

Smart Worksites, Safer Workplaces

Background

1. Rapid technological change is displacing traditional processes, disciplines and ways of working across all industries. Adoption of new technologies is helping companies to digitalise their work processes, raise productivity and enhance workplace safety and health. Presently, new technology-based products/tools used in a worksite work alone in their own operating platforms. The exchange and sharing of data between these different products/tools is therefore difficult and contractors are unable to harness and extract useful insights from the data in real time. Moving forward, a single integrated platform that links these disparate technology-based products/tools can help companies to make their worksites safer through the exchange of real time information in the form of alerts for the companies to take action and additional control measures enabled through the sharing of information. MOM initiated a collaboration with Teambuild Engineering & Construction Pte Ltd and Capps Solutions Pte Ltd to develop a prototype that allows for integration of a biometric access (gantry) system with other WSH management applications within a worksite.

Current Challenges

2. In accordance of Building Control Regulations 2011, it is mandatory for builders to submit construction productivity data for project with ground floor area of more than 5000m². The productivity data is currently captured when the workers goes through controlled gantry gates with facial recognition to register that the worker enters the site. Under the WSH Act, employers are required to conduct a risk assessment for all activities, and for certain high risk work, permit-to-work is required as a control measure for management of WSH. . One of our observations prior to commencement of the project was that many companies had adopted a multitude of standalone systems or applications supplied by different vendors at their worksites. However, the data collected by these systems (e.g. gantry systems, safety and health management applications etc.) are not shared across the various platforms.

Information Exchange between Gantry System with WSH Management Applications

3. The main objective of this prototype is for the integration of data from a gantry system to a safety and health management application. A data specification document is published to allow potential companies facing the same challenges as Teambuild Engineering & Construction Pte Ltd to have access to information on how to self-help and develop their own integrated systems by engaging their own technology provider. The prototype covers a few areas, from facial recognition for authentication to toolbox meeting, worker induction, and management of workers' safety records.

Conclusion

5. Many companies are adopting the use of technology in a bid to drive improvements to safety and health at their workplaces. While many standalone solutions are available, there is an opportunity from which adoption of technology can be expanded by integrating current disparate systems to allow for improvements to the management of safety and health at the workplace.