

Five Mining Companies Recognized for Performance Excellence - Immersive Technologies' 13th Annual Business Improvement Award

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Immersive Technologies has announced the winners of its 13th annual Global Business Improvement Award. Immersive Technologies recognizes the most outstanding [results](#) achieved by mining companies who use simulation as a key driver in their business improvement process.

Category winners are selected from customers across 47 countries for their achievements in continuously improving operational safety, productivity and maintenance through strategic simulator-based initiatives. These projects demonstrate excellence in aligning people, process, and technology to push the mining performance envelope across any OEM make, this year's winners operate mixed fleets including Komatsu, Caterpillar, Liebherr and Hitachi.

Global Award Winners:

- Shovel Category – Rio Tinto Kennecott (US)
- Excavator Category – Stevin Rock (UAE)
- Safety Category – La Cantera (Mex)
- Sustainability / Environmental – Tata Steel Noamundi (India)
- Truck Category – Copper Mine (Chile)



Rio Tinto

Rio Tinto (Kennecott Copper Mine, USA), completed a continuous improvement project targeting machine abuse and improved productivity of their P&H 4100 rope shovels. Immersive Technologies provided an Embedded Resource to deliver training targeting specific loading and digging best practices and teaching safe operating technique for the project. MineWare data from the shovels was used to track in-pit data for a period of 3 months prior to training and 3 months post-training. By analyzing fleet management data, training needs were identified for each operator, then a custom simulator-based training program was rolled out to help operators change behaviors where needed.

Results include:

- 7.3% improvement in payload
- 51% reduction in swing impact alarms
- 5% reduction in boom jacks

“Our partnership with Immersive Technologies and the adoption of two PRO4-B Simulators has played a key role in our training program. Using an Immersive Technologies’ embedded trainer and a targeted training program focusing on experienced shovel operators, we saw very positive results in both productivity and a reduction in machine abuses, including over a 50% reduction in swing impact alarms. Rio Tinto Kennecott is committed to investing in workforce development for our operators to achieve mine site objectives.”

Jason McNeill, Mine Operations Superintendent - Rio Tinto Kennecott



Stevin Rock (UAE) completed a continuous improvement project focused on production efficiencies for their Komatsu PC1250 fleet operators. By partnering with Immersive Technologies, Stevin Rock was able to rapidly deploy a program that utilized simulation to identify operators in most need of training. Specific operators were selected based on simulation assessment data, with the objective to improve their production and lower their risk profile based on operational errors. Once operators were selected, they went through targeted simulator training to hone their skills and were then mentored and assessed in the field to help transfer and reinforce the learning to actual on-the-job behavior.

Results include:

- 12.1% improvement in load time
- 1.7% improvement in truck payload
- 5.3% improvement in loading cycle time
- 7% improvement in load passes per truck

“Through a collaborative and targeted approach of effective simulator and field training we can drive our operators to improve machine set up, safe operating practices, and loading efficiencies, resulting in improved safety and productivity.”

Paul Mckernan - HSE Director



La Cantera (Mexico) partnered with Immersive Technologies to improve the integration of simulation training technology into their underground operation. The project included creation of a focused training program for a Sandvik LH410 LHD, simulator baselining, and real-world data collection to identify operational improvement needs. Across two mines, the training curriculum ultimately focused on 1) Machine Alarms; 2) Emergency Response and Safety; and 3) Machine Productivity.

The results below demonstrate the difference between trained and untrained personnel from data collected over 8 months during the course of the project.

Results include:

- 81% reduction in operator related safety events
- 9% reduction in maintenance hours.

"Immersive Technologies simulators have helped us to develop skills for new operators and improve the skills of experienced ones notably by improving their operating results and equipment care. Through the continuous improvement project carried out in conjunction with Immersive, we were able to measure the impact of simulator training, cost of refurbishment, equipment damage, and the increase in productivity of the Scooptram' operators in one of our units".

Isidro Martinez N. – Gerente de Recursos Humanos

TATA STEEL

Tata Steel Noamundi (India) partnered with Immersive Technologies to improve their Hitachi EX1200-5D excavator productivity and Komatsu HD785-7 haul truck fuel efficiency. For haul trucks, the program helped operators develop behaviors and skills to properly use the retarder, RPM control and accelerator pedal to optimize machine fuel efficiency. For the excavators, the programs focused on correct operating technique and bucket fill factor to ultimately reduce haul truck load times.

Results include:

- 4% reduction in fuel consumption
- 39% reduction in haul truck load times

"The spread of the performance has also reduced, which means more and more of the operators are having similar performance which is good news for us because then we will have higher productivity and more efficient operators. We saw reductions in loading time and now the excavators are more productive hence the diesel consumption per load cycle was reduced. Because of the success of this project, Tata Steel is replicating the Immersive Continuous Improvement Program in other iron ore mines also".

Atul Kumar Bhatnagar, General Manager - Ore Mines and Quarries - TATA Steel

As part of their focus on continuously improving operations, a Chilean copper mine partnered with Immersive Technologies for a haul truck-based Continuous Improvement Project targeting spot times on their Caterpillar 793 trucks under P&H 4100 shovels to maximize yield, while ensuring safe and responsible production.

Results include:

- 46% right side loading and 55% left side loading reduction in the field spotting times for trained operators.

Immersive Technologies congratulate the Global BI Award recipients who now join the ranks of prominent past winners including Vale, Rio Tinto, BHP, Kiewit Mining Group, PT Pamapersada Nusantara (PAMA), Cipta Kridatama, Cliffs Natural Resources, Syncrude, Kinross, Codelco, CSN, Caserones, NEMISA, DTP Mining, Glencore, Freeport-McMoRan, Roy Hill, Peabody Energy among others.

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About Immersive Technologies

Immersive Technologies is the world's largest, proven and tested supplier of surface and underground Advanced Equipment Simulators to the global mining industry. The company has achieved this unique position by focusing on its mission to increase Customer profitability by optimizing the safety and productivity of their operators. Immersive Technologies' Advanced Equipment Simulators are helping hundreds of mining companies around the world to increase their equipment operators' safety and site profitability through effective simulation training.

With advanced simulator modules deployed in 47 countries, Immersive Technologies is dedicated to provide outstanding service. To deliver on this commitment the company has customer sales and support offices located close to its customers in Perth and Brisbane Australia, Salt Lake City and Tucson USA, Fort McMurray, Vancouver Canada, Estado de México Mexico, Lima Peru, Santiago Chile, Belo Horizonte Brazil, Bochum Germany, Johannesburg South Africa, Jakarta Indonesia, Kolkata India and Moscow Russia.

Immersive has the global mining experience, innovative technology, product range, industry endorsement, proven support commitment and industry vision to partner with you to ensure your simulator training solution delivers the significant results you expect.

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