



Title: Increasing Public Awareness around Construction Zones in North Vancouver

Date: 11/27/2023

Background: The goal of this project is to raise public awareness and safety in North Vancouver's construction zones. It aims to make construction sites safer for everyone, including those with disabilities, and tackles the problems caused by distracted pedestrians, especially those absorbed by their mobile devices.

City Goal / Strategy: The objective of our project is to lessen accidents and increase pedestrian safety in and around construction zones. The plan calls for putting in place creative, inclusive, and successful safety precautions and public awareness programs.

Overview of the project: With the use of innovative projected light technology, the project offers a brand-new method for placing interactive, bright safety messages and directional indicators on the ground at construction sites. By engaging distracted pedestrians' attention and offering them clear instructions, this technique aims to improve general safety.

Methods / Project details: To obtain the necessary information, we found it most beneficial to conduct on-site observations in construction zones. Engaging with pedestrians and construction staff through interviews allowed us to gather valuable opinions and feedback regarding our proposed solution.

Key recommendations / Key features:

- Implement interactive, eye-catching projections at major construction sites.
- Ensure the technology is inclusive, catering to the needs of people with disabilities.
- Regular updates and maintenance of the projection content are necessary to ensure relevance and effectiveness.

Next steps/ Further research:

Pilot Program Expansion:

- Extend the implementation of the projected light technology to more construction sites across North Vancouver for a broader impact study.

Long-Term Impact Analysis:

- Conduct longitudinal studies to assess the sustained effectiveness of the technology in reducing accidents and improving pedestrian safety over time.

Technological Enhancements:

- Explore advancements in projection technology for better clarity, durability, and energy efficiency.
- Investigate integration with smart city infrastructure for real-time updates and adaptability to changing construction site conditions.

User feedback and iteration:

- Regularly gather feedback from both pedestrians and construction workers to continuously improve the design and functionality of the projections.
- Implement iterative design processes to refine the technology based on real-world usage and feedback.

Accessibility and Inclusivity Studies:

- Further research into the effectiveness of the technology for people with different types of disabilities.
- Explore additional features to enhance inclusivity, such as integrating auditory elements for visually impaired individuals.

Cost-Benefit Analysis:

- Conduct a comprehensive cost-benefit analysis to evaluate the economic impact of widespread adoption of the technology.
- Assess potential savings in terms of reduced accidents and improved traffic management in construction zones.

Scalability and Adaptation:

- Investigate the scalability of the technology for different types and sizes of construction zones.
- Adapt the technology for use in other contexts where pedestrian safety is a concern, such as school zones or high-traffic public areas.

Sources:

https://safety.laserglow.com/virtual-sign-projectors/?gad_source=1&gclid=CjwKCAiA04arBhAkEiwAuNOslraws6RiaXLNM3kxryXox1SJ25IGTIjjzw2yzXtPUzjSDNg2ChN7BoCqrEQAvD_BwE

<https://www.toptreesafety.com/Product/Warehouse-Signage-Projection-Virtual-LED-Sign-Projector-Toptree.html>

https://www.toptreesafety.com/Product/LED-Virtual-Warning-Sign-Projector-for-Workshop-Overhead-Crane-Forklift.html?gad_source=1&gclid=CjwKCAiA04arBhAkEiwAuNOslsNOhqMZiA7gk20oBlq8Q-dvQk8iB43uxKrNjJZ_5JoNP8KQudQQlxoCKicQAvD_BwE

<https://blog.stop-painting.com/how-to-use-virtual-lines-and-signs/>

<https://www.amazon.ca/gp/aw/d/B09TYL15J5/>

<https://www.visualworkplaceinc.com/virtual-led-floor-sign-projector/>

Student names: Alpy Erdogdu, Pavarisa Lamphat, Anatasia Dymova, Ashmeet Kaleka, Golshid Kholghi, David Xiong, Parankush Kwatra

Staff Partner: Milla Zaenker

Faculty Partner: School of Business

Course: BADM 305 7A/B Fall 2023