Problem definition

We have been approached by the technology company MXTreality (<https://mxtreality.co.uk>) relating to an ongoing contract with Highways England. MXTreality (and by extension, us) have been asked to investigate potential uses of 360 degree live-streaming video to enable real-time discussions in a multi-user environment.

The intended uses of this technology will be in situations where an accident or ‘near-miss’ has been reported on a Highways England site, and an investigation by management is necessary.

Currently, when a safety related event occurs, the site ceases all operation until relevant management personnel have gathered and held an investigation/discussion of the events. Until these members of management give the all-clear, no further progress is made on the site. These delays are significant; it can potentially take multiple days to assemble the management team onsite.

Highways England are interested to see what technological solutions can be employed to reduce these delays. By using 360 degree live-streaming video, the hope is that it will no longer be necessary for the management team to physically attend the site, and instead can take part in the discussions from remote locations.

A second potential use that was suggested was for members of the public to view events remotely. The examples given were an archaeological dig or a bridge demolition, where it is likely that members of the public would be interested in watching, but to allow them to attend in person could cause complications or delays.

Key topics to be addressed are communication and collaboration. It is expected that our solution will provide an inbuilt means of communication alongside the video feed. This communication channel should have multiple features, allowing for private conversations regarding business processes and safety, while also providing a means for members of the public to interact with each other to discuss the live-stream.