



Form Ref: HSI-10	Independent Health & Safety Inspection – Blue Star Item	Version: 3.0 Jan 2017
----------------------------	--	---------------------------------

★	Awarded for Exceptional Performance or New Initiative not widely used on other sites
---	---

Project	Principal Contractor (PC)	Date of Inspection
M6 Smart Motorway J 2 - 4	Balfour Beatty and Vinci JV	13 th March 2018
Site Contact	Email Address	Telephone Number
Navroop Rai	Navroop.Rai@bbv-jv.com	07738617919

Description of Blue Star Item	<p>Working collaboratively, the M6 Digital Engineering team and a team member from Vinci in Watford have developed a Virtual Reality (VR) People Plant Interface training experience.</p> <p>The training places a person virtually into a construction scenario where an excavator is digging into the embankment and filling up the nearby wagon. The goal of the training is to highlight the danger zones red and amber around the plant, assert that they must never pass behind the excavator and to reinforce the correct method of gaining permission from the plant driver to pass by.</p> <p>The user starts by placing the headset on and we give them the left and right controller. The scenario places them on one side of the excavator and we ask them to position themselves using the left green teleport trigger in a safe position out of the red and amber zones and in line of sight for the plant driver. If the user is on the right side of the driver we use this as an opportunity to relay that the driver only has a small sight line of you standing there as the arm and hydraulics of the excavator are in the way.</p> <p>We ask the user to press a button on the controller to check the drivers view if the operative can be seen. If so, we ask the user to wave at the driver to get his attention, the driver should then put his bucket down stop the machine and gives a thumbs up to let the user walk in front of the machine. The user must ensure they stay in clear sight of the driver at all times whilst crossing and keep the zones highlighted, remaining out of them.</p> <p>Once they have passed safely to the other side and are asked to look at the highly dangerous space behind the excavator, how little the driver can see and never to go there. It is also reiterated that there have been nine crush fatalities on live sites in the past seven years.</p> <p>The VR experience was created in-house, which took some initial research and development. Once created they would be owned by BBV JV</p>
--------------------------------------	--



<p>Benefits of Blue Star Item</p>	<p>The immersive experience gives the user a real feel for the size of excavator and sheer drop of the embankment common at most highways schemes. Digitally rehearsing a scenario before going out on site can save a life. The cost of getting the headset is nominal when you consider the impact it has had and will have. There is also a lot of further potential on developing additional packages. We have already planned pilling as our next one and will be discussing the next packages to cover other high risk activities.</p> <p>The training is provided at every induction for every person to experience. Either by wearing it or watching via the TV projection.</p> <p>The workers have commented on how useful the training is, giving them an understanding of both points of view and visually seeing the impact of poor Plant person interface. The virtual reality element is an interesting and innovative way of demonstrating the importance of Plant person interface and safe zones which we have been informed is being applied by workers. We usually find the standard chalk and talk or death by powerpoint which has its own challenges specially for those with reading and writing issues. This is a practical demonstration of how it would be out on site.</p> <p>E.g (Albert Johnson) Plant operative “We had incidents of operatives crossing without permission in the danger zones regularly on my last job, if we had this training everyone would know they need the thumbs up process and the safe distance to stand”.</p> <p>John Gill (Craig Dean) Site Works Manager “Great VR training gives the user a real life site scenario relevant for all people no matter the experience level. I would like you to develop more high risk heavy plant scenarios especially in tight workspaces.</p> <p>We have found it has made a major impact on site and believe other projects could value from it also.</p>
<p>Details and Cost of any Specific Product</p>	<p>£600 for Vive headset Can be run from a decent desktop</p>

Photograph



Photograph