Partnered with Northcrest

PROJECT WALKWAY

Enhancing Pedestrian Comfort in the Hangar District (YZD) | C4 Team C12 | C4 3.0 Winter 2026

APRIL | 2026

C4 Cross Campus Capstone Classroom YORK U



01 THE PROBLEM

Extreme Weather:
- Cold and strong winds
- Rain
- Extreme temperatures
- etc.

Other storefront walkways are not all retractable, acccessible, and/or modern.

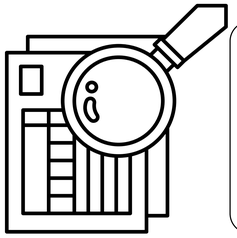
Team Members: Akshar Jadhav: Lassonde School of Engineering, Anthony Pham: Lassonde School of Engineering, Danielle Burnett: Faculty of Health and Faculty of Education, Shuwayne Fyne: Faculty of Environmental and Urban Change, Mohamed Abdelrahman: Lassonde School of Engineering, Haytham Hassan: Faculty of Liberal Arts, Shami-uz Zaman: Faculty of Science

THE SOLUTION 02

A weather-responsive, retractable, and interactive pedestrian storefront walkway system designed to improve comfort and usability. It preserves openness while introducing functional shelter.

Taxiway → Central Square → Plaza





03 RESEARCH

- Cause of weather: elevated open area
- Materials: flexible, transparent, polycarbonate or laminated glass for high impact resistance and safety
- Cost: 500, 000 - 2 million dollars
- **Innovations: retractable doors, interactive digital screens, lighting, temperature**
- Control centre of doors (opening/closing): by security

UN SDG CONNECTIONS + SOUND THINKING 04

- **SDG 13** – Climate Action
  Adapts infrastructure to changing environmental conditions
- **SDG 11** – Sustainable Cities and Communities
  Improves public space usability and walkability
- **SDG 3** – Good Health and Well-being
  Supports safe, comfortable, and interactive movement for all users

- **S**ustainable: made with materials meant to last
- **O**ut-of-the-box: has other concerns in mind too (digital screens, retractable, lighting)
- **Un**iversal: accessible for everyone (in wheelchairs, those with claustrophobia, etc.)
- **D**esign thinking: costs, materials, and structure were all planned for efficiency and best fit, and were tested

SOUnD



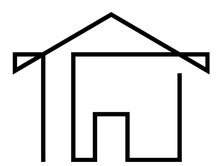
05 TESTING

- Explored design alternatives (open vs. enclosed systems)
- Asked current York University students the user experience of York Lanes and ACE/E walkways
- Researched other existing walkways and reviews

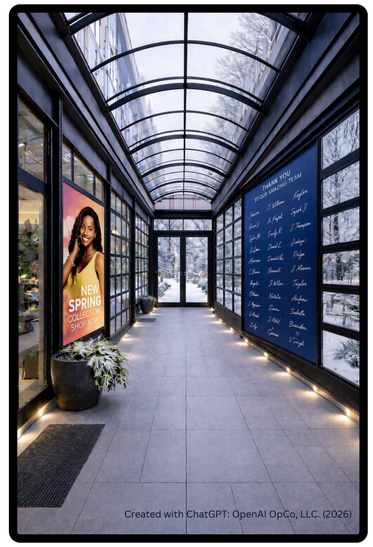
CONCLUSION 06

- Increases pedestrian comfort in all seasons
- Improves accessibility for diverse users
- Enhanced social interaction and community engagement
- Economic support through storefront integration

Unlike traditional shelters, this solution:
- Creates a continuous, connected pedestrian system
- Adapts to multiple environmental conditions
- Is interactive
- Well-lit
- Has store advertisements

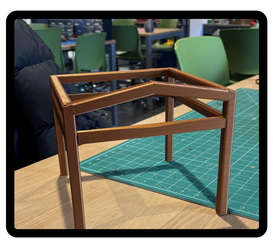


AI Design:





3D Printed Model:



VR :

