on the list. You know, it’s a shame that that’s the environment we now sit in, but the hazards associated with people driving cars down the streets has always existed, it’s just they’re now being weaponised in the way they’re used. So I think it needs to be considered, but it’s one of those considerations that needs to be put in place.

We work closely with the people responsible for that, so again the police service, and they do assessments around our venues with that. But again it will be one of those things that we mitigate as part of the overall thing. We have a little bit of a clue about what’s going on. The Australian intelligence services are very good at what they do, which has been proved recently. So I think it’s a concern but it’s not an over concern.

And I think one of the things we are certainly keen about is that people shouldn’t change their behaviours just because there are some lunatics out there. So we’d encourage people to go to events and make sure you can do what you want. People are doing the right thing to make sure that happens.

And just to go back on Aldo’s thing about weather, what better way to mitigate than hold it in Queensland.

(Laughter)

Stephanie Brantz:

I have to admit from a broadcast perspective Aldo, you just briefly just reminded me of a recent event at Anzac Day at Villers-Bretonneux in France for the western front commemorations, and the temperature dropped. At about four o’clock in the morning it dropped to the very, very low single figures. So as part of the WHS protocol they started handing out space blankets. That looked so horrible on television with all these reflective blankets, and it was an absolute nightmare for the broadcasters, but everyone was warm. So that’s what mattered wasn’t it?

Before we come back to you on mitigating risk Steve and Tony, I’d just like to give you perhaps the final word on the terrorist aspect. How do you legislate or regulate or anything for something you don’t know if it’s going to happen?

Tony Williams:

Yeah. Look, I certainly agree with Stephen. I think it’s just in the mix in terms of risks, and the last thing we’d want an organiser to do is to concentrate too much on one risk and letting others sneak up if you like and be the one that really causes the issues at the event. The reality is a major stand collapse or whatever the case may be could cause just as much damage and heartache as a terrorist issue. So let’s have a well-rounded approach to our risk management strategy and make sure we cover off all of those risks.

And the reality is for us that if you’re in the major event business, if you’re in that business, regulators have very high expectations of you. You’re running events here that if you get it wrong you can put a lot of the community in harm’s way. We’re unapologetic in saying as safety regulators that we have you on a very, very high shelf and we expect a lot of you. And as has been said a couple of times already, we expect that organisers really do their homework in terms of planning the event right upfront, and as Stephen says that starts a long way out, to make sure that all of those risks, whatever they might be, are covered off.

Stephanie Brantz:

Stephen, Tony mentioned those ill-fated words collapsing stand. Let’s talk about infrastructure. And Aldo mentioned crowd control. Can you tell us what you do in planning an event to mitigate those risks, how important is the infrastructure and what are the main practical construction safety issues?

Stephen Woolger:

Definitely. For us there isn’t enough infrastructure in Australia to put on a Commonwealth Games, so we’re bringing some stuff from overseas. In the Olympic space and the Commonwealth Games space a lot of that infrastructure moves from Games to Games, and with that comes some overseas…

Stephanie Brantz:

Which part of the infrastructure are you talking about?

Stephen Woolger:

So particularly about temporary stands, temporary seating, some of those bits associated with tentage and other temporary buildings that go into those.

Stephanie Brantz:

In Australia we don’t have enough tentage?

Stephen Woolger:

Not for the amount of what we’re putting together. Not the sort of tents that we need to put that on. So you can’t just get the run of the mill. It’s got to meet a certain requirement, and we need to make sure that that’s the safe requirement that puts in there. So we’re sourcing a lot of those from different places. Now there might be businesses locally that can help with that, and we’re certainly going through the local market first, but some of the stuff does come from overseas.

So associated with that then is overseas contractors, and contractor management in our space is enormous. You can’t underestimate the fact that we can’t put our Games on without those sort of people there. So for us to get that right, the engagement with the contractors and the requirement for those to get their conditions and tell us how they’re going to do safely upfront is really important. We’ve applied a real measure to those, and we apply the same measure regardless of the nature and type of equipment they’re going to provide. So the same requirement applies to the person building 16,000 temporary seats as it does to a person providing a tent or the person doing catering. So we want them all to be safe in the way they do stuff. We are not going to tell them how to do their business though, because I certainly don’t understand how to build a huge stand and I trust the people that will do that.

And we have a certifier that certifies the stand basically in the design phase, but also in the completion phase as well. So you have to bring all those together. If you consider the tail, it’s like a huge tail upfront and a little tail at the end, but it’s a huge tail about getting all those providers, all those commodities in place and getting the safe people that can put through. Now in saying that, there are some niches in that as well. There are only certain companies in the world that provide certain sports equipment and sports facilities, so you are reliant on the overseas market for that. And we’re aware of those that come with a few challenges around that space, and it’s back to the legislative environment we sit in. They don’t do construction white cards in Germany, so you need to be aware of the fact that those people need to be able to work in our environment as well.

So we put a lot of effort in upfront to make sure that that comes to fruition, and the planning stage is about how you build and how you get people in and out of those stands, and the emergency requirements associated with that are all considered at that planning stage.

Stephanie Brantz:

Well despite the guidelines, the preparations and the safety measures Tony, incidents still occur. So what concerns regulators the most out of all those issues, and what are the expectations around say plant safety, construction and amusement devices?

Tony Williams:

Clearly any of these major events have a very significant range of risks that need to be managed across a range of areas. I guess I’d start off by saying the biggest concern that regulators would probably have – and without going into the specific issues which I will in a minute – is an organiser not doing enough in terms of their planning work. So that is a risk for the organiser, it’s a risk for those who are attending, but in terms of a regulator, we really expect to see – and as I said before we hold these people at a pretty high level – we expect to see very good planning processes in place.

But if we break that down into what some of the individual risks are, so certainly every time you introduce plant of any description on to a site, as Stephen and Aldo have indicated, they bring inherent risks. Two little words that we hear splashed around very regularly – and Stephen was touching on it – are due diligence. So we expect the organiser to really do their backgrounding in terms of if you want to bring a piece of plant on through a particular supplier or business, you want to make sure you do your homework there and check the bona fides of them.

If you’ve got people assembling things on site and they need to hold a high risk work licence for example, you need to make sure they actually do, and not just ask that question but make sure you follow that up and be quite as I said before uncompromising in making sure that you go through that process in quite a structured clinical way to make sure you cover off all of those risks.

But then we have others – electrical. You look at any of these major events and the amount of electrics around these events can be quite staggering. And it’s very important that you work with businesses in supplying all of those mechanics and those electrical goods to make sure that they are sound, they meet appropriate standards, they’ve been maintained and they have records of that maintenance.

And then we get into I guess what we’re seeing more and more often at all sorts of events, and that’s amusement devices. And that starts to introduce a real world of its own in terms of obligations for organisers. There are certainly obligations for those supplying those amusement devices, but in terms of that overall event organisation and that organiser, they really need to make sure that if they’re going to introduce amusement devices into that mix of issues and that mix of the event, that they work through what is required. So that would start by making sure that in terms of the amusement device you’re going to have on site, it’s the right one, it suits the profile of the event, it suits the profile of the audience, and it can be managed safely in the space that’s available without putting people, both workers or users, at risk.

And a lot of this for an organiser is about asking the right questions of the right people. So talking to the business and asking for things like is the device registered. It needs to be registered and be registered at the time of the event. Has the appropriate maintenance been done? The workers that are operating this, have they been trained, are they competent in doing that? And we don’t want to just see a head nodded, we actually want to see evidence of that. Do they know what happens in terms of an emergency? Some of these devices can take people to great heights. Do they have the evacuation issues sorted and all of those sorts of issues?

So there are a huge range of issues that revolve around that particular issue that need to be managed. And I’m not saying in any way that organisers should be taking on the obligations of others, but they need to have a good due diligence process to make sure that they’re asking the right questions and that they’re making sure that those that carry the risks and have those obligations are actually delivering on what they should be delivering on.

Stephanie Brantz:

We can see how the very public manner in which the events in Queensland around amusement devices panned out, what happens when it goes so horribly wrong.

Before we leave the risks and concerns for regulators, can you tell me where electricity falls on that list?

Tony Williams:

Yeah. Very high. Very high. And I mentioned amusement devices before. So part of that is making sure that they can provide you with a register of the electrical equipment and the fact that that has been maintained. And once again you don’t accept the fact that somebody’s got it somewhere. You need to actually have a look at it and make sure it’s up to date. But controlling those risks, you need to make sure you’ve got qualified people. You don’t want people that are unqualified setting up electrics in environments where you’ve got large numbers of people, and ensuring that people haven’t got access to those.

So crowd control has been touched on by both Aldo and Stephen a number of times, and you’ve got to make sure people can’t get into places where that equipment is stored or where that equipment is live. So sometimes it’s not the direct use of that device, but it’s actually keeping people away from where they could put themselves often unknowingly at risk around those devices.

Stephanie Brantz:

Stephen, Tony mentioned having the right people and making sure that the right people are doing the right jobs. I imagine for the Commonwealth Games these roles the delineation was already decided quite a long time ago. Can you tell us how you approached that and how you approached the division of roles and responsibilities to deliver the best, most fun and safest event?

Stephen Woolger:

And I think it goes back to where the accountability and responsibility for safety sits, and I think Tony’s alluded to that a little bit. GOLDOC, the Commonwealth Games Corporation, remains accountable for safety through the whole experience. Now we engage certain people to do roles for us, that we rely on their skills and capability and particular niche that they do, and we make them responsible for their own safety. So it’s how you find out that those consistencies can be applied across the organisation, make sure that you work through the fact that there might be different contractors working simultaneously doing really high risk stuff. It’s how you coordinate and cooperate those activities going on within those venues.

So we will appoint in our case what we call an overlay delivery partner which will become our principal contractors through the actual build phase of the Games that bring all that together. So we select organisations usually that have experience in doing this previously but can operate over multiple environments with multiple contractors that again are operating over multiple areas. Trying to reduce some of the confusion associated with that as well, so we’re trying to keep the message simple within the organising committee to make sure that people understand that safety is their responsibility but it can be done quite simply. And safety people are the worst at confusing people about how to do things safely sometimes, so it’s actually bringing it back to the basics of we need to do this safely, we need to deliver it well, but we need to make people also responsible.

We maintain the accountability, check what they’re doing, but engage with the right people to make sure those things are happening. And it’s getting an environment that actually helps people be safe while they’re at work. I think one of the things that I struggle with a little bit – I know this is a bit off track a little bit – but it’s this word around safety culture. It’s actually business culture, and within the Games industry we have a really good culture. So people want to come and deliver an event. They know it’s going to happen on a certain date. They want it to be fantastic. They want there to be lots of bravado. People win medals, everybody’s happy at the end of it. But if you can embrace that culture that sits with an organisation, actually safety is quite easy to put into that. And it’s engaging people to be safe in their working environment regardless of what that is.

Stephanie Brantz:

And I imagine for something like the Commonwealth Games that the regulators are quite interested in everything you’re doing. How is that relationship?

Stephen Woolger:

It’s interesting really. I mean they’re very interested. We have events obviously on the Coast all the time. Sometimes you don’t ever see an inspector, because it’s all safe and good to go. But we’ve got them lining up, even ones you’ve probably never heard of before that do a regulatory function that nobody’s ever met. He giggles. He knows what I mean.

So yeah, we have a really good relationship with them. For us again as an organising committee, we aim to engage early. We want them to work with us, because there will be things that the regulators won’t have ever seen before, and they certainly wouldn’t have seen this scale of event on the Coast. And I think educating the regulator a little bit about those things and allowing them to have the purpose not only to be a regulatory function, but to learn from the experience of an overseas contractor that might do something slightly different but still does it safely. The contractors locally have an opportunity to learn as well. But encouraging the regulator actually to have a different view about how you approach your regulatory function. There’s a learning environment.

We’re a very dynamic and fast moving environment. There is also the occasion that actually we’re different to construction and we’re different to the normal activities that go on. Because we might not stop. The broadcast happens, and you’ll understand this yourself. The cameras are on. The cameras are rolling. They will continue to roll regardless of what happens. And there is a customer base that is far greater out there than there is actually locally. So in some cases we have to not bend the rules, but work within the rules safely to make sure we can still deliver what the outcomes are related to that.

So I think it’s a very interesting moment with the regulator at the moment, but I think they’re also keen to see it a success as well. And that’s the good thing, is good events actually have an effect for everyone, and if you can run an event like the Commonwealth Games safely then you can run your music festival or your fair or whatever else you do safely as well. There’s no excuse why you can’t.

Stephanie Brantz:

And of course for all the behind the scenes work, all the public sees when they rock up on the day is around how the crowd moves and crowd and basically traffic control. So Aldo you touched on it briefly before, and you’ve all three mentioned how important the planning of the site is and the worksite plans, the work plans ahead of the event, but can you talk us through where that comes in to crowd control? Aldo has a PhD in crowd control. I’m unclear as to whether that means you can control a crowd or whether you can tell us what the crowd will do in a certain situation. But can you talk us around the importance of that planning?

Aldo Raineri:

Yeah. Look, I think from what we’ve been saying it’s probably self-evident that planning is fairly critical. I did mention before that the issue of the crowd itself is probably the least understood aspect of an event, and as a consequence it’s not dealt with generally very well, or at all. However in the light of kind of crowd disasters that have been occurring and accumulating and the evidence accumulating over a number of years, I did mention that there is an emerging kind of discipline now that’s referred to as crowd science.

So look, I think when you’re talking about crowds and masses of people or mass gatherings, there are three critical elements to consider. The first is density, how many people are packed into a space. And that’s relatively easy I would have thought to calculate, because if you’ve got a particular space you know the dimensions or you can certainly very easily configure or find the dimensions, and you can work out relatively easily how many people can sit comfortably – not sit literally, but fit into that space.

The research says that at about a crowd density of approximately seven to eight people per square metre it starts to get uncomfortable. And that’s a static crowd. If it’s a moving crowd, then that is particularly problematic. I don’t know if you’ve ever tried bunching together. In some of my classes and presentations I do a little demonstration where I get seven/eight/ten people together and I’ve got a piece of rope that’s one square metre. And I fit them in there and they’re all ‘This is snug’. And then I go ‘Yeah. Good. Walk up and down,’ and they find that particularly difficult. And then you fit more and more people in, and the people in the middle really start to get claustrophobic.

And look, the research is suggesting that at critical densities of about seven or eight people – and again depending on the event – people within a crowd lose their ability to move freely. So you become part of this greater amorphous fluid mass. And that has really serious repercussions. If you look at physics for example, then that creates wave motions. And so literally you can have wave motions in densely packed crowds. That can have some really serious affects obviously at the centre of that mass of people but also at the margins, at the edges, if you’re pushed up against a barrier for example or a fence.

So density is a very important consideration, and a pretty easy one to kind of work with I would have thought.

The second critical issue I think is dynamics, movement. And so it’s important that for example if you have a mass of people that you get them moving all in the same direction so there are no cross flows or back flows for example. One of the real problems for example with the Love Parade incident was that – well there were a number of problems, but the organisers seriously underestimated the number of people that were going to turn up. And they had a venue, and it was a greenfield site never used before, but this venue had one entrance and the same area was used as an exit. So you had cross flows of people and you had people concentrating in a particular area that was confined.

At venues you may find that there’s a build-up of people depending on your processing capacity. So your processing capacity, dealing with people, issuing them with tickets or bag searching, scanning, whatever it is that you are going to do at the event obviously takes time. So as people arrive, then if you’re not processing people quickly enough then they’re going to back up. You’re going to have a queuing effect, and of course people at the back, particularly if they’re all excited about getting into the event, are going to push, push, push, and so you have huge potential for disaster.

So try and get people moving in the same direction, no cross flows, no back flows. Again you’ve got to look at the design of your facility. Some places you’re stuck with. You’re stuck with bad design. I know from experience one venue that I had to deal with. It was just such a poor design, but you were stuck with it. There was nothing you could do. And so you had to work around it in terms of creating alternate paths for people.

The third dimension is that of behaviour, and of the three, again, this is probably the least understood, the most neglected and to a degree the most under-researched. The behaviour of people is very much dictated by the nature of the event, and you need to consider how people are going to potentially behave at your event both under normal circumstances and also in emergency circumstances.

Now the emergencies, there’s a lot of literature around, and it’s thankfully an area that’s been sort of fairly well researched. But the behaviour of people, particularly when they’re moving, under normal circumstances is not so well researched. Crowd science says you’ve got to consider those three aspects and you need to consider them in terms of three critical spots or places I guess in terms of a venue. Ingress or entry point is critical, because that involves your processing of people and your queuing. So ingress can be a particularly problematic place. Circulation, people moving around the event. If people have got to go to the bathroom, what’s the path to the bathroom? And you don’t want people walking in the opposite direction for example impeding them or any cross flow, or if they’re going to get refreshments, whatever. Circulation. And circulation is also particularly important where you have multiple sites within a venue or multiple happenings, and Stephen, I think you said you’ve got about 18 or so of these so good luck with that. Good luck with that.

And then of course the other aspect is the egress, because people want to leave, they’re happy, they’ve had a great experience, but they want to get home or they want to get to the bus or they want to get to the cab. So that’s a bit problematic as well.

Broadly issues that you also need to keep in mind are the design of the event and the design of the venue or the facility. Information. Information is really critical, both pre-event letting people know what the transport facilities are, where the entrances are for example, how they can get in, and also information during the event itself. Let people know what’s happening through public address systems and what have you, particularly if there’s an issue somewhere, if there’s a bottleneck happening somewhere and people at the back are not going to see or know what’s going on. So it’s critical to give them information. And then there’s general management.

Planning is critical around those issues, but in addition to the planning or the proactive aspect, it’s also fairly important to monitor those issues. You need to monitor the density. You need to monitor the dynamics and you need to monitor the behaviour in real time. And so you need observation, or there is technology now that assists with that monitoring. And so crowd science postulates techniques like a ramp analysis for example. Look at the routes, look at the areas, look at the movement of people, and look at their profile as well. And you can do sort of fairly simple stuff like heat mapping based on your knowledge of the design of areas and the expected number of people. And of course if you’ve had previous events – some events are annual for example – if you’ve had previous events and you’ve got experience, you’ve got that to draw on as a basis or an evidence base.

So planning critical, but the monitoring aspect is also very important as well and shouldn’t be neglected.

Stephanie Brantz:

Interesting. When I listen to what you say, as a frequent traveller it baffles me that loading 200 odd people on to an aeroplane and deplaning them afterwards always seems to be so problematic in terms of crowd science. There’s always one person that boards from the wrong end. So I can’t even imagine where your planning process Stephen is for the arrival of all these visitors for the Commonwealth Games.

We are going to open our forum to the floor in just a moment, but just to wrap up, Stephen everything Aldo mentioned really talks to good communication. How do you ensure good communication and a really good site culture?

Stephen Woolger:

You know, it extends across our partners as well, and that’s working with the local community, the councils locally, the police as well, is really important. So it’s about having open communication on that. So we’ll have several situations where that will be put in place. There will be a network within the venues themselves. Because we don’t look just at the venue, we also look along those arrival and routes, what we call the last mile. It’s not a physical mile, but that point between gate and the transport hub. So you know, there’s a lot of people that move through there, and we want to reduce the impost on the transport hub, because if we release 3,000 people to the local station we will soon flood that sort of environment. So if we can get communication right, we can hold people within the venue, we can have pop up events or entertainers that will actually keep people and then enable that crowd to move a lot easier.

And on the way in crowds are really well self-regulated. The problem we’re going to have is that security check, but then don’t bring the stuff that’s on the restricted items list and you’ll get through. Don’t take your scissors through the airport and you’ll be okay. So it’s being able to get those people through quickly into the environment they want to be in.

In a Commonwealth Games you’ve probably got a more compliant crowd, except for certain sports that like to amp up the fact that they want to get people excited about what they do, and then we’ll deal with the outcomes of that afterwards. And if the Australians win a gold medal everybody’s going to be on a high and you’ve got to then get that crowd managed back somehow into the station without them leaping up and down too much.

Stephanie Brantz:

But they’re happy.

Stephen Woolger:

But they’re happy. It’s all good. So you’re able to work with that as well. But it’s being able to encourage them to get to the right points and have places where you can actually send people to to get them out. So it’s all of those agencies need to talk to each other. Obviously the police are ultimately responsible for crowd and public safety outside the venues, so they will step into that point. But for us it’s about managing those people across all those domains to get them out there, and good planning will come to assist with that and I’m sure we’ll be in a position where the planning is well. The fact is the implementation at the time, and again given the current environment with so much technology, we’ll have our eyes and ears everywhere to know what’s going on in those spaces to monitor them.

Stephanie Brantz:

Planning is so very important, and you hope that the good planning and the forward planning means a safe and happy event.

Tony to close though, tell us in the event of an emergency, those things that you plan for but you hope don’t happen, how important is that planning around the responsibility of say the contractors, the volunteers and public safety during those events?

Tony Williams:

It’s absolutely critical, and I guess that’s where regulators turn a lot of their attention, to making sure that emergency planning is thorough, that it’s involved the right people. So clearly people that are here today, they know the police and emergency services have a critical role there in terms of that forward planning process. And we need to be sure that when things go wrong people have been made very, very clear what their role is, they’ve been given the appropriate training, and we’d like to think that that’s been pressure tested in some way, that we’ve had practices, we’ve had trials. And often it’s only after we have an emergency at an event and the response goes beautifully, that when we talk to people we find out in actual fact people were clear about their roles, people had been trained and people knew what to do.

So very often you’ll have that many people at these events from different places doing different things, security, it could be musos, it could be all sorts of people. People need to know what to do, and that upfront planning – and I know we’ve said that 100 times but it’s so, so critical – is very, very important to making sure when something does go wrong – and that scenario planning and testing is so critical – it really shows when something does go wrong how that response works.

Stephanie Brantz:

Well gents, thank you very much indeed. And now it seems a good opportunity to open the floor to our audience to ask any questions they may have. Can I ask you to please raise your hand if you have a question and wait until the microphone reaches you, and then please identify yourself by name and workplace, and perhaps even just briefly stand so that our panellists can see where you are in the room.

**Q&A Session**

Q: Good morning, and thank you for a fantastic presentation. My name is Robert Van Gelder. I run the company called Stage Safety, and I have a question for Tony. As a risk manager for events, I often find that events managed by smaller councils are the worst offenders. What is the regulator doing in terms of communicating with smaller councils about the proper processes?

Tony Williams:

So look, you raise an excellent point there. So clearly the people running events, it’s quite disparate, quite a disparate group. We have professional organisations that run it, we sometimes have community groups, but we also have people like local government. So I can tell you – and look, I can generally only speak for New South Wales – but if there is an event occurring in a particular local government area that is going to be a significant event and attract a lot of people, normally these days we are approached by councils a long way ahead of time to help in that planning, and if we don’t we’d be approaching them anyway to make sure they have that appropriate insight and the skills and capabilities.

Regulators are always happy to provide advice and assistance, and we do that free of charge. I know we’ve just had Splendour in the Grass in New South Wales, and we had a number of inspectors allocated to specifically work with those organisers, which included as part of the event management if you like the local government up there, the local council. So we’ve worked very, very closely with them. We allocate resources to that. Because it’s very, very important that regulators aren’t seen to be getting in the way of business if you like. We want these events to be successful, but we just want the outcomes to be good outcomes and safe.

So we’re always very, very happy to provide advice. We’re only a phone call away, and we’ll help people develop their plans, guide them in terms of what their due diligence obligations are, guide them in terms of what good planning looks like. So I strongly encourage anybody that’s in that business to just talk to the regulator and talk to them early.

*Q: Good morning. Thank you for that. Grant Whitehorn, Scouts New South Wales. I just wanted to know, considering the basis of a lot of the things that you gentlemen had to say was all about culture and the prevalence of having a good safety culture to get a good safe outcome, what are your attitudes or opinions with regards to should safety or the head of safety for an event be sitting at the event management or executive table, and if not why doesn’t that happen?*

Stephen Woolger:

So to me, as I said before, I’ve got a little issue with safety culture. It’s about business culture and it’s how you do things safely within that confines. So I as the Manager, Health and Safety for the Gold Coast Commonwealth Games report directly to the Deputy CEO. He’s brought that around because of his previous Games experience. So he’s done several Games previously. He understands the importance of safety within those. And encouraging an executive to take that important step within that area is something that they do themselves. They don’t actually need me to tell them to be safe. They do that because it’s within their business culture. And they understand that not only are they going to be delivering the event and making it safe for the workforce and the numbers of volunteers and other people that will come to that, but also the spectators that come as well. And they completely understand that’s critical to the success of that outcome.

Can’t talk for smaller events, but certainly within our major event that’s the way it sits within that environment certainly here and certainly in the UK events. Again you can’t talk for that across all events round the world, and some of those probably don’t have those bits, but I think for us to be encouraged with the fact that actually people take safety importantly as part of their business actually makes my job a lot easier to do that. So although I don’t sit within the executive board, I know that they are talking about safety. I know that our board talks about safety. So to them it’s important in their normal business.

Aldo Raineri:

I might just say that unfortunately many organisations, probably less mature organisations, see safety as some sort of bolt on, add on, and they see it as a nuisance. And it’s unfortunate, because they don’t understand the benefits that adopting a safe approach will have in terms of productivity and relationship building etcetera. It is unfortunate.

There are organisations, and it’s good to hear that the Commonwealth Games is amongst them, where people at the highest levels really understand the importance of safety. And I guess it’s because of the focus, the higher focus on the safety of large numbers of members of the public. That’s kind of an imperative if you like for organisations like that. But look, it is unfortunate, and it’s just an education process. Unfortunately when people go and do business degrees – you look at the business degrees across Australia. How many of them have safety, health and safety in them, as a critical element of doing business in the same way as accounting is or logistics or personnel management. Very, very few. And for me as an academic that’s problematic, and particularly in the safety game that’s problematic. Because until people, the community or whoever sees safety as an integral component of doing business, it will be seen as just something that has to be done, almost a compliance tick and flick nuisance exercise, which it shouldn’t be and doesn’t have to be.

Stephanie Brantz:

Tony, anything to add?

Tony Williams:

Only that we see leadership from the top if you like as being a key element of what a safety landscape looks like in any business, and that’s very, very important that we see that. Where we see that good strong leadership from the top, we’ll see that across all the areas of the business. And I tend to agree with Stephen in terms of it’s a lot broader. It’s about the business culture, and if we’ve got a strong leadership, they’ll be doing their finances well, they’ll be doing their safety well, they’ll be doing everything well, and it won’t be the bolt on. It will be integrated, and it will be just how we do business around here. And that’s what we love to see and that’s what we always encourage, and happy always to provide advice.

Stephanie Brantz:

Perhaps one more final question.

*Q: My name’s Kerry Sebio. I’m from Canterbury Bankstown Council. So certainly not a small council. In fact we are the largest. We are the new City of Canterbury Council. And what you were just saying Tony about leadership from the top, that’s exactly what we’ve got. Our general manager at every meeting, what is paramount in our culture is safety. So that’s always the number one concern, it’s the number one issue, it’s what we’re told that we need to incorporate into all of our business plans, not just for events – I’m obviously in the events unit – but throughout Council. And it’s not just for the safety of our workers and the safety of our residents and patrons that come to our events, it’s the safety of our reputation. And I realise we’re talking about safety at events here today, so we’re not touching on that, but that’s something that is paramount.*

*And that’s leading to my question now. And my problem is actually with the hire companies, because there are so many of them around that the dodgy infrastructure is still there. It’s still there outback in the yards, and they are still bringing it out to us time and time again if we don’t use reputable firms. So my question is regarding tender processes, because I always look at it and I look at the weightings. If we’re looking at a weighting of quality, performance, delivery against price, price for me does not hold a weighting of 40 percent, because I’m looking at other areas. So when you’re looking at the suppliers that you’re using for these huge events, how do you use the weightings and how would you suggest that local councils revisit that?*

Stephen Woolger:

I can talk to that because I had this conversation with our procurement people upfront when I arrived. Health and safety for us is a mandatory criteria. You pass or your fail. That tends to cause some issues around local councils, and I understand having been from that environment about encourage local business to do things, because some of those local businesses won’t pass upfront in some of the criteria that’s supplied to that. So we apply that across the organisation now. We do go back to them to ask for clarification about certain things they’ve put in place, however it’s unfair within the tender process if you assist somebody to get over the line to start with, and we don’t do that.

However we do accept some risk associated with that, to a point to know if you’ve got someone you can understand their gaps, their capabilities that they need help with, and we can help you once you’ve signed against the line. So it’s about understanding the application or what you want to see from them initially. Although we have a question about third party certification, I don’t care. I want you to tell me how you’re going to be safe. And actually the people that even do third party certification, I still want you to tell me how you’re going to be safe. Because there are so many companies that put that tick that box and think they’re all sweet but actually fail to implement that on the ground.

So it’s about how you encourage, how you get the information back that you want to see, asking a fair level set of questions that actually say this is what we want to see, this is how you implement it when you’ve done it previously before and what the outcomes of that have been, and even if you’ve got it wrong, what have you done then to fix that so you’re safe the next time you come. And then if you get them across the line at that initial tender process – and we’re pretty hardnosed about the fact – as I say it’s a pass and a fail as far as I’m concerned. But once you know there is a level of risk with them, you can work with them when they arrive to understand that. And I particularly give that to not only the overseas contractors that we work with, but some of our local ones as well, that although they have the right ticks in boxes and the right level of information that they will give to you, they’ve never implemented it on the scale we’re asking them to do that. And we want them to be safe when they get there, so you know you’re going to work with them to make sure that happens.

Stephanie Brantz:

Stephen, thank you very much indeed.

Gents, can I ask all three of you as we wrap up to give perhaps one overarching takeaway that you’d like our audience both here and online to have from today?

Tony Williams:

Well look, I think the Australian community should have a lot of confidence in the fact that when they go to a major event in Australia it’s going to be safe. Yes, we have had some incidents around the various jurisdictions, but generally speaking considering the number of events we have, the range of events we have and the huge numbers of patrons, it is a safe place to be, and we should never lose sight of that. There are a lot of people working behind the scenes, not only safety regulators, but police, organisers, emergency services, to make sure that happens. We want them to be successful. It’s part of our community fabric. And look, generally speaking I think we do a great job and we’re getting better every time.

Stephanie Brantz:

Stephen?

Stephen Woolger:

Yeah. I think if we don’t lose sight of what the event is there for. We can get tied up in doing a lot of stuff to keep people safe and to make sure we’re ticking the right boxes, but actually there is somebody that’s buying a ticket, that’s coming to an event that actually wants to get the enjoyment out of that. So don’t lose sight of the fact that actually those members of the public who you can’t control in how they move are actually there to enjoy what they’re doing. So sometimes it’s important to remember that there is that element to it as well, and we get focused on how we put it together. But it’s not difficult. It’s a very exciting place to be, but it just needs a bit of due diligence applied to it to make sure it’s safe.

Stephanie Brantz:

Just before we go to Aldo Stephen, with the Gold Coast Commonwealth Games, where are your allegiances going to lie?

Stephen Woolger:

Well tickets are available.

(Laughter)

Stephanie Brantz:

Moving right along. Aldo?

Aldo Raineri:

I think the takeaway for me is plan rigorously, monitor comprehensively and evaluate. Always evaluate at the end and see what you can learn, and take those learnings into the next event.

Stephanie Brantz:

Indeed. Well thank you to our panellists, Dr Aldo Raineri, Stephen Woolger and Tony Williams. It’s been wonderful to have you here this morning.

Thank you to our studio audience here, and of course to all of you watching online as well. We hope you found this informative and thought provoking, and we look forward to welcome you all back to another virtual seminar series with Safe Work Australia.

Good morning.

(Applause)

§ (Music Playing) §

[*Closing visual of slide with text saying ‘Brought to you by Safe Work Australia’, ‘Virtual Seminar Series’, ‘seminars.swa.gov.au’, ‘#virtualWHS’*]

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