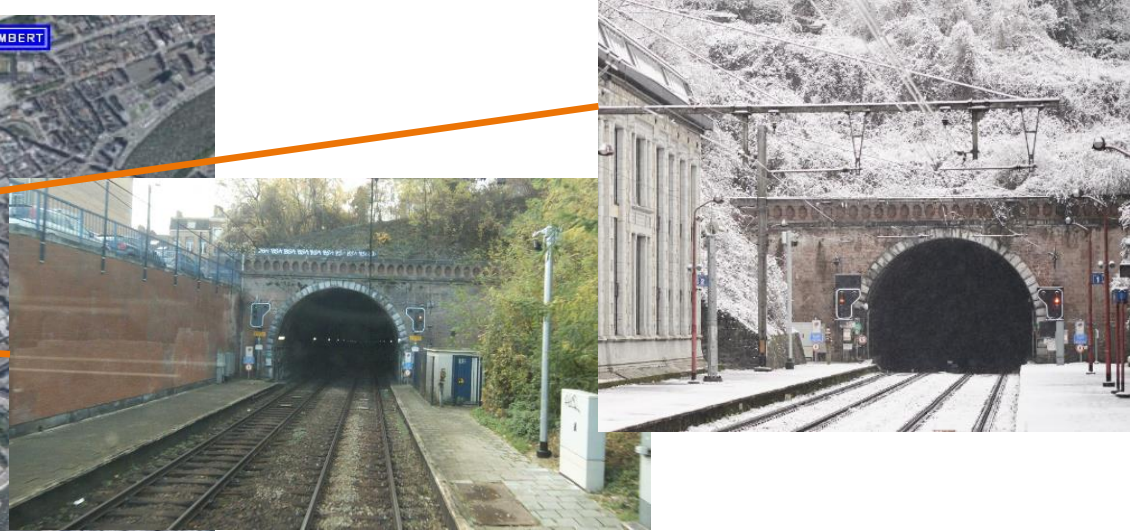
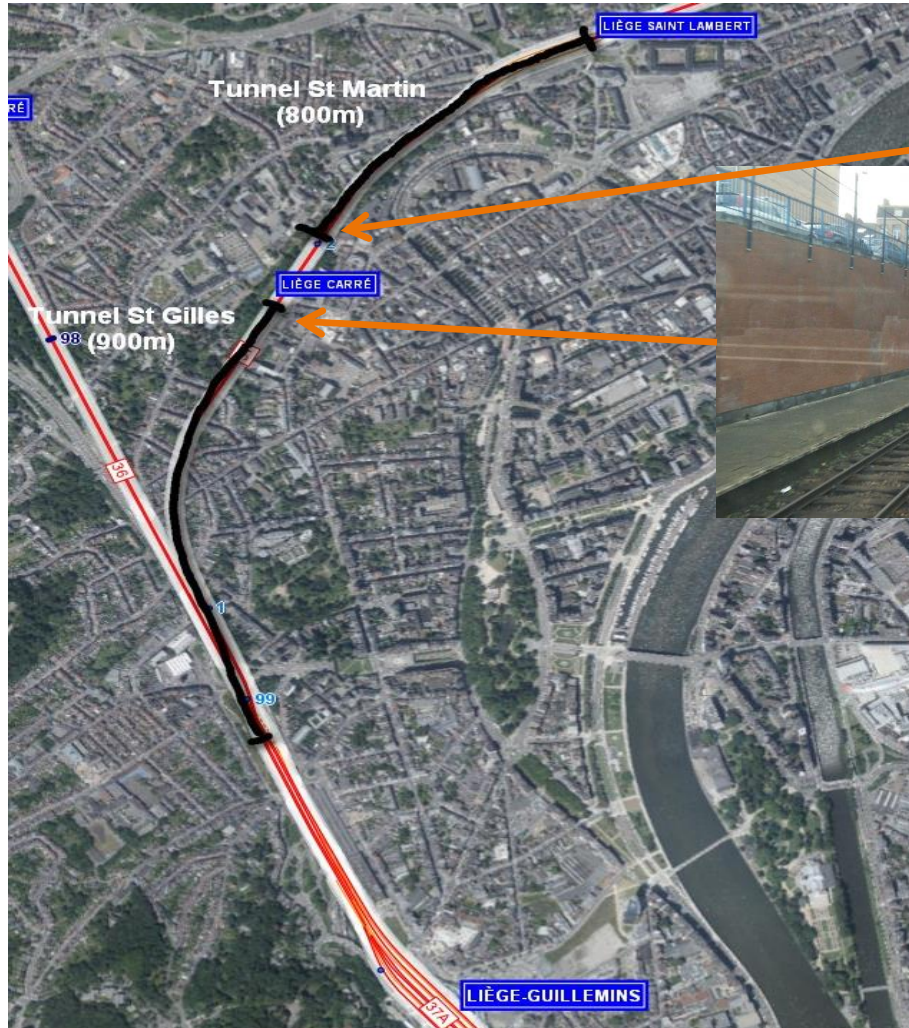
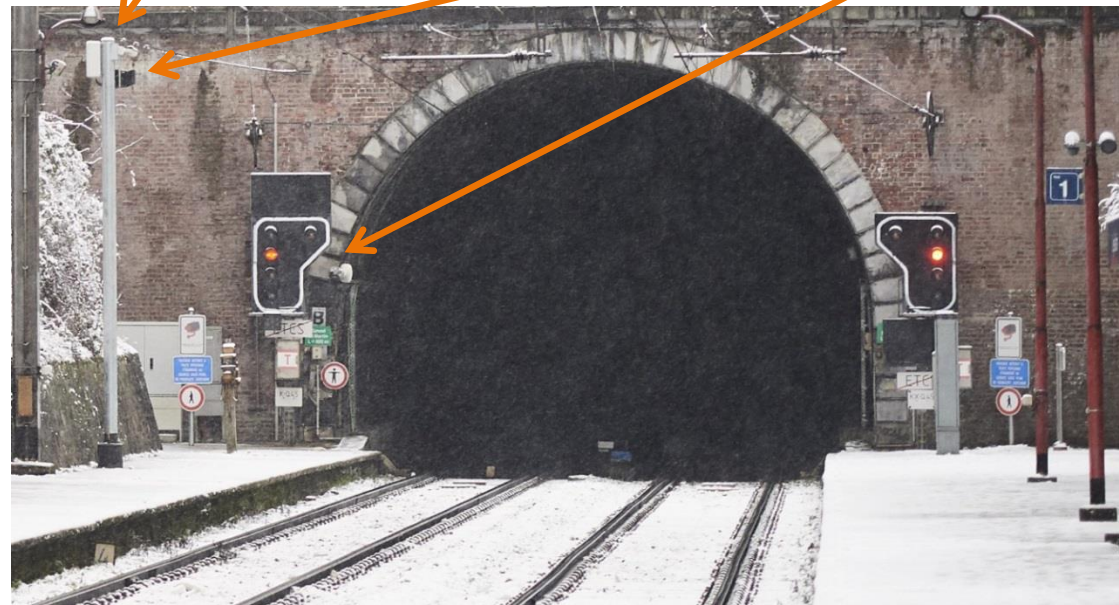


Pilot test (Liège-Carré): description of the hotspot



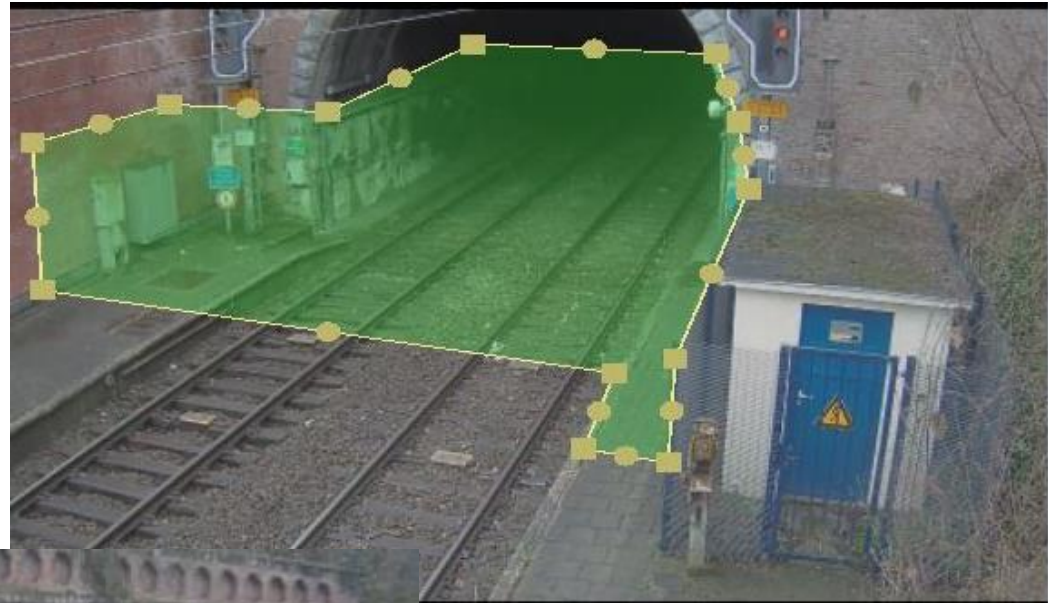
- ❖ Lots of trains running in this railway section (more than 200 trains/day);
- ❖ Lots of schools next to the stations;
- ❖ Tunnels are very narrow;
- ❖ Platform height is low;
- ❖ Population density is very high (suburbs of Liège);
- ❖ Very festive place (“The Carré”).

Pilot test: description of the system



- ❖ Camera with an intrusion detection algorithm;
- ❖ Sound warning when person is in the detection zone;
- ❖ Not connected to a Control Room (local);
- ❖ GOAL = influence the person's behaviour.

Démo / Concept



Results

❖ System accuracy

- 8 periods of analysis (10 days);
- 70% of alarms were justified (presence of a person in the detection zone);
- 30% of false alarms
 - Train detection (60%);
 - Reflection problems (30%);
 - Animals (10%).

Number of intrusions (before installation of the system)	Number of intrusions (after installation of the system)
11 cases (average 2016-2017)	2 cases (2018), 0 (2019)

❖ Safety / Punctuality Results

- Good results (80% reduction in the number of intrusions- 2016/2017 compared to 2018);
- 800 minutes saves in the section (2017 compared to 2018)

Delays in the railway section (2017)	Delays in the railway section (2018)
5417 min	4619 min

Improvement of the system

- Installation of timers so that staff can disable the voice system (for 2 hours) during work / maintenance in the tracks;
- Installation of signs prohibiting the crossing of tracks at the entrance to tunnels;
- Awareness-raising among company personnel (videos on the intranet) and staff in the area concerned (Safety Flash).



SAFETY NEWS

SAFETY FLASH

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Conclusion

- Reduction of the number of intrusions and improvement of punctuality thanks to the installation of cameras;
- Good communication both internally and externally;
- Possibility to extend this installation to other hotspots in the future based on the good results recorded.



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Anti-trespass camera: a pilot test in
Belgium