



NATIONAL CAPITAL COMMISSION
COMMISSION DE LA CAPITALE NATIONALE

Enhanced Mapping for Inclusive Trail Usage NCC CanDO Initiative

Board of Directors presentation

April 10, 2025

Cartographie optimisée pour une utilisation inclusive des sentiers
Initiative de la CCN et de l'organisme CanDO

Présentation au conseil d'administration

10 avril 2025



Context

Initial request from Canadian
Disabled Outdoor Society (CanDO)

"...A more inclusive approach for all trail users would be to provide better information about the trails and let users decide for themselves what they are able to do..."

Contexte

Requête formulée par la Canadian
Disable Outdoor Society (CanDO)

"...En fournissant davantage d'informations sur les sentiers et en laissant les utilisateurs choisir le parcours qui convient à leurs capacités, on favorise l'inclusion de tous..."



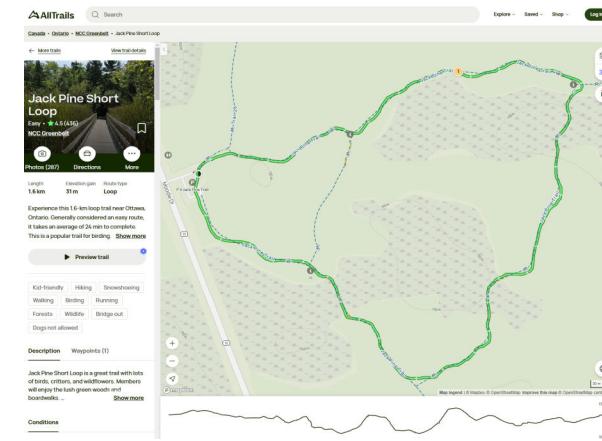
Reference Information

Référence

Trail / Sentier	Brief Description / Brève description	Time (Leisurely Pace) Durée (sans se presser)	Distance
Roadside Bike Trail / Piste cyclable en bordure de route	Travels alongside the Denali Park Road, from the Visitor Center to the park entrance. Little elevation change. The surface is well-compacted gravel. 5% maximum grade, 3 m (10 ft.) width. Continues as a paved path alongside Highway 3 (see Parks Highway Bike Trail below)./ Longe la route du parc national du Mont-Denali, du centre d'accueil à l'entrée du parc. Faible dénivélé. La surface est en gravier bien compacté. Pente maximale de 5%, largeur de 3 m (10 pi). Continue en tant que sentier pavé le long de la route 3 (voir la piste cyclable de la route des parcs ci-dessous).	45 minutes one-way from the Denali Visitor Center	2.7 km, one-way

Banff Area Cross-Country Ski Trails

Rating	Trail	Condition	Comment	Links
● Easy	Tunnel Mountain Winter Trails	Ungroomed.	25-11-2024: Insufficient snow for tracksetting for cross-country skiing;	i Trail details
● Easy	Spray River Winter: West Trail	Ungroomed.	25-11-2024: Insufficient snow for tracksetting for cross-country skiing; Thin snow cover over uneven surface. More snow is needed to cover rocks, roots and creeks;	i Trail details
● Easy	Spray River Winter: East Trail	Ungroomed.	25-11-2024: Insufficient snow for tracksetting for cross-country skiing; Thin snow cover over uneven surface. More snow is needed to cover rocks, roots and creeks;	i Trail details



Goal

Provide the right information so that people can easily find and access trails appropriate to their needs and abilities.



But

Fournir des renseignements utiles pour que les gens puissent facilement trouver et emprunter des sentiers adaptés à leur besoins et à leurs capacités.



Objectives

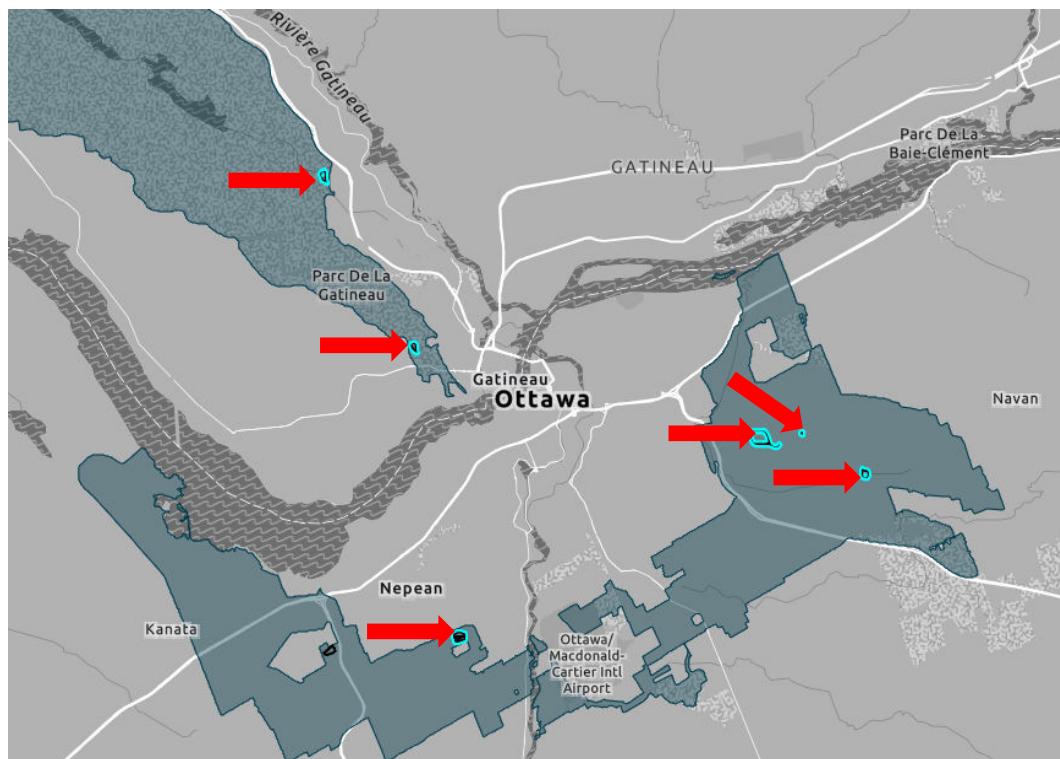
1. Inspect and improve a selection of trails (Greenbelt and Gatineau Park).
2. Collect data on trail conditions (360 photos, trail length, surface, grade, width, choke points, obstacles and slope, etc.).
3. Create an intuitive and efficient GIS tool.
4. Make the tool available to the public.
5. Improve the trail experience for all users.

Objectifs

1. Inspecter et améliorer certains sentiers sélectionnés (Ceinture de verdure et parc de la Gatineau).
2. Recueillir des données sur l'état des sentiers (photos 360°, longueur, surface, pente, largeur, points d'étranglement, obstacles et topographie du sentier, etc.).
3. Créer un SIG intuitif et efficace.
4. Mettre l'outil à la disposition du public.
5. Améliorer l'expérience des utilisateurs des sentiers.

Sites

Emplacements



	Trail / Sentier	Length / Distance (km)
Gatineau Park Parc de la Gatineau	Sugarbush Trail Sentier de la Sucrerie	1.9
Gatineau Park Parc de la Gatineau	Pionniers Pathway Sentier des Pionniers	1.5
Greenbelt Ceinture de verdure	Mer Bleue - P22	1.4
Greenbelt Ceinture de verdure	P14 - Nepean Sportsplex	3.2
Greenbelt Ceinture de verdure	P23 - Dewberry Trail	0.5
Greenbelt Ceinture de verdure	P20 – Anderson Rd	3.3
total		11.8

Inspection and Improvement

- Ops team inspected the selected trails
- General maintenance was done to fix issues
- Some trails were improved based on low cost/high impact opportunities



Inspection et amélioration

- L'équipe des opérations a inspecté les sentiers sélectionnés
- Des travaux d'entretien ont été effectués pour résoudre les problèmes
- Des améliorations à faibles coûts et à fortes retombées ont été apportées à certains sentiers



Data Collection

- Collect detailed information about each trail (physical data, 360 images, surface condition, obstacles)
- Assess the accessibility features of each trail (parkings, infrastructures)



Collecte de données

- Recueillir des renseignements détaillés sur chaque sentier (données physiques, imagerie à 360°, état de la surface, obstacles)
- Évaluer les caractéristiques d'accessibilité de chaque sentier (stationnement, infrastructures)



Trail Assessment

Ground truthing by CanDO

- 4 visits were done by Chelsea and Brie with NCC employees
 - Bell High School
 - Pioneers
 - Anderson
 - Dewberry
- 11 visits were done by Chelsea and Brie + volunteers
 - Gatineau Park – 2
 - Greenbelt – 8
 - Western lands – 1



Évaluation des sentiers

Validation sur le terrain par CanDO

- Chelsea et Brie ont effectué quatre visites en compagnie d'employés de la CCN
 - école secondaire Bell
 - sentier des Pionniers
 - chemin Anderson
 - sentier des Ronces
- Chelsea et Brie ont effectué 11 visites assisté de bénévoles
 - parc de la Gatineau – 2
 - Ceinture de verdure – 8
 - terrains de l'ouest - 1



Trail Assessment

Évaluation des sentiers

Shared experience by CanDO

- Education
- Expand the view
- Foster strong collaboration



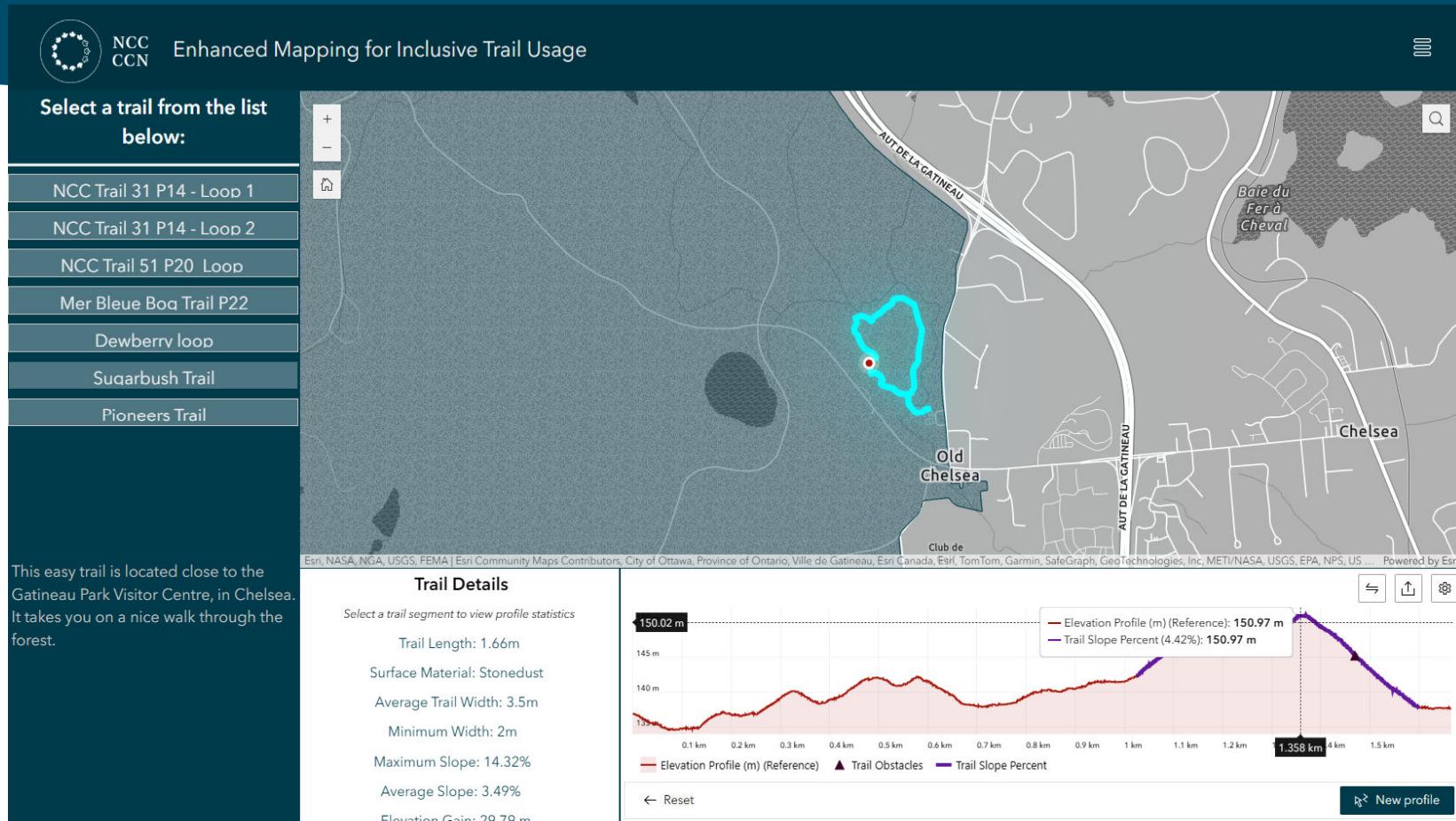
Expérience collective de CanDo

- Sensibilisation
- Élargissement des horizons
- Renforcement de la collaboration



Web Application

Application Web



Web Application

Application Web

The screenshot displays a web-based application interface for managing and visualizing trail data. At the top left is the NCC CCN logo and the text "Community Led Enhanced Mapping for Inclusive Trail Usage". A sidebar on the left lists various trails: NCC Trail 31 P14 - Loop 1, NCC Trail 31 P14 - Loop 2, NCC Trail 51 P20 Loop, Mer Bleue Bog Trail P22, Dewberry loop, Suqarbusch Trail, and Pioneers Trail. A central map shows a cyan-colored trail segment with a blue square marker and a red circle marker. Below the map is a text box stating: "Mer Bleue Bog Trail is popular with families because of its universally accessible boardwalk and storytelling route. It's an ideal spot to take young children for a walk – even with a stroller." On the right side, there is a "Trail Obstacles" panel showing a table with one entry: Type: Trail Obstacle, Description: Unavoidable lip, and Link: View. Below the table is a photograph of a trail in a wooded area. At the bottom right is a "New profile" button. The bottom left contains "Trail Details" for the selected segment, including Trail Length: 1.36m, Surface Material: Stonedust / Wood, Average Trail Width: 3m, Minimum Width: 1.2m, Maximum Slope: 14.75%, Average Slope: 2.11%, and Elevation Gain: 13.43m. The bottom center features an elevation profile graph with a purple line representing the trail slope and a red line representing the reference elevation. The graph shows a significant dip around 0.4 km and a rise after 1.1 km.

NCC CCN Community Led Enhanced Mapping for Inclusive Trail Usage

Select a trail from the list below:

- NCC Trail 31 P14 - Loop 1
- NCC Trail 31 P14 - Loop 2
- NCC Trail 51 P20 Loop
- Mer Bleue Bog Trail P22
- Dewberry loop
- Suqarbusch Trail
- Pioneers Trail

Mer Bleue Bog Trail is popular with families because of its universally accessible boardwalk and storytelling route. It's an ideal spot to take young children for a walk – even with a stroller.

Trail Details

Select a trail segment to view profile statistics

Trail Length: 1.36m

Surface Material: Stonedust / Wood

Average Trail Width: 3m

Minimum Width: 1.2m

Maximum Slope: 14.75%

Average Slope: 2.11%

Elevation Gain: 13.43m

Trail Obstacles

Type	Trail Obstacle
Description	Unavoidable lip
Link	View

Elevation Profile (m) (Reference): 70.59 m

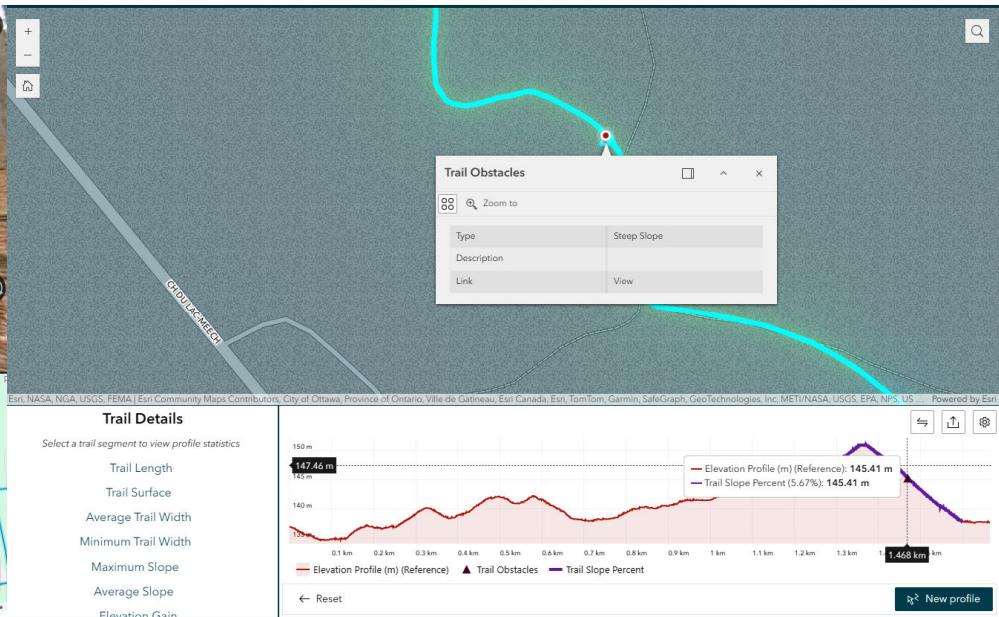
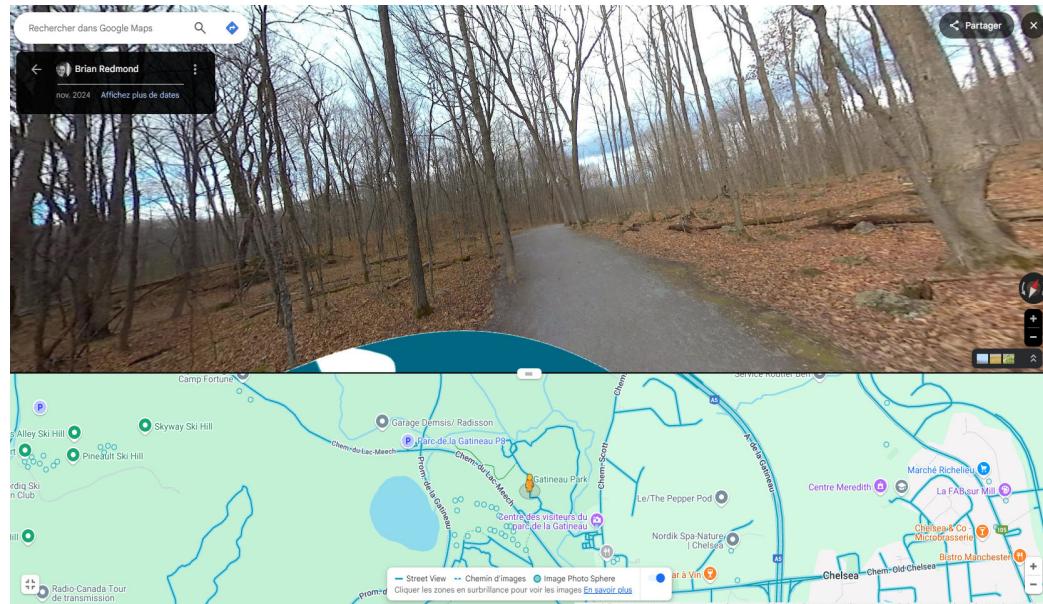
Elevation Profile (m) (Reference) Boardwalk Trail Obstacles Trail Slope Percent (9.0%) Trail Slope Percent

1.111 km

New profile

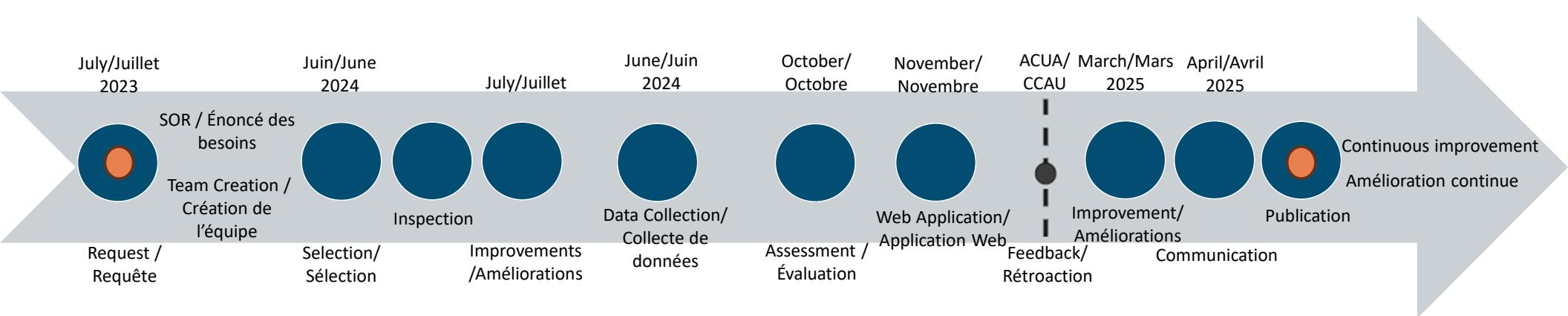
Web Application

Application Web



Timeline

Échéancier



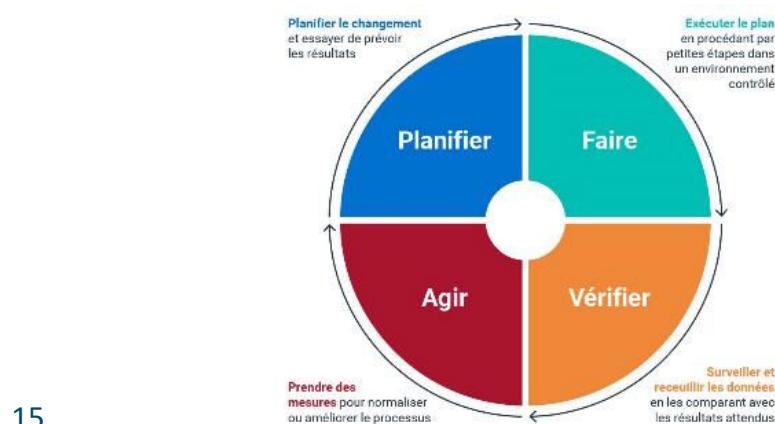
Next Steps

- Improve the tool based on ACUA feedback
- Develop communication strategy
- Develop additional content (hard copy map, signage)
- Continue trail maintenance with improved service levels
- Assess the initiative and gather end-users' feedback
- Identify opportunities, add trails and improve the tool



Prochaines étapes

- Améliorer l'outil suite aux commentaires du CCAU
- Élaborer une stratégie de communication
- Créer du contenu complémentaire (carte papier, signalisation)
- Maintenir l'entretien des sentiers à des niveaux de service améliorés
- Évaluer l'initiative et recueillir des commentaires
- Rechercher des améliorations possibles et ajouter des sentiers



Conclusions

- Collaborative effort
- Team engagement and fulfillment
- Learning opportunities and expertise building
- Innovative tool development
- Low cost/big impact
- Promote user autonomy
- New opportunities and continuous improvement

Conclusions

- Effort concerté
- Mobilisation et accomplissement de l'équipe
- Acquisition de connaissance et développement de l'expertise
- Création d'outils novateurs
- Faible coût/importantes retombées
- Promotion de l'autonomie des utilisateurs
- Nouvelles occasions et amélioration continue

Collaborators

Collaborateurs

CanDO

- Brie Birdsell (co-founder / confondatrice)
- Chelsea Ogilvie (co-founder / cofondatrice)
- Marita Meyer (volunteer / bénévole)
- Sharon Ogilvie (volunteer / bénévole)
- Steph Righi (volunteer / bénévole)
- Jack Ogilvie (volunteer / bénévole)
- Matt Kozun (volunteer / bénévole)
- Willa (mascot / mascotte)

NCC - CCN

- Anne Ménard (CS Vice-President)

Gatineau Park / parc de la Gatineau

- Catherine Verreault (Director)
- Pierre-Olivier Dorego (Manager)
- Benjamin Hiard (Program Officer)
- Élise Paré- Lépine (Information Officer)
- Marguerite Poelman (Program Officer)
- Martin Lambert (Project Officer)

Ontario Urban Land – Greenbelt Terrains urbains de l'Ontario – Ceinture de verdure

- Patrick Laliberté (Director)
- Bruce Devine (Sr. Manager)
- Marc-Antoine Poitras (Sr. Manager)
- Isabelle Hugues (Land Manager)
- Janice Dawson (Project and Capital Pathway Coordinator)
- Nicolas Brunet (Jr. Program Officer)
- Jessica McNamara (Sr. Program Officer)
- Jessica Thorne (Program Officer)
- Owen Brennan (Program Officer)
- Dylan Purkis (Student)
- Samuel Chung (Student)

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Geomatics / Géomatique

- Maurin Dabbadie (GIS Manager)
- Amelia Hewitt (GIS Analyst)



Conclusions

The health benefits of being in nature are indisputable. However, for a significant portion of the population, there are barriers to accessing these spaces.

With this project, the NCC and CanDO hope to make it easier for people with disabilities to find trails appropriate to their needs, abilities and equipment.

By providing objective, relevant information, this project allows trail users to make informed decisions about accessing the outdoors.

Conclusions

Les bienfaits du plein air pour la santé sont incontestables. Cependant, l'accès à ces espaces est difficile pour un bon nombre de personnes.

Par ce projet, la CCN et CanDO aident les personnes en situation de handicap à trouver des sentiers adaptés à leurs besoins, à leurs capacités et à leur équipement.

Au moyen de renseignements objectifs et pertinents, ce projet permet aux utilisateurs et utilisatrices des sentiers de prendre des décisions éclairées et de profiter du plein air.



DISCUSSION

Ad hoc References

- [NCC Accessibility Plan 2023-2026](#)
- [Best Practices Guide to the Accessible Design of the National Capital Commission's Outdoor Spaces – 2010](#)
- [Disability Accessible Trails and Parks Guide – AllTrails \(en anglais seulement\)](#)
- [Guidelines for Planning and Designing All Persons Trails – Trans Canada Trail](#)
- [Adaptive Hiking – Trail Access Project \(en anglais seulement\)](#)
- [CAN-ASC-2.1 Outdoor spaces: Public Review Draft](#)
 - 6. Common accessibility measures
 - 8. Additional requirements for accessible surfaces

Références ad hoc

- Plan sur l'accessibilité de la CCN 2023-2026
- Guide des bonnes pratiques pour l'accessibilité aux espaces extérieurs de la Commission de la capitale nationale – 2010
- [Disability Accessible Trails and Parks Guide – AllTrails \(en anglais seulement\)](#)
- Lignes directrices pour la planification et l'aménagement de sentiers pour tous – Sentier transcanadien
- [Adaptive Hiking – Trail Access Project \(en anglais seulement\)](#)
- CAN-ASC-2.1 Espaces extérieurs: Projet d'examen public
 - 6. Mesures d'accessibilité communes
 - 8. Exigences supplémentaires relatives aux surfaces accessibles