Canadian inventors place first in noise safety challenge

"If we could end the number 1 occupational illness, we could make 100 million workers more efficient," was the clamour behind a 2016 OSHA Noise Safety Challenge that recognized inventors for their ideas to reduce work-related hearing loss.

The challenge was launched with the dual goals of inspiring creative ideas and raising business awareness of the market for workplace safety innovation. A panel of judges awarded first place to Canadians Nick Laperle and Jeremie Voix for their custom-fitted earpiece designed to provide a worker with protection, communication and monitoring in high noise environments.

The technology developed at the University in Montreal was 15 years in the making. It extracts unwanted noise and enhances the voice, allowing workers in close proximity to communicate as if they were on an FM transmitter. It also monitors the worker's exposure to noise, and communicates this to the employer. "When there is high noise level, it allows person to person communication," said Nick Laperle CEO of EERS Inc.

Laperle explained that anyone working in noise above 105 decibels (chainsaws, chipper/shredders etc.) should wear dual protection including plugs and muffs. The EERS device was not designed to be worn with muffs but it can be done. "My mission is to end hearing loss." Laperle grew up in a family involved in the medical treatment of hearing loss. "Hearing loss and its prevention was part of every dinner conversation. Hearing protection is a team effort."

EERS product will be launched this summer with a full release expected in the fall.

Brendon Dever received second place for his "Heads Up," a wearable sensor technology that affixes to glasses or protective equipment such as hardhats. The sensor detects noise levels and provides warnings and other communications via colour-coded lights. This is from the Heads Up safe website: "The Heads Up wearable communication system allows operators to receive personal safety and time critical updates while maintaining focus by providing alerts within their peripheral vision. Heads Up enables instant communication between operators, safety crews, management teams, and life-saving sensor technology."

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