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Event

Safety

Specialists

Explained

Open social media sharing

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Introduction

Not all [Event Safety specialists](#) are created equal.

There is a wide range of specialisations within Event Safety. There are Event Safety generalists and then there are Event Safety specialists.

In the world of events, there is a need for both.

When we work on large-scale, complex projects in particular, like [Balad Beast](#) or [Wild Lights at Dublin Zoo](#), balance among our own team is critical. We need to risk assess the event and establish who we need on the team.

In Dublin Zoo, we don't have any pyro (fireworks), SFX or lasers generally. So we don't need a specialist in those areas. The same can not be said for Balad Beast. We definitely need that specialist knowledge and experience for that one.

On projects on which we are [consulting](#) we have to similarly select the correct team make up. That way, we have the correct event safety specialist input. We do this at Pre-Concept, Concept and Masterplanning stages.

Operating at Pre-Concept and Concept stages of projects allows us to be most effective for clients. We advocate that clients involve their Event Safety specialists as early as possible. [There are many benefits to doing this.](#)

Below I will introduce you to some of the most common Event Safety specialists. It's not an exhaustive list, I dare say, but it includes the main ones I think.



1. Crowd Science / Crowd Dynamics

It's only really in the last 15 years or so that you can really study Crowd Dynamics / Crowd Science.

What used to be termed 'Crowd Dynamics' has been expanded to take in more understanding of the behaviour of crowds and their psychology, and is more commonly termed Crowd Science these days, according to [Prof. Dr. G. Keith Still](#), who is one of the originators in the field.

[Crowd Safety specialists](#) who focus on Crowd Science tend to be (not always!!) among the most highly qualified and experienced in our field. They can have studied to Postgraduate level. Some will have researched in the field. Others will have written academic articles or more readily-accessible material.

They provide value in areas like flow rate calculations, capacity calculations, understanding causalities, enhanced risk-assessment techniques and more.

They can be particularly effective if involved early in the planning process. '[Safety by Design](#)' is generally a forte of Crowd Science specialists.

2. Modelling / Simulation

Many event professionals will never need or encounter modelling / simulation in their careers. Again, it tends to be the most complex and large-scale event projects that require modelling or simulation. We use it on events like [Soundstorm](#), which benefits significantly from it.

Crowd simulation or modelling can be described as the process of creating computer models of the behaviour and movement of people in crowded spaces. Examples include event sites, shopping centres, central business districts (CBDs) etc. It uses mathematical algorithms and computer graphics to simulate the behaviour and flow of large groups of people through a space.

In our experience, it's key that the person building the simulation understands events. Ideally they know event crowds and will likely have studied Crowd Science and understand [Crowd Safety](#). The 'agents', as the people in the simulation are termed, need to behave like event attendees.

3. Fire Safety

Event Safety specialists who have a specialisation in Fire Safety are very important.

Among our Directors, for instance, both [Matt](#) and [Paul](#) have both extensive operational experience as well as academic qualifications in the field.

Event Safety specialists who focus on fire develop [Fire Risk Assessments](#), calculate evacuation capacities, put Fire Safety Management Plans together, tend to be highly involved in creating Emergency Procedures and more.

Fires happen at events. I've worked events where light towers caught fire beside queueing systems. During site preparation on another event, some scenic elements caught fire. On another occasion, an electrical fire started underneath the stage.

Events like [Soundstorm](#), where there are majorly complex semi-permanent to permanent structures, we need Fire Safety specialists. At [Balad Beast](#), we need them similarly, as we are utilising a lot of very old buildings.

4. Site Safety

Event Safety specialists who focus on Site Safety are ‘generalists’, typically. These specialists usually have extensive experience and training in traditional Occupational Health & Safety. They then choose to work on events, gaining an understanding of the industry nuances.

They tend to have NEBOSH and / or [IOSH qualifications](#) at a minimum. Many will be qualified at postgraduate level in the field.

Often described as the backbone or anchor of our teams, event safety specialists in Site Safety are important. The majority of our team members will be Site Safety qualified and experienced and some go on to specialise further too.

5. Plant Safety

One of the lesser-heard-of specialist roles, this is a feature more in certain markets. For instance, with our work in the Middle East, this is a specialist area, for sure. For our Irish events like [Dublin Pride](#) and [TRA 24](#), it’s less of a requirement as a specialist field.

In emerging markets, where H&S may not be as understood, Plant Safety is key. The quality of plant and equipment can vary wildly. It is very common to see extremely old plant that has not been maintained well on construction sites in the Middle East, for instance.

Event Safety specialists focused on Plant Safety are key in markets like the Middle East.

[Shane in here](#) led a project where we developed a range of resources for our team members. These aid them in identifying likely unsafe plant and machinery. They learn to spot fake operator and machine certificates. We also regularly secure on-site support from [TUV](#) and others who can help us ensure Plant Safety.

6. Food and Beverage (F&B) Safety

We don’t want to give food poisoning to our crew or our attendees at events. I think we likely all agree on that.

That being the case, Event Safety specialists who focus on F&B Safety are a regular feature. Companies like ourselves and our competitors will have a pool of F&B Safety specialists.

We’ve dealt with Food Safety issues on event sites all around the world. It’s a real risk and it can be problematic, as you’d imagine.

In markets where Health & Safety for events is new or relatively new, this needs particular focus. We like to work with F&B providers to help them improve their Food Safety

standards. [We have specific F&B Portals](#), where they can access document templates, submit their documents etc.

7. Pyro, SFX, Laser Safety

Event Safety specialists in Pyro (fireworks), Special Effects (SFX) or Lasers are key on many events.

Often the same specialists look after the 3. This is not 100% the case all the time though.

There is specialist training in these fields. Safety in these areas is quite technical and it's important those involved really know their stuff.

There is a small pool of legitimate specialists in this area. Similarly, there is a small pool of world-class companies delivering pyro, SFX and laser services to events. This is particularly true on the global stage.

What that tends to mean is the Event Safety specialists tend to know the companies doing the work. There tends to be a professional respect. There is often an understanding between the H&S specialists and their counterparts in those companies. They know one another and cross paths on many shows over a season.

That's really helpful on site when we are all looking to keep people safe.

8. Decision-Support specialists

I am not sure anyone else doing what we do implements Event Safety specialists focusing on Decision-Support the way we do. On some of the larger events on which we work, this is its own function.

The goal here is to harness data and information to make good decisions in Event Control Rooms. To that end, Decision Support specialists build tools and deploy them in Event Control Rooms.

They tend to be mathematicians and / or Crowd Scientists. They are people who understand how to harness and display data effectively.

Naturally, they need data from the event to harness. MOST events have far more data than they think, in my experience. Ticket sales, arrival profiles, CCTV footage, crowd-counting software, ticket scans, carpark fill-rates etc. can all feed into Decision-Support.

Beyond that, on events like [Soundstorm](#), our [Crowd Safety team](#) provides key data inputs also. They are estimating density, utilisation, tension levels etc. These are sent in regularly to the Event Control Room. Our Decision Support team then feeds those into the tools. In turn, we get custom heat maps, graphs, trend illustrations etc. to aid decision-making.

On large-scale, challenging events we find this really valuable.

9. Tactical / Silver specialists

Not all Event Safety specialists operate inside Event Control rooms.

Many have zero interest in being operational in Event Control. They prefer to be on the ground focused on [Crowd Safety](#) or [Event Safety](#).

Those who work in Event Control Rooms tend to be operating at a Tactical / Silver level. They are involved in key decision-making and have responsibility for the Health & Safety function in the room.

As well as those at Tactical / Silver level, you will have operational H&S team members too in the room. They may be radio controllers or dispatchers or similar.

[Martin, Paul, Matt and myself](#) regularly operate in Tactical / Silver roles. Many of our core freelance team members also do, especially on international shows.

Conclusion

Event Safety specialists play a significant part in [ensuring people are safe at events](#).

Balancing team composition to meet all the H&S requirements for different shows is a task. Companies like us, who are lucky enough to have really good people, both fulltime and freelance, generally manage this well.

[Tess](#) and the team in here spend a lot of time engaging with our teams and potential new members so we can continue to expand. We use [our Liveforce platform](#) to source and recruit freelance team members. Be sure to sign up there if you are interested in working with us.