

Success story

» **People tracking**

Securing an underground construction site in Vancouver »



» ELA Innovation secures

the Vancouver subway construction site

BESSAC, a company specialized in the **manufacture of tunnel boring machines and tunnel construction**, has entrusted ELA Innovation to **secure the construction site of the Metro-Vancouver water treatment plant**. Following the analysis of the client's needs, the objective was **to track the workers** as they went down the tunnel to perform the operations. Approximately 30 workers were entering and exiting a drop shaft to access the site. The solution made it possible to **count each worker** at the time of the descent and ascent of the well in order to know the workforce in real time.

» The key players



Manufacturer of IoT tags



End user

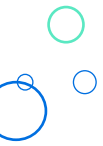


« The implementation of the access control system by our own resources was made easy by ELA's remote support, and a good understanding of our site conditions. The deployed system allows us to ensure a reliable and permanent monitoring of the personnel working underground at a reasonable costn and not to expose unnecessarily the lives of the rescuers in case of an incident. »

G. Roux, Construction Manager, Bessac

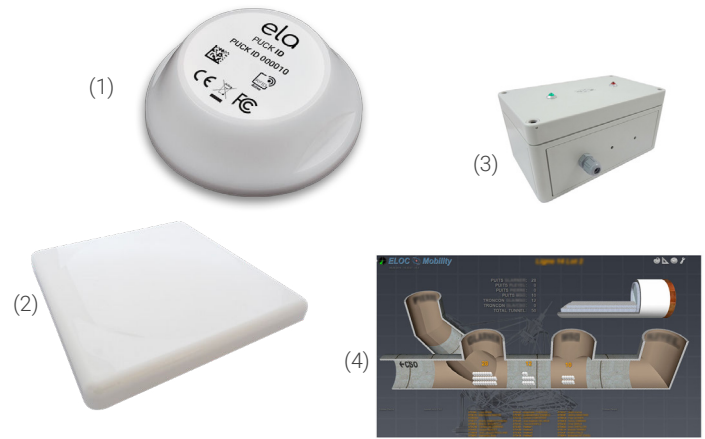
» The client requirements

- ✓ Ensure the safety of workers descending into the underground
- ✓ To respond in a simple way to regulatory constraints
- ✓ Take into account the technical constraints : low temperatures (-30°C), shock resistance and high humidity



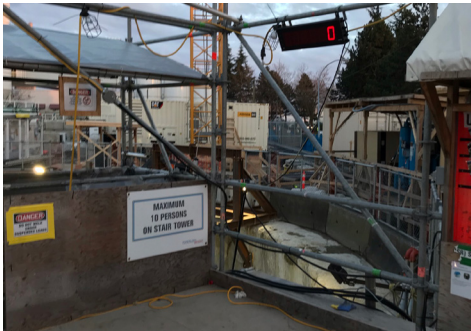
» The equipment

- ✓ 50 PUCK ID (1)
- ✓ 2 RFID antennas (2)
- ✓ 1 Tag checker (3)
- ✓ ELOC 1.0 IoT Platform (4)



» The operating mode

Each worker is equipped with a **PUCK ID**. At the entrance of the well, an antenna is installed to pick up the tag attached to the helmet of each worker, which will ensure that the worker has entered the well. Once the worker goes down into the well, another antenna located in the well will pick up the tag again to ensure that the worker has gone down. At the same time, a tag checker has been installed, which allows to check the correct functioning of the PUCK ID before the descent in the



well. If the LED of the **tag checker** is green, the PUCK ID is working, so the worker can descend.

If the LED is red, it means that the PUCK ID has a malfunction, so it must be changed in order to properly equip the worker and ensure his safety. This parallel solution allows to secure the identification solution.

» The results

- ✓ **Reliability of personnel** counting
- ✓ **Safety** in case of incident
- ✓ **Better control of access** to the shaft
- ✓ Simplicity in the verification by the team that no isolated worker is in the tunnel

» The advantages

- ✓ **Easy** to implement solution
- ✓ Turnkey solution
- ✓ **Remotely deployable**