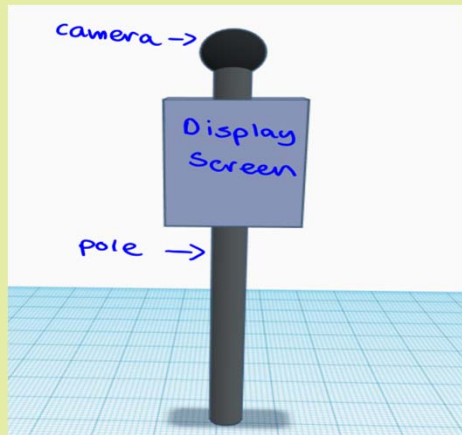




A preliminary sketch of our prototype



Our 3D prototype design



We used the CNC machine to create our first prototype

SHARING



On Nov 18, 2019, we spoke with Mr. Adamo Donatucci, Regional Vice-President of Indigo Parking Canada



On Oct 16, 2019, we discussed our innovative Solution with Ms. Karen Whitney, Director of Community Development for the Regional Municipality of York



On Dec 5, 2019, we presented our skit and innovative solution to over 200 students at the Bayview Glen assembly.



Visit our:

- website at: <https://flctrlz.github.io/ctrlz/>
- product description: <https://youtu.be/5M1TXqfoZa8>
- presentation at: https://youtu.be/BM_v2otF9Y8



PROBLEM IDENTIFICATION

The problem we are addressing is accessibility. People without accessible parking permits are parking in designated spots and blocking access to those who require them. This prevents people with disabilities and many seniors from leaving their homes, leading to isolation and immobility. We need a way to ensure accessible parking is available to those who need it.

Sources of Information

We have consulted with experts and referred to articles and websites

Experts

Mrs. Karen Whitney.

Director, Community Planning and Development, Planning and Economic, Cooperates Services York Region, talked about how our solution would ensure accessible parking for those who need it to promote safety for those individuals. They can park and have less distance to travel, rather than parking further away and risking injury.

Mr. Craig Lane.

HCMA Architecture + Design, Vancouver, Canada, shared his insights on how making public spaces more accessible will encourage more people to be active in their community. He shared that our solution would ensure people with disabilities and seniors would have access to parking close to public buildings.

Prof. John Zelek.

Associate and Professor and Co-Director of the VIP (Vision Imaging Processing Lab) Ontario, Canada, encouraged to potentially use the data collection to allow property owners to optimize the number of accessibility stalls in parking lots.

Mrs. Kim Huntley and Mrs. Eda Conte-Pitcher.

Library Service Manager of the Toronto Public Library informed us that better accessibility parking solutions at the library will encourage people with disabilities to leave their homes and visit libraries.

Prof. Brenda Vrkljan.

Professor, Occupational Therapist, McMaster University advised us that our original idea, a buzzer to prevent people from parking in those spots without a permit, would cause stress and scare people nearby.

Mr. William Wiles.

Parking Operations Supervisor at York University suggested that in the future, we could use our solution to help the problem of people parking in front of fire routes.

Mr. Adamo Donatucci.

Regional Vice-President of Park Indigo Canada offered to install our Spot Saver at one of his company's parkades.

Selected References

The City of Toronto, Permits – Accessible Parking Permits - parking exemptions and holder responsibilities

CITYLAB, Teresa Favuzzi, Solving Disability Placard Abuse – Is There A Technological Solution?

New Atlas, Ben Coxworth, Tech solution developed for disabled parking abuse, 29 December 2011

Existing Solutions

Intelligence Parking Management System (Korea)



Dislife's More Than a Sign (Germany)



INNOVATIVE SOLUTION Ctrl-Z's Solution

Our solution will ensure access to parking that will lead to greater levels of physical activity and interaction with others, resulting in improved mental health and longevity. The Spot Saver features a camera located at the top of a post in front of the accessible parking spot to check for the presence of a valid permit. If detected, the Spot Saver will indicate this on a display screen and a green light will appear. If not detected, a message saying "No Valid Permit Detected", and a red flashing light will appear. If the unauthorized vehicle has not moved within 3 minutes, the camera will record the license plate and the owner of the vehicle will be fined.

Innovation

Our solution is a pole with a camera located on the top of a pole to detect the presence of an accessible parking permit on the dash of the car.

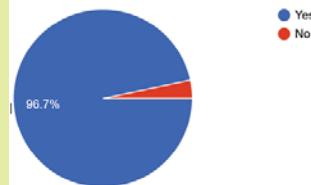
It can validate if you are able to park in the accessible spot with sensing an accessible permit.

It will allow people with disabilities and seniors to be able to find a parking spot closer to the public space entrance.

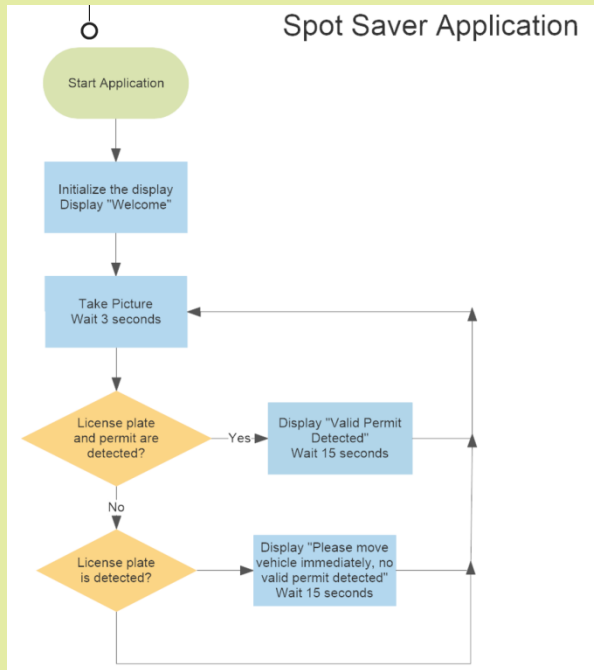
Survey Results

Would our Spot Saver invention benefit those in need of an accessible parking space?

61 responses



How the Spot Saver Works



The Spot Saver has 2 main parts to it. There is a camera located on the top of a pole in front of the accessible parking spot to detect the presence of an accessible parking permit on the dash of a parked car. If so, a message saying, "Valid permit detected." with a green light will appear on a display screen below the camera, indicating a legally parked vehicle.

If there is no permit detected, a message saying, "No valid permit" and a red flashing light will appear on the display screen. If a vehicle has not moved within 5 minutes, the camera will record the license plate and a ticket will be mailed to the vehicle owner.

Estimate of Installed Cost

Spot Saver Installed Cost Per Unit	
Installation Labor Per Spot (see note below)	\$3,600.00
Equipment Rental	1,000.00
GoPro Camera	509.00
Factory Labour	120.00
LCD 7-inch Display Screen	99.00
Wires (40m)	85.00
Qualcomm Snapdragon 410 processor	60.00
Galvanized Metal Post (2 meters)	54.00
Concrete	40.00
Disability Sign	25.00
Waterproof housing	22.00
Sonotube	6.00
Total	\$5,620.00

Note: assumes an installation of 4 units