

2021

# UBC OKANAGAN TRANSPORTATION PLAN



## ACKNOWLEDGMENT

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We begin by acknowledging that UBC's Okanagan campus is located on the unceded territory of the Syilx (Okanagan) peoples and that UBC's activities take place on Indigenous lands throughout British Columbia and beyond.

The Syilx Okanagan people have been here since time immemorial. In September 2005, the Okanagan Nation Alliance officially welcomed UBC to Okanagan territory in a ceremony, Knaqs npi'ismist, where UBC signed a Memorandum of Understanding with the Okanagan Nation Alliance. The University works with the Okanagan Nation in the pursuit of campus plans for UBC Okanagan in respectful acknowledgment of the Syilx Okanagan people's stewardship of their territory for thousands of years.

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# 1. Plan Overview

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This Plan sets out an aspirational Vision for the future of transportation at UBC Okanagan and identifies strategies and actions that will help get us there.

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The University of British Columbia (UBC) has developed this Transportation Plan for the Okanagan Campus to guide the planning, design and delivery of transportation services, programs and infrastructure for decades to come.

This Transportation Plan is a key tool in implementing the [UBC Okanagan Campus Plan](#), enabling continued campus growth as anticipated by [UBC Okanagan Outlook 2040](#), and advancing the University's priorities as articulated in its strategic plan, [Shaping UBC's Next Century](#). Crucially, the actions identified in this Plan are also central to UBC's efforts to reduce greenhouse gas (GHG) emissions and respond to the climate emergency. Responding meaningfully to this emergency will require radical change and a dramatic shift in how people move to, from and around campus.

UBC is a global centre for research and teaching that is consistently ranked as one of the top universities in the world. The Okanagan Campus in the City of Kelowna joined UBC in 2005, evolving from the Okanagan University College, which was originally established in 1989. Since then, the campus has grown rapidly in terms of student enrollment, employment and building space, and growth is expected to continue over the coming decades. This growth will continue to place pressures on the local transportation system and present opportunities to leverage concurrent cultural and technological change to rethink the way we get around.







## Working with BC Transit and the City of Kelowna

UBC cannot respond to our transportation challenges alone. In order to shift travel away from personal vehicle use, reliable alternatives need to be in place. BC Transit and the City of Kelowna play a pivotal role in enabling sustainable transportation choices by providing transit service to and from campus. Many of the infrastructure investments and land use planning decisions required to support sustainable growth and movement in the region are also the responsibility of external planning authorities such as the City of Kelowna.

Recent nearby investments like the new John Hindle Drive and Okanagan Rail Trail along with new housing in the Academy Hill area are examples of the positive influence and critical role external authorities like the City of Kelowna play in enabling sustainable transportation options for the campus community.

The suite of strategies and actions (see [Section 4](#)) included in this Plan are intended to be supportive and help ensure success of the broader sustainable transportation improvements underway in the City of Kelowna.

### Did you know?

**Commuting trips** are the single largest source of GHG emissions at UBC Okanagan, accounting for **55% of total emissions.**

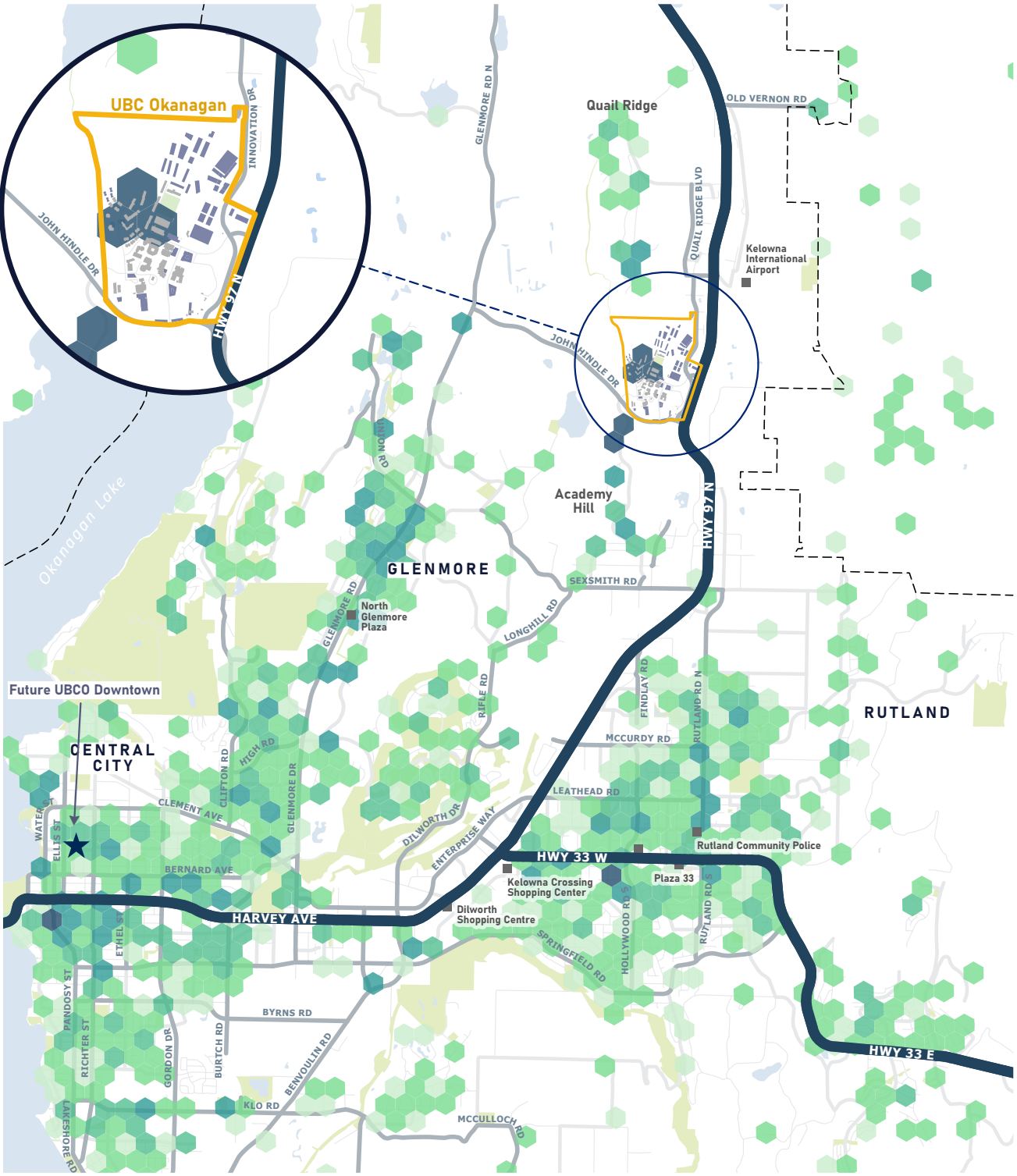
## 1.1 CONTEXT

Given its location, size and existing transportation challenges, the primary focus of the Transportation Plan is UBC Okanagan's main campus, located within the northeast quadrant of the City of Kelowna, on the west side of Highway 97 (see Map 1).

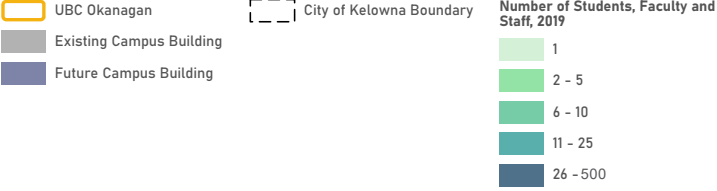
Staff, faculty and students are dispersed across Kelowna and beyond, with the highest concentrations in central Kelowna, Rutland and Glenmore areas. A large proportion of students also live in the Academy Hill neighbourhood adjacent to campus. Improving access to campus by sustainable modes from communities across the city and region is a key pursuit of this Plan.

A historically auto-oriented approach to land use planning in Kelowna has resulted in a form of development that makes efficient and attractive transit service challenging to deliver. This is anticipated to improve over the coming decades as the City implements their new [2040 Official Community Plan](#) and [2040 Transportation Master Plan](#).

At the time of this Plan's development, UBC, in partnership with UBC Properties Trust, began planning a new building in downtown Kelowna on Doyle Avenue, expanding UBC's downtown presence. This future facility is optimally located to benefit from the strong transit and active transportation infrastructure provided in downtown and central Kelowna. The Plan's vision and supporting strategies and actions will likewise support sustainable and convenient travel to UBC Okanagan's new downtown location.



MAP 1: Regional Context



## 1.2 PURPOSE

The Transportation Plan serves as a high-level roadmap for meeting the transportation needs of the UBC Okanagan community through 2040 in a way that supports regional improvements to transportation services and infrastructure and aligns with related strategic priorities and campus plans. It describes the University's Vision for the future of transportation at UBC Okanagan and articulates related objectives, targets, strategies and actions.

Over the next twenty years, the campus daytime population is expected to grow from roughly 11,000 people in 2019 to over 17,000 people in 2040 (refer to [Appendix 1](#) for population assumptions). The number of trips being made to and from campus will increase proportionally, meaning that a dramatic shift in travel behaviour towards sustainable modes will be needed to limit the growth of personal vehicle trips and avoid large areas of land dedicated to parking and GHG emissions.

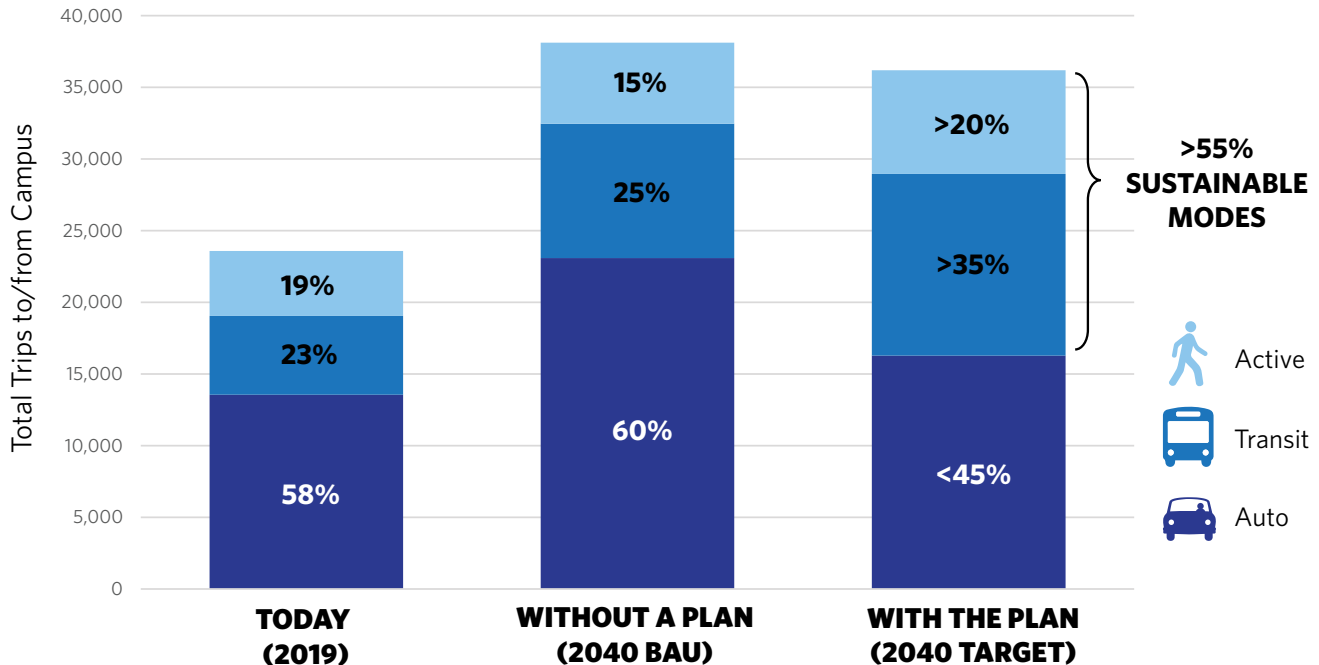
**FIGURE 2:** Alumni Avenue

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## What will the Plan achieve?



**FIGURE 3** Forecast weekday trips by mode, with and without the Plan

### Notes:

1. Active modes include walking, cycling and use of micromobility devices like skateboards and e-scooters
2. Auto modes include single occupancy vehicles, carpooling, truck and motorcycle

A status quo approach will not allow UBC to move towards its vision. The Plan establishes bold mode share targets including an increase in the proportion of trips made by sustainable modes like transit, walking and cycling to 55% (compared to 42% today). In addition, a target of a 40% reduction in GHG emissions by 2030 aligns with the University's GHG reduction targets as set out in [Climate Action Plan 2030](#). These targets are described in more detail in [Section 5: Monitoring Our Progress](#).

As illustrated by Figure 3, achieving these targets will involve a dramatic increase in the number of trips made by sustainable travel modes. Transit trips will more than double from 5,500 trips/day in 2019 to 12,000 trips/day by 2040. Trips by active modes like walking and cycling will also increase from 4,500 trips/day in 2019 to 6,500 trips/day in 2040. A modest increase in automobile traffic

to/from campus is also still anticipated even with this significant modal shift because of the increase in campus daytime population and thus in total trips.

To achieve the 2040 targets, the UBC Okanagan Transportation Plan identifies 21 strategies across five focus areas: policy, programs, transit, active transportation and vehicles. The targets, particularly for transit, cannot be met without investment in improved service frequency and capacity by BC Transit and the City of Kelowna.

Prospective strategies and actions were evaluated and prioritized based on their anticipated cost-effectiveness in advancing the objectives of the plan. Each of these strategies are described in more detail in [Section 4: Making it Happen](#).

### 1.3 KEY DRIVERS

This Transportation Plan is being driven by several factors with significant impact on the UBC Okanagan campus.

#### CAMPUS GROWTH

The [UBC Okanagan Outlook 2040](#) establishes existing and future campus population scenarios with a significant amount of growth in student and staff population expected over the next twenty years. While campus growth is not new to UBC Okanagan, having experienced a near doubling of population from 5,570 to 10,600 between 2008 and 2019, the next twenty years will challenge the University's ability to keep up with the travel demands and land area needed under business-as-usual travel behaviours.

Outlook 2040 Scenario 2 was determined in the Transportation Plan's development as the most likely path forward for how the UBC Okanagan campus will grow (refer to [Appendix 1](#) for further background on population projections). With this growth comes pressure on existing road and parking infrastructure to support the build-out of academic buildings identified in the [UBC Okanagan Campus Plan](#) and in the [Innovation Precinct Structure Plan](#).

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Over the next twenty years, the campus daytime population is expected to grow from roughly **11,000 people in 2019** to over **17,000 people in 2040**

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Note:  
Projection is based on Outlook 2040 Scenario 2

#### CLIMATE ACTION

Today, 55% of the University's GHG emissions at UBC Okanagan are from commuting to and from campus – the highest of all emission contributors (including building operations, energy, waste, and other business functions). Personal automobile use accounts for the majority of these commuting emissions.

Several factors contribute to a heavy reliance on automobiles including the low cost of parking and limited alternative options. Supporting the introduction of new and improved ways to commute to campus in order to change this status-quo is a high priority for this Transportation Plan.

The [UBC Okanagan Climate Action Plan 2030](#), developed in parallel to this Transportation Plan, lays out a path to reduce carbon emissions for the University by setting targets, and identifying strategies and actions to achieve them. The strategies in this Transportation Plan will support the *Climate Action Plan* target of reducing GHG's from commuting by 40% from 2013 levels by 2030. The *Climate Action Plan* refers to this Transportation Plan for detailed strategies, and accompanying implementation actions, to reduce GHG emissions associated with commuting.

## COLLABORATION WITH COMMUNITY PARTNERS

Coordination with community organizations including the City of Kelowna and regional transportation authorities has and will continue to be a key driver of this Transportation Plan. Several municipal and regional transportation plans that were either recently completed or are underway have been considered including the City of Kelowna's [Transportation Master Plan](#) and [Official Community Plan](#), the *Okanagan Gateway Transportation Study*, and the *Regional Transportation Plan* for the Central Okanagan. Ensuring there is alignment between these plans and the *UBC Okanagan Transportation Plan* with respect to the types of strategies introduced and their implementation will help UBC and its partners achieve their respective targets and objectives.

## RECENT INFRASTRUCTURE CHANGES AND DEVELOPMENT

Development continues to occur surrounding the UBC Okanagan campus. The Academy Hill neighbourhood south of the campus has grown significantly in recent years, which has contributed to more people walking to and from campus using the new pedestrian overpass across John Hindle Drive. The success of the Academy Hill neighbourhood in encouraging walking trips to and from campus speaks to the positive impact building housing within or near the campus can have on reducing automobile trips and fostering active transportation.

Development of the Okanagan Rail Trail and the John Hindle Drive multi-use pathway has created new connections between the campus and surrounding communities. The completion of John Hindle Drive and Upper Campus Way also allowed the University to restrict vehicle movements on University Way to support the pedestrianization of the campus core. Expansion of the transit exchange on campus has improved the transit experience for passengers and expanded capacity for future service expansion.

## TRENDS IN REMOTE WORK

One of the most effective ways to reduce GHG emissions related to commuting and avoid overwhelming constrained transportation systems is to reduce the number of trips being made. The COVID-19 pandemic prompted wide-spread deployment of remote work at UBC Okanagan and resulted in a number of related technological and cultural barriers being overcome. As we emerge from the pandemic, there is an opportunity to leverage the learnings and adaptations to remote work that took place over the last year to make this a viable option for work in the long term.



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**“ If there was a better transit system program I would not hesitate to take it... ”**

- Survey participant

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**“ A carpool app for UBC students would be helpful to find other students in your area. ”**

- Survey participant

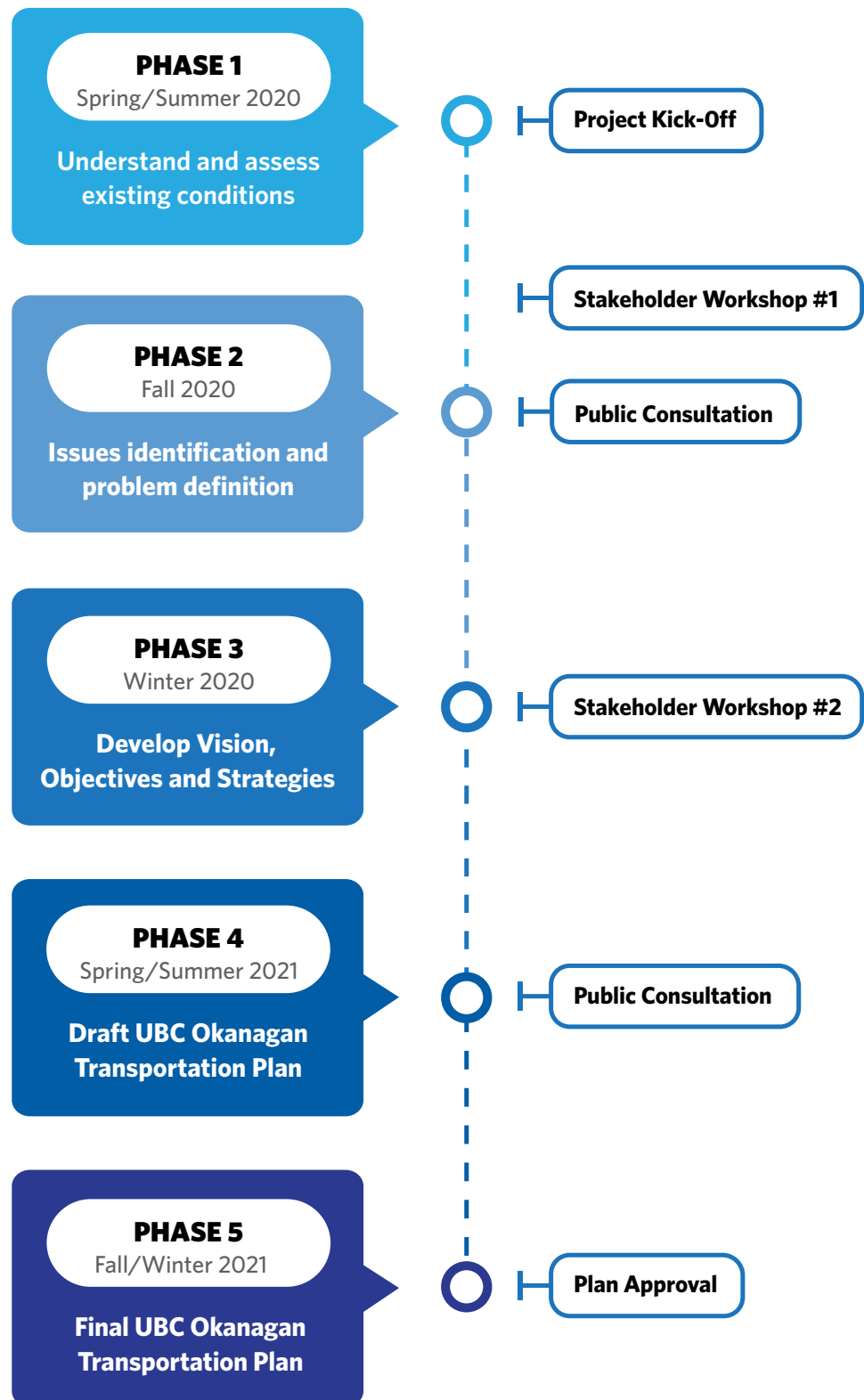
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## 1.4 PLANNING PROCESS

This Transportation Plan was developed over 18 months through an iterative and collaborative process of technical analysis, synthesis and consultation with stakeholders and the campus community, as shown in Figure 5. Campus Planning led the process, with strategic oversight and direction provided by a Project Steering Committee with representation from faculty and administrative campus departments. For further details on the engagement process that informed this Plan please refer to [Appendix 2](#).

This Transportation Plan was developed and completed during the COVID-19 pandemic in 2020/21. However, the pandemic has had little impact on the analysis presented in this report as most findings are based on the data collected in pre-pandemic periods (i.e. Fall of 2019). Moving forward, the impacts of this pandemic on campus travel patterns will be monitored through the University's biennial travel data collection program.

**FIGURE 5:**  
Transportation Plan  
Planning Process



## 2. Where We Are Now

### 2.1 KEY CHALLENGES

Informed by technical study and input from stakeholders and the public, several overarching challenges were identified to which the Transportation Plan responds.

#### Continued growth will increase pressure on an already constrained transportation system

The UBC Okanagan Campus has experienced recent and significant growth in its population and transportation infrastructure, along with significant parallel growth in areas surrounding the campus including new off-campus housing, commercial development, and roadway and cycling network improvements. In just 14 years, UBC Okanagan's daytime population has nearly tripled from 4,000 FTE students, staff and faculty in 2005 to nearly 11,000 in 2019.

This growth has contributed to large changes in travel patterns for all transportation modes. It has compounded issues with cross-campus connectivity, safety issues and multi-modal traffic conflicts, parking capacity pressures, and some accessibility gaps. Significant road network and parking supply upgrades will be needed if traffic volumes and patterns continue to grow in a business-as-usual (BAU) scenario without shifts in the existing mode share to more sustainable modes of travel. Average daily trips to campus are projected to increase from 23,600 (2019) to 38,100 (2040) under a BAU scenario.



#### Too many trips are made by personal vehicles and during peak travel times

Based on 2019 data, trips made by sustainable modes of transportation (transit, walking and cycling) made up 42.5% of all trips, with the remaining 57.5% of trips to campus made by personal vehicles. This significantly contributes to GHG emissions and the parking capacity challenges experienced on campus. Furthermore, the prevailing culture and practice of working and learning almost entirely in person on campus leads to many trips being made every weekday, concentrated during peak travel periods.

#### Driving alone could increase significantly by 2040 under a BAU scenario

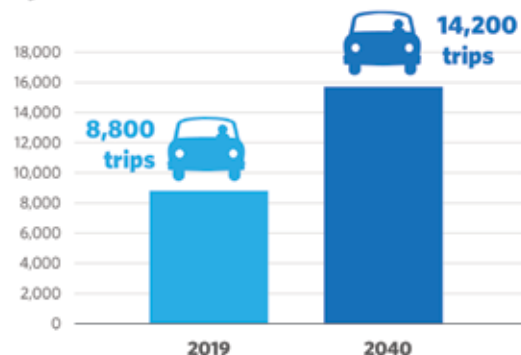


FIGURE 6:  
Campus's Arrival Plaza





### Commuting distances are long as a result of land use patterns and auto-oriented development

UBC Okanagan Campus is located more than 10km from downtown Kelowna and is not easily accessed by many of the surrounding communities due to limited transit service, topographical constraints and gaps in the road and bicycle network. An increase in walking, cycling and transit trips in the future will rely on better land use and transportation integration, allowing more people to live closer to campus, and ensuring safe, convenient routes by bike and bus are available for those that live further away.

Current City of Kelowna land use policies limit the potential for significantly more housing to be located close to the campus. Furthermore, a legacy of suburban, auto-oriented development has promoted a reliance on private automobiles in the region. Many staff, faculty and students live in communities that are not well served by transit or bike routes. For instance, the community of Glenmore, where a large proportion of staff and faculty live, is not well served by transit to/from campus (see Map 2).

UBC Okanagan is located within the City of Kelowna and as such is directly impacted by the land use policies and decision making that take place within this local government context. UBC can play an advocacy role and provide input into planning decisions. The actions and strategies in this document will serve to ensure success as new policies and land use planning approaches are adopted by the City of Kelowna, some of which are anticipated with the City's updated [2040 Official Community Plan](#) (OCP) and [Transportation Master Plan](#).

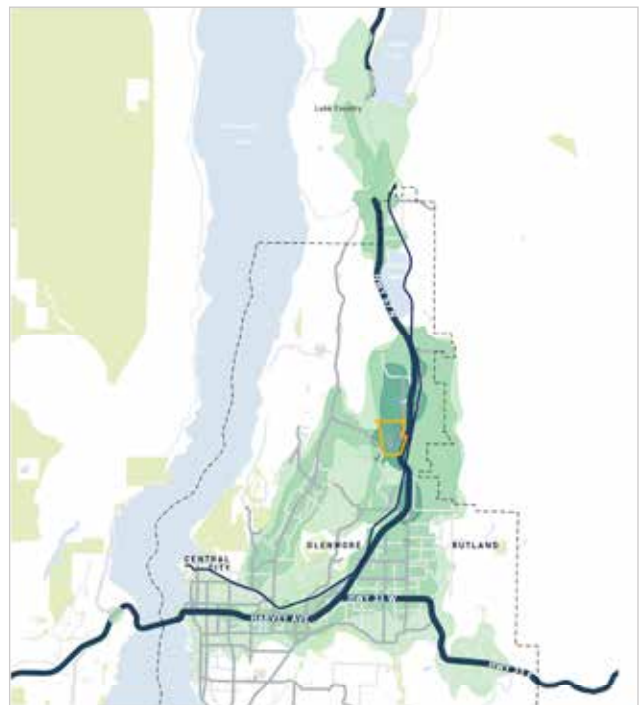
## What We Heard

**Challenges with Public Transit** was the most common topic of public feedback. **Infrequent bus services** makes it very difficult to align with people's work and school schedules. **Multiple bus transfers** are a barrier to taking public transit because of the extra commuting time. There are **not extensive enough bus routes** to reach all the neighbourhoods where commuters live.

### There has been a recent decline in transit use

Over the last decade, transit use to and from campus has seen a declining trend. In part, this is because more people are living within walking distance of campus. But largely this trend is attributed to low service frequencies (long wait times), circuitous and slow bus routes that often require multiple transfers (long travel times), and limited coverage (long walk times to access transit). Combined, these make transit far less attractive and convenient when compared to driving.

In order to increase transit use to and from campus, transit service across the central Okanagan needs to improve, including: frequency increases on existing routes; more investment in transit priority measures; and new or rerouted services in areas that are currently underserved. While UBC can advocate for these improvements, BC Transit in partnership with the City of Kelowna would need to fund and implement them.



15 min 30 min 45 min

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**MAP 2:** Time to transit to/from campus

### Cycling mode share remains low, despite recent network improvements

Significant infrastructure improvements including the Okanagan Rail Trail and John Hindle Drive multi-use pathway as well as safety improvements to Glenmore Road are increasing the presence of separated and safe cycling facilities with direct connections to UBC Okanagan. However, these recent improvements have not yet translated to a significant increase in cycling mode share. This may be a result of longer travel distances between the campus and nearby residential neighbourhoods in Rutland and Glenmore, or insufficient cycling awareness, education and amenities on campus to support cycling as a choice travel mode (see Map 3).

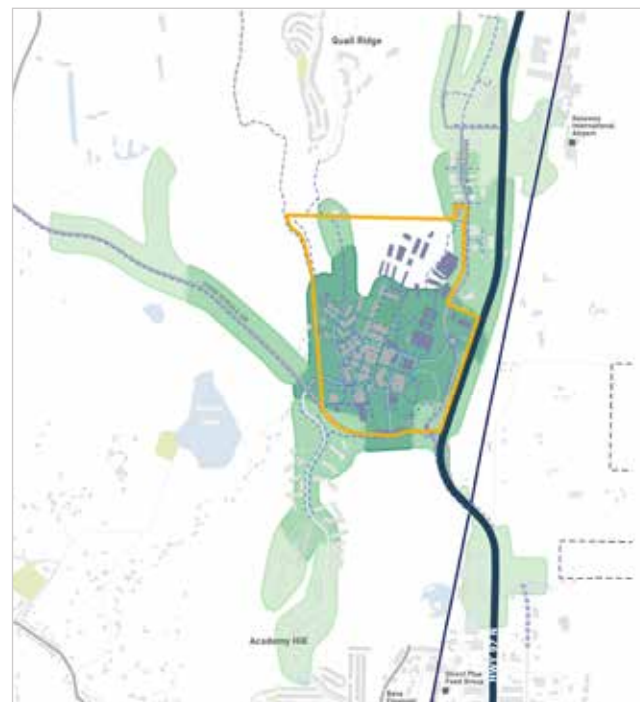


10 min (3.5 km) 20 min (7 km) 30 min (10.5 km)

**MAP 3:** Distance and time to cycle to/from campus

### Few services and amenities are within walking distance of campus

There is limited availability of nearby services and amenities, such as grocery stores, pharmacies, restaurants and doctors' offices, that would otherwise be typically found within walking distance of more urban campuses. Within a 20-minute (1,600 m) walking radius of the campus, there is limited connectivity other than that provided by the roads and trails located within or directly connected to the campus (see Map 4)



10 min (800 m) 20 min (1600 m) 30 min (2400 m)

**MAP 4:** Distance and time to walk to/from campus



### Existing parking demand exceeds supply

Many of the long-term campus parking lots are over-subscribed with more parking permits issued than there are spaces. Already, the demand for on-campus parking has outstripped supply. Consequently, UBC Okanagan has needed to provide a temporary overflow parking lot east of Innovation Drive to accommodate peak hour parking demand, typically observed during the midday on weekdays. There are pedestrian connectivity gaps and challenges between some parking lots and campus buildings.

The cost of parking at UBC Okanagan is relatively low, particularly for long-term permits, which offer a steep discount in comparison to daily “non-pass” parking rates. Longer term (monthly/term/annual) parking permits also represent a “sunk cost”, and once purchased, actually incentivize pass-holders to drive every day.

**By 2040 there could be a need for over 5,000 additional parking spaces**



### Providing parking is expensive

Successful implementation of the Strategies and Actions in this Plan could reduce the need for parking spaces on campus in 2040 from around 5,000 to 3,800 total space. This parking reduction represents considerable savings to the University in terms of required land and capital costs of future parking, which in turn significantly reduces the transportation costs for the campus community.



### Did you know?

**Over 25%** of the developed area of UBC Okanagan is **devoted to parking**.

Parking for vehicles takes up nearly 10 hectares of land on campus – that’s **equivalent to 10 Nonis Sports Fields!**

### **Few transportation demand management (TDM) programs exist**

UBC Okanagan has some Transportation Demand Management (TDM) policies and strategies in place to encourage transit among students with the successful U-Pass BC program and cycling with the UBCycles bike rental program. There are also some unique TDM events that are held throughout the year to encourage sustainable trips including the annual commuter challenge, GoByBike Week, and virtual cycling workshops. However, there are few other TDM programs and services available to manage vehicle traffic and parking demands on campus. There is a patchwork of carpooling incentives such as designated parking spaces, but no dominant software system or mobile app to encourage carpooling. Further, emerging services such as bike and scooter sharing and ride-sharing are relatively new and require kick-starting through either investment, promotion or a change in culture to shift trips away from non-sustainable modes

### **Why is Transportation Demand Management Important?**

In order to address the challenges ahead, the Transportation Plan focuses on a Transportation Demand Management (TDM) approach.

TDM is the application of policy tools, services and programs that together encourage more resource-efficient trips, such as travel by transit, carpool, and active transportation, as well as seek to eliminate some trips through remote working and learning arrangements.

The benefits to successful TDM implementation often include less land required for parking, lower infrastructure investment and maintenance costs, reduced GHG emissions and greater sense of transportation equity among the campus population when compared to business-as-usual conditions.

### **Parking areas will be displaced by future academic buildings**

UBC Parking Services manages all parking on campus and provides a variety of parking duration, payment type, and parking permit options. Several of the existing parking lots near the centre of campus are identified in the Campus Plan as locations for future academic buildings, and development of the Innovation Precinct is now planned within the northeast area of campus where the Campus Plan previously envisioned the bulk of new surface parking supply would be accommodated.

In the future, the projected demand for parking along with the displacement of existing parking lots by new academic buildings will require a new approach to managing parking demand. These challenges could be addressed through changes to parking supply and layouts, by shifting commuters to non-vehicular modes of travel, and by reducing the need to travel to campus through remote learning and working options.

### **Not everyone is impacted equally or will respond the same to these challenges**

UBC is comprised of a diverse student, staff and faculty body. Socio-economically vulnerable members of the UBC community will be disproportionately impacted by a strained transportation system that cannot meet their needs for affordable and reliable service. Furthermore, within the staff and faculty population there is a significant range in incomes and the way this group contributes to implementation of the plan will vary. Ensuring that there is a range of safe, reliable, affordable and convenient transportation options available is essential to enabling access to campus for everyone.

# 3. A Vision for the Future

**//** The Okanagan valley needs to be **encouraged away from car use**... nearly everyone here is reliant on their own vehicle and it's **not practical** for the **environment** or **future growth** of the area. **//**

- Survey participant

The UBC Okanagan Transportation Plan includes a Vision statement that describes a bold aspiration for UBC Okanagan to effectively confront the transportation challenges ahead. This Vision statement is supported by seven objectives that provide concise directions for implementing the Vision.

The Vision and objectives will be actioned through a suite of strategies (see [Section 4](#)) and measured and monitored through targets (see [Section 5](#)) that will help the University track the progress of achieving this Transportation Plan.

**FIGURE 7:** Amphitheatre Bike Rack



**FIGURE 8:** EV chargers in Parking Lot E





  
**EV PARKING**  
Only While Charging  
← →  
Paid Parking or Permit Required  
Pay with credit/debit card or cash  
www.southcoastma.gov  
Pay station or call 617-855-1234 for more info  
parking.southcoastma.gov

  
**EV PARKING**  
Only While Charging  
← →  
Paid Parking or Permit Required  
Pay with credit/debit card or cash  
www.southcoastma.gov  
Pay station or call 617-855-1234 for more info  
parking.southcoastma.gov

## 3.1 VISION

UBC Okanagan envisions a **resilient, connected and equitable** transportation system for the campus and region. Together with our community and partners, we will enable **sustainable, healthy and affordable** travel choices for getting to, from and around campus – enhancing the UBC Okanagan experience and demonstrating leadership in climate action.

## 3.2 OBJECTIVES

The objectives for the Transportation Plan are rooted in the Vision statement and articulate the direction UBC Okanagan needs to go if we are to achieve that Vision.

Achieving these objectives and our Vision cannot be done by UBC alone. Ongoing collaboration with the City of Kelowna, BC Transit and other regional partners will be critical. As will the capacity and willingness of the entire UBC Okanagan community to think differently about how we get around in the future.

### Consultation Phase 1 Survey

When asked about the importance of each draft objective, participants answered that the **majority of objectives** were **very important or important**, indicating general support for the objectives overall.



- 1. Reduce emissions** associated with travel  
(through trip-reduction, mode-share shift and decarbonizing/electrifying modes)



- 2. Expand transportation choice and flexibility**  
(match modal choices to trip type, maintain affordability, manage transition over time)



- 3. Improve the experience and safety of travel for people of all ages and abilities**  
(through improved comfort, convenience, accessibility, reduced travel times, etc.)



- 4. Encourage and prioritize the use of active and sustainable modes**  
(inclusive transit, walking, cycling, other forms of micro mobility, etc.)



- 5. Support the development of a mixed-use and compact campus community**  
(use land efficiently, improve walkability, contribute to vibrancy of public spaces, etc.)



- 6. Be a catalyst for change and leader in innovation for sustainable transportation**  
(drive broader cultural shift, leverage new and emerging technologies, etc.)



- 7. Ensure long-term resilience and adaptability to changing needs**  
(remain nimble in the face of technological change, social/cultural and environmental change)



# 4. Making it Happen

## 4.1 STRATEGIES AND ACTIONS

UBC Okanagan will respond to the key transportation challenges summarized in [Section 2](#) through the implementation of a suite of strategies and related actions organized under five focus areas: Transit, Active Transportation, Vehicles, Programs, and Policy.

Prospective strategies and actions considered in the development of this plan were evaluated on the basis of their relative impact on advancing the Plan's objectives as well as the relative cost and feasibility of their implementation. The result is a suite of strategies and supportive actions that will cost-effectively advance the objectives over time and, ultimately, achieve the Vision.

Successful implementation of these strategies will rely on appropriate financial commitments by the University, contributions and support from units across the University, partnerships and collaborations with external agencies and interest groups, and sustained efforts to enable and encourage behavioural change at the individual level.

The strategies are not mutually exclusive and instead depend on each other. Timing is also a factor where some strategies and their actions must be implemented before others can be realized. For more information on implementation see [Section 5](#).

The order of the strategies in this section begin with a focus on specific modes *transit, active transport and vehicles* and end with *programs and policies*, many of which are cross-modal and create an important foundation to support implementation of the full suite of strategies and ultimately the Plan.

A total of 21 strategies were identified that correspond to the five areas of focus, as summarized in [Table 2](#) and described in more detail in the following section. Ten of

### What We Heard

**"Advocate for Improved Transit Services"** was the top ranking high-impact strategy for staff, faculty and students.

these strategies are considered to be "high impact" in terms of their potential to advance the objectives of the Plan and achieve the 2040 targets and will therefore be prioritized.

The detailed descriptions of the strategies that follow include a summary of the opportunity to which the strategy responds, the detailed actions that support the strategy, and key dependencies and other considerations. Implementation details such as the responsible department or unit, high level cost range estimates, and the estimated time-frame for implementation are also provided.

Cost ranges provide an indication of the magnitude of investment required for implementation. The cost ranges, as outlined below are representative of both the capital (one-time) and programming (annual) costs required to implement.

Cost Symbol	Estimated Cost (Annualized)
\$	0 - 9,999
\$\$	10,000 - 99,999
\$\$\$	100,000 - 499,999
\$\$\$\$	500,000 - 999,999

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**TABLE 1:** Strategy Cost Estimate Key





FOCUS AREA	STRATEGY
Transit	T-1. Advocate for Improved Transit Service <b>[high impact]</b>
	T-2. Offer a Staff and Faculty Transit Pass <b>[high impact]</b>
Active Transport	A-1. Improve Pedestrian and Cycling Connections and Safety <b>[high impact]</b>
	A-2. Improve Secure Bike Parking and End-of-Trip Facilities for Cyclists <b>[high impact]</b>
	A-3. Enhance Wayfinding for Active Transportation
	A-4. Enable Shared Micromobility Services
	A-5. Improve Pedestrian Amenities and Ensure Universal Accessibility
Vehicles	V-1. Update Parking Pricing Model <b>[high impact]</b>
	V-2. Support Adoption of Zero Emission Vehicles
	V-3. Update Campus Parking Requirements with the City of Kelowna
	V-4. Limit Parking for Students Living in Residence
	V-5. Manage and Optimize Curbside Space Usage
Programs + Policies	P-1. Establish a Sustainable Transportation Program Office <b>[high impact]</b>
	P-2. Enable and Incentivize Active Transportation and Transit <b>[high impact]</b>
	P-3. Enable and Incentivize Carpooling, Ride-Sharing and Vanpooling
	P-4. Offer E-Bike / E-Scooter Purchase Programs
	P-5. Deliver Ongoing Sustainable Transportation Education and Awareness Programs
	P-6. Establish a Funding Mechanism for Sustainable Transportation Programs and Initiatives <b>[high impact]</b>
	P-7. Strengthen Support for Remote Working <b>[high impact]</b>
	P-8. Strengthen Support for Online Learning, Teaching and Research <b>[high impact]</b>
	P-9. Provide a Mix of Campus Housing, Services and Amenities

.....  
**TABLE 2:** Summary of the Transportation Plan strategies

# Transit

**IMPACT:** VERY HIGH

## IMPLEMENTATION

### COST

\$

### TIMING

Immediate + Ongoing

### LEAD

Sustainable Transportation  
Program Office

## OBJECTIVES ADVANCED



**2.** Choice and flexibility



**4.** Active and sustainable modes



**5.** Mixed use and compact

## STRATEGY T-1

### ADVOCATE FOR IMPROVED TRANSIT SERVICE

Work with City of Kelowna and BC Transit to improve transit service to/from campus by increasing frequency of buses, expanding the bus network, and aligning bus schedules with class schedules.

### OPPORTUNITY

To reach the University's target mode share and GHG emission targets, convenient, reliable and accessible transit service is essential. Spatial data and feedback on barriers to taking transit by the UBC Okanagan community can feed into the City of Kelowna's efforts on transit service planning to directly improve transit service for the UBC Okanagan community.

### ACTIONS

- **ACTION T-1.1** - Collaborate on an ongoing basis with the City of Kelowna and BC Transit to improve transit service frequency, expand the span of service to off-peak times, and improve routes to and from campus. *[Ongoing]*
- **ACTION T-1.2** - Report annually to the City of Kelowna and BC Transit with summary information on where the UBC Okanagan community lives and what we have heard regarding barriers and issues facing UBC transit commuters, highlighting opportunities to improve the transit user experience. *[Ongoing]*

### DEPENDENCIES AND OTHER CONSIDERATIONS

Transit services are funded and operated by the City of Kelowna and BC Transit. UBC can play an active advocacy role and can also directly influence service provision by driving demand through incentive programs (Strategy P-2), education and awareness programs (Strategy P-5), and directly subsidized transit passes (Strategy T-2).

# Transit

**IMPACT:** VERY HIGH

## IMPLEMENTATION

### COST

\$\$\$\$

### TIMING

Short-term

### LEAD

Sustainable Transportation  
Program Office

## OBJECTIVES ADVANCED



**4.** Active and sustainable modes



**6.** Change and innovation



**7.** Resilience and adaptability

## STRATEGY T-2

### OFFER A STAFF AND FACULTY TRANSIT PASS

Develop an opt-in transit pass discount program for all staff and faculty by working with the City of Kelowna and BC Transit, increasing the effective discount over time.

#### OPPORTUNITY

One of the largest opportunities to reduce the University's GHG emissions from commuting and manage congestion and parking demand for the campus is to increase trips made by transit. The U-Pass program for students has been very successful in encouraging students to use transit instead of personal vehicles. A similar program for staff and faculty, however, does not yet exist. By subsidizing transit use by faculty and staff, in the form of a discounted monthly transit pass, transit demand on routes to and from campus will increase. As transit use increases, transit service will also improve with more service hours and expanded routes to better facilitate trips to/from the UBC Okanagan Campus.

#### ACTIONS

- **ACTION T-2.1** - Work with City of Kelowna and BC Transit to offer all staff/faculty the ability to opt into a program of discounted monthly transit passes (minimum 15% discount). *[Immediately]*
- **ACTION T-2.2** - Work with the City of Kelowna and BC Transit to increase the discount for transit passes for staff, faculty and students over time through a combination of negotiated discounts and direct subsidy by the University, funded in part by parking revenues. *[2-5 Years]*

#### DEPENDENCIES AND OTHER CONSIDERATIONS

Success of this program is dependent on the expansion of transit service and capacity to campus (Strategy T-1) as well as funding availability (Strategy P-6).



# Active Transport

**IMPACT:** HIGH

## IMPLEMENTATION

### COST

\$\$

### TIMING

Ongoing

### LEAD

Sustainable Transportation  
Program Office

## OBJECTIVES ADVANCED



**3.** All ages and abilities



**4.** Active and sustainable modes



**6.** Change and innovation

## STRATEGY A-1

### IMPROVE PEDESTRIAN AND CYCLING CONNECTIONS AND SAFETY

Work with the City of Kelowna to expand and improve connections to, from and around campus.

#### OPPORTUNITY

Cycling routes and sidewalks are provided along most campus roads, along with multi-use pathways and shared use public realm spaces. Bike rack provision is comprehensive, with more secure bike racks provided in high traffic areas. Most existing cycling routes on campus, however, are on existing roadways and are not protected from vehicular traffic. With infrastructure improvements and more cycling connections to campus being introduced (e.g. John Hindle Drive, Okanagan Rail Trail), cycling trips to and from campus are anticipated to increase. To accommodate this increase, along with the planned increase of on-campus residents, a complete cycling network on campus that connects to regional routes is essential. Equally important is to ensure the routes to campus are safe (e.g. well lit), accessible, convenient, and connected.

#### ACTIONS

- **ACTION A-1.1** - Identify and fill gaps in the on-campus walking and cycling network to create a complete, convenient, and safe active transportation network on campus, with excellent connections to the transit exchange and to off-campus active transportation routes. **[Ongoing]**
- **ACTION A-1.2** - Advocate for and collaborate with the City of Kelowna to address gaps in off-campus walking and cycling networks, focusing on routes between campus and areas known to have higher concentrations of UBC Okanagan students, staff and faculty. **[Ongoing]**
- **ACTION A-1.3** - Prioritize the needs of active transportation (walking, cycling, etc.) and transit users when making infrastructure and operational decisions (e.g. by ensuring safe and direct walking and cycling paths are maintained during construction). **[Ongoing]**

#### DEPENDENCIES AND OTHER CONSIDERATIONS

UBC can directly improve the experience of cyclists and pedestrians traveling to and from campus through investments in on-campus active transportation infrastructure and amenities (Strategies A-2 to A-5).

# Active Transport

**IMPACT:** HIGH

## IMPLEMENTATION

### COST

\$\$

### TIMING

Ongoing

### LEAD

Sustainable Transportation  
Program Office

## OBJECTIVES ADVANCED



**3.** All ages and abilities



**4.** Active and sustainable modes



**6.** Change and innovation

## STRATEGY A-2

### IMPROVE SECURE BIKE PARKING AND END-OF-TRIP FACILITIES FOR CYCLISTS

Increase and improve secure bike parking options across campus and end-of-trip facilities including lockers, change-room areas and showers.

#### OPPORTUNITY

UBC provides several secure bicycle parking locations on campus as well as end-of-trip facilities including showers, and washroom amenities. UBCycles also offers secure storage of commuter bicycles with access to day-use lockers, showers and tools. To accommodate the planned increase in the number of cycling trips to campus, additional reliable, secure, and convenient places to park personal bikes and get ready for a day of work or school is essential. A good distribution of facilities across the campus is necessary to ensure the whole campus community is provided with a convenient option of biking to work/school.

#### ACTIONS

- **ACTION A-2.1** - Update *UBC Okanagan Design Guidelines* to include minimum requirements for bike parking, secure bike parking and end-of-trip facilities for new capital building projects. **[1-2 Years]**
- **ACTION A-2.2** - Carry out a full review of bike parking and end-of-trip facilities on campus to identify gaps and identify a suite of improvements to provide campus wide coverage of secure bike parking options and end of trip facilities. **[2-5 Years]**
- **ACTION A-2.3** - Explore opportunities for new secure bike parking facilities as stand-alone structures and/or incorporated within future structured vehicular parking facilities. **[2-5 Years]**

#### DEPENDENCIES AND OTHER CONSIDERATIONS

As additional end-of-trip facilities will likely need to be delivered in new buildings, their timing, size and configuration may be constrained by competing program needs.

# Active Transport

**IMPACT:** MEDIUM

## IMPLEMENTATION

### COST

\$

### TIMING

Ongoing

### LEAD

Campus Planning + Sustainable Transportation Program Office

## OBJECTIVES ADVANCED



**3.** All ages and abilities



**4.** Active and sustainable modes



**7.** Resilience and adaptability

## STRATEGY A-3

### ENHANCE WAYFINDING FOR ACTIVE TRANSPORTATION

Add more pedestrian and cyclist wayfinding including signage, maps and online tools.

#### OPPORTUNITY

Wayfinding for active transportation offers support for users by providing direction and reassurance along their trip. Wayfinding reduces the barrier of users having to plan routes in advance by providing directions to their destination along the way.

#### ACTIONS

- **ACTION A-3.1** - Add wayfinding for cyclists on campus, prioritizing routes to key destinations on campus and to routes heading off campus. **[2-5 Years]**
- **ACTION A-3.2** - Advocate for and collaborate with the City of Kelowna to improve wayfinding on active transportation routes to campus. **[2-5 Years]**
- **ACTION A-3.3** - Enhance existing pedestrian wayfinding infrastructure on campus and explore / leverage online wayfinding tools. **[2-5 Years]**

#### DEPENDENCIES AND OTHER CONSIDERATIONS

This strategy requires collaboration and support from City of Kelowna to update signage and wayfinding on activate transportation routes to campus and is closely coordinated with efforts to improve connections (Strategy A-1) and end-of-trip facilities (Strategy A-2).

# Active Transport

**IMPACT:** MEDIUM

## IMPLEMENTATION

### COST

\$

### TIMING

Short-term

### LEAD

Sustainable Transportation  
Program Office

## OBJECTIVES ADVANCED



**4.** Active and sustainable modes



**6.** Change and innovation



**7.** Resilience and adaptability

## STRATEGY A-4

### ENABLE SHARED MICROMOBILITY SERVICES

Allow shared micromobility services to operate on campus that make cycling, e-biking and/or e-scooter travel more accessible as a replacement to personal vehicle travel.

#### OPPORTUNITY

Known barriers to travelling to and from campus by bicycle, scooter and other wheeled modes include the cost of owning the devices as well as concerns about theft. A shared fleet of micromobility devices for community use for travelling to, from and around campus could reduce dependencies on personal vehicles, facilitate multi-modal trips, and offer another healthy and sustainable mode choice. Adding micromobility systems near transit stops also helps resolve the 'first- and last-mile' problem of accessing transit, while a service accessible by students living on-campus would support access to nearby commercial, service and recreational amenities.

#### ACTIONS

- **ACTION A-4.1** - Work with the City of Kelowna and potential operators to enable a regional shared micromobility program with coverage that includes the UBC Okanagan campus, prioritizing shared e-bikes and allocating appropriate space in the campus' public realm. **[1-2 Years]**
- **ACTION A-4.2** - Plan for exterior electrical charging infrastructure in new and retrofitted building projects in anticipation of a future electric bike share fleets. **[Ongoing]**

#### DEPENDENCIES AND OTHER CONSIDERATIONS

The success of a shared micromobility program in advancing the objectives of this plan will depend on its usefulness as a commute mode and/or means of accessing nearby services and amenities. A service that extends beyond the campus boundaries is therefore critical, and a partnership approach with the City of Kelowna will be necessary. Its success will also depend on investments in cycling infrastructure both on and off campus (Strategies A-1 to A-3) and related education and awareness programs (Strategy P-5).



# Active Transport

**IMPACT:** MEDIUM

## IMPLEMENTATION

### COST

\$

### TIMING

Ongoing

### LEAD

Campus Planning + Sustainable Transportation Program Office

## OBJECTIVES ADVANCED



**3.** All ages and abilities



**4.** Active and sustainable modes



**5.** Mixed use and compact

## STRATEGY A-5

### IMPROVE PEDESTRIAN AMENITIES AND ENSURE UNIVERSAL ACCESSIBILITY

Improve pedestrian amenities along major pedestrian corridors to encourage walking. Pedestrian facilities should meet or exceed best practices for universal accessibility.

#### OPPORTUNITY

Providing places to enjoy the scenery, gather, or take a break while walking are ways to make walking on campus more attractive and accessible. Although these amenities will not directly contribute to a reduction in vehicle trips they do improve the overall pedestrian experience and may indirectly encourage more trips by walking, cycling and transit. There are a wide variety of pedestrian routes across campus, many of which could benefit from enhanced amenities like benches and shaded / sheltered rest areas (e.g. International Mews and Knowledge Lane). There are also some gaps in accessible pedestrian connectivity, especially between some parking lots and campus buildings (e.g. B Lot and J Lot), which should be prioritized.

#### ACTIONS

- **ACTION A-5.1** - Provide high quality pedestrian amenities throughout campus (e.g. benches, shaded/sheltered rest areas, waste receptacles, etc.), prioritizing investment along major pedestrian corridors. **[Ongoing]**
- **ACTION A-5.2** - Provide pedestrian facilities that meet or exceed best practices for accessibility, surface material treatments, design widths, lighting and landscaping. **[Ongoing]**
- **ACTION A-5.3** - Continue to update the *UBC Okanagan Design Guidelines* to ensure best practices in universal accessible design (UAD) are implemented with infrastructure projects. **[2-5 Years]**

#### DEPENDENCIES AND OTHER CONSIDERATIONS

The University has a high degree of control over the public realm on campus and can continue to improve the pedestrian experience through retrofits to existing buildings and landscapes as well as through new developments. These improvements should be coordinated with improved pedestrian connections (Strategy A-1) and related wayfinding initiatives (Strategy A-3).

# Vehicles

**IMPACT:** HIGH

## IMPLEMENTATION

### COST

N/A

### TIMING

Short to Long-term

### LEAD

Parking Services

## OBJECTIVES ADVANCED



**1.** Reduce emissions



**2.** Choice and flexibility



**6.** Change and innovation

## STRATEGY V-1

### UPDATE PARKING PRICING MODEL

As alternatives become increasingly available, update the current model of parking pricing to manage parking demand and encourage the use of sustainable transport modes.

### OPPORTUNITY

Convenient and affordable parking supports the prevailing culture at UBC Okanagan of driving alone. Parking must be less convenient and more expensive than sustainable alternatives if the behaviour change necessary to advance the objectives of this plan is to happen. Parking pricing should also be approached strategically to ensure that the structure does not unintentionally encourage driving. Shifting towards a “daily choice” model for instance eliminates the sunk cost effect of longer-term parking permits which encourage more driving.

### ACTIONS

- **ACTION V-1.1** - Increase the cost of parking over time to better manage parking demand and fund sustainable transportation programs and initiatives, calibrating increases to the availability of reasonable alternatives to driving. **[1-2 Years]**
- **ACTION V-1.2** - Ensure the cost of all parking permits is at least 10% higher than a transit pass, consistent with City of Kelowna targets, to encourage more sustainable transportation choices. **[1-2 Years]**
- **ACTION V-1.3** - Transition towards a “daily choice” model of parking pricing by reducing/eliminating longer-term parking permits and hence eliminating the sunk cost effect of longer-term permits and enabling greater flexibility in mode choice. **[2-5 Years]**

### DEPENDENCIES AND OTHER CONSIDERATIONS

Actions outlined above should complement those of Strategy P-6 including reallocating a portion of parking revenues towards sustainable transportation programs and initiatives. Changes to parking pricing should be considered within the context of the availability of reasonable alternatives to driving, such as transit.

# Vehicles

**IMPACT:** MEDIUM

## IMPLEMENTATION

### COST

\$\$

### TIMING

Short to Long-term

### LEAD

Campus Planning + Parking Services

## OBJECTIVES ADVANCED



**3.** All ages and abilities



**6.** Change and innovation



**7.** Resilience and adaptability

## STRATEGY V-2

### SUPPORT ADOPTION OF ZERO EMISSION VEHICLES

Continue to enable the widespread adoption of Zero Emission Vehicles by incentivizing their use and increasing the availability of EV chargers across campus.

#### OPPORTUNITY

Ownership of Electric Vehicles (EVs) and other Zero Emission Vehicles (ZEVs) is anticipated to increase dramatically over the coming years, supported by the Provincial and Federal requirements that 100 percent of new car and light truck sales be ZEVs by 2035. As electric vehicle ownership increases in the region, so to will demand for EV chargers on campus. Retrofitting structured parking with EV charging can be prohibitively expensive, so building with EV-readiness in mind from day one is critical.

#### ACTIONS

- **ACTION V-2.1** - Implement measures to increase turnover of vehicles parked at EV charging stations and optimize the use of the chargers (e.g. through maximum stay times, incremental fees, etc.). **[1-2 Years]**
- **ACTION V-2.2** - Develop an incentive program to encourage zero emission vehicle trips to / from campus (e.g. priority parking, reward programs, EV celebration days, etc.). **[2-5 Years]**
- **ACTION V-2.3** - Add more publicly-accessible EV chargers as demand warrants and provide them at intuitive and visible locations across campus. **[Ongoing]**
- **ACTION V-2.4** - Ensure any new parking associated with residential development and any structured commuter/visitor parking is 100% EV-ready, with each parking stall having access to a nearby energized outlet capable of providing Level 2 charging or higher **[2-5 years]**

#### DEPENDENCIES AND OTHER CONSIDERATIONS

This strategy should be closely coordinated with sustainable transportation education and awareness programs (Strategy P-5) and coordinated with related efforts by the City of Kelowna, FortisBC, and other levels of government.

# Vehicles

**IMPACT:** MEDIUM

## IMPLEMENTATION

### COST

N/A

### TIMING

Short-term

### LEAD

Campus Planning + Sustainable Transportation Program Office

## OBJECTIVES ADVANCED



**1.** Reduce emissions



**5.** Mixed use and compact



**6.** Change and innovation

## STRATEGY V-3

### UPDATE CAMPUS PARKING REQUIREMENTS WITH THE CITY OF KELOWNA

Work with the City of Kelowna to update the parking requirements for campus to establish a maximum parking capacity ratio for development on campus and eliminate parking minimums for the campus.

### OPPORTUNITY

The UBC Okanagan campus is required to meet City of Kelowna parking requirements on campus. However, the City's requirements are general rates applied to all institutions without consideration of their TDM programs, available transit service, or the proportion of students living on campus.

### ACTIONS

- **ACTION V-3.1** - Work with the City to update the parking requirements for "Universities or Colleges" uses to better reflect the needs and objectives of UBC Okanagan (e.g. replace current minimum parking capacity ratio with an appropriate maximum ratio) **[1-2 Years]**

### DEPENDENCIES AND OTHER CONSIDERATIONS

The City of Kelowna bylaw requirements would need to be updated, reflecting collaborative efforts by UBC Okanagan and the City to reduce automobile dependency and encourage the use of transit and active modes. Implementation of this strategy should be informed by ongoing Campus Plan implementation as well as related land use planning efforts of the City of Kelowna.



# Vehicles

**IMPACT:** MEDIUM

## IMPLEMENTATION

### COST

N/A

### TIMING

Short-term

### LEAD

Parking Services

## OBJECTIVES ADVANCED



**4.** Active and sustainable modes



**5.** Change and innovation



**7.** Resilience and adaptability

## STRATEGY V-4

### LIMIT PARKING FOR STUDENTS LIVING IN RESIDENCE

Limit parking for students living in residence and encourage their use of transit, active transportation, and shared micromobility services to get around.

#### OPPORTUNITY

The *UBC Okanagan Campus Plan* envisions new academic buildings on many of its existing parking lots, displacing over 530 current parking stalls. With an increasingly constrained land supply, it is becoming less and less feasible to allocate this limited space to parking for students living in residence, given their immediate proximity to academic buildings and facilities. Many UBC Okanagan students living on campus arrive with a personal vehicle, knowing they can park on campus for a relatively low cost. By limiting the availability of student resident parking the true costs of allocating space for this use can be more accurately reflected and the relative convenience of other more sustainable modes can be increased.

#### ACTIONS

- **ACTION V-4.1** - Cap available parking on campus for students living in residence. **[1-2 Years]**
- **ACTION V-4.2** - Collaborate with UBC Okanagan Student Housing and Community Services (SHCS) staff to provide detailed information on transportation options in student resident packages (i.e., encourage transit, active transportation and shared mobility alternatives and discourage bringing personal vehicles onto campus). **[1-2 Years]**
- **ACTION V-4.3** - Ensure car share spaces and ride-hailing pick-up and drop-off spots are conveniently located next to student residences. **[2-5 Years]**

#### DEPENDENCIES AND OTHER CONSIDERATIONS

This strategy must be calibrated with the availability of reliable and affordable alternatives to having a personal vehicle on campus, including car share programs, improved transit service, ride-hailing and shared micromobility services.

# Vehicles

**IMPACT:** MEDIUM

## IMPLEMENTATION

### COST

\$\$

### TIMING

Short to Medium-term

### LEAD

Parking Services + Sustainable Transportation Program Office

## OBJECTIVES ADVANCED



**2.** Choice and flexibility



**3.** All ages and abilities



**7.** Resilience and adaptability

## STRATEGY V-5

### MANAGE AND OPTIMIZE CURBSIDE SPACE USAGE

Develop and implement a curbside management strategy to optimize the use of curb space on campus and improve the user experience, prioritizing accessible parking needs.

#### OPPORTUNITY

There is limited curb space on campus to accommodate the various and changing needs of the campus community. The curb space needs to be well managed and flexible to accommodate the diverse needs and to address the current challenges such as personal vehicles stopping at bus stops. UBC Okanagan has explored the option of parking spots that could serve as parking, loading, pick-up and drop-off, and even pedestrianized spaces at different times of the day. As technology evolves, dynamic surface materials linked with smart infrastructure could relay information about the dynamic space (e.g. parking availability and pricing) to road users in real time.

#### ACTIONS

- **ACTION V-5.1** - Map out curb space on campus and use it to identify gaps in essential curb space allocation to meet the needs of the campus community. **[1-2 Years]**
- **ACTION V-5.2** - Ensure there is a good distribution of pick-up/drop-off, accessible parking, ride-hailing/taxi, and car share spaces. **[2-5 Years]**
- **ACTION V-5.3** - Enable and encourage the operation of car share services on campus as part of city-wide/regional systems, ideally with a mix of one-way and two-way services to meet the needs of the community. **[2-5 Years]**
- **ACTION V-5.4** - Enable the safe and efficient operation of ride-hailing and taxi services on campus. **[1-2 Years]**

#### DEPENDENCIES AND OTHER CONSIDERATIONS

Curbside space allocation and management should be coordinated with efforts to improve pedestrian, cycling and transit user experience on campus (Strategies T-1 to A-5).

# Programs

**IMPACT:** HIGH

## IMPLEMENTATION

### COST

\$\$\$

### TIMING

Immediate + Ongoing

### LEAD

Campus Planning + Sustainable Transportation Program Office + Parking Services

## OBJECTIVES ADVANCED



**4.** Active and sustainable modes



**6.** Change and innovation



**7.** Resilience and adaptability

## STRATEGY P-1

### ESTABLISH A SUSTAINABLE TRANSPORTATION PROGRAM OFFICE

Create a sustainable transportation program office, including dedicated staff and allocated funding to implement the Transportation Plan and monitor progress.

#### OPPORTUNITY

A program office is essential to achieve the objectives and targets of this Plan. Dedicated staff resources will provide year-round coordination support, administer the various programs and initiatives identified in this Plan and support infrastructure planning and advocacy efforts related to sustainable transportation. The program office will liaise with internal and external partners, including the City of Kelowna and BC Transit. The scale of the office may evolve over time, but a minimum of 1 full time employee (FTE) and a dedicated program budget is anticipated in perpetuity to ensure sustained progress.

#### ACTIONS

- **ACTION P-1.1** - Establish a Sustainable Transportation Program Office with a minimum of 1 FTE and coordinate program activities closely with UBC Vancouver's Sustainable Transportation Program to achieve efficiencies and share best practices. *[Immediately]*
- **ACTION P-1.2** - Liaise with related advocacy and research groups at UBC Okanagan, leveraging the expertise of faculty and staff and enabling community involvement in program development and delivery. *[Ongoing]*
- **ACTION P-1.3** - Carry out monitoring and reporting on at least a biennial basis to track progress against the Transportation Plan's targets, strategies, and actions. *[Ongoing]*
- **ACTION P-1.4** - Manage a dedicated program budget and calibrate spending based on implementation priorities and related revenue streams. *[Ongoing]*

#### DEPENDENCIES AND OTHER CONSIDERATIONS

This strategy is a dependency for all other strategies proposed in the Transportation Plan as there are presently no dedicated staff resources or operating funds allocated to this type of work. The success of the program office will depend upon reliable ongoing funding (Strategy P-6).

# Programs

**IMPACT:** HIGH

## IMPLEMENTATION

### COST

\$

### TIMING

Short-term

### LEAD

Sustainable Transportation  
Program Office

## OBJECTIVES ADVANCED



**3.** All ages and abilities



**4.** Active and sustainable modes



**6.** Change and innovation

## STRATEGY P-2

### ENABLE AND INCENTIVIZE ACTIVE TRANSPORTATION AND TRANSIT

Develop a suite of incentive programs and partnerships to encourage active transportation and transit trips to and from campus.

#### OPPORTUNITY

Central to achieving the objectives of this Plan is a transition towards active and sustainable modes of travel, such as walking, cycling and transit. UBC Okanagan will prioritize and incentivize these modes through infrastructure and operating decisions and by delivering various initiatives aimed at encouraging their use. By building direct incentives into various programs, the University can nudge commuters and visitors alike towards choosing more sustainable modes of travel. Incentives may come in many forms, including discounts, rebates, prizes or priority access to UBC services or amenities.

#### ACTIONS

- **ACTION P-2.1** - Develop incentive programs to support and encourage active transportation and transit trips to/from campus, including rewards programs, competitions, celebration days, partnerships with City of Kelowna, BC Transit and/or shared micromobility providers. *[Ongoing]*
- **ACTION P-2.2** - Leverage digital transportation and/or parking management platforms to communicate, track commuter behaviour, and deliver incentives. *[2-5 Years]*
- **ACTION P-2.3** - Work with City of Kelowna to identify potential park n'ride locations for transit. *[2-5 Years]*

#### DEPENDENCIES AND OTHER CONSIDERATIONS

Success of incentive programs depends heavily on the availability of convenient, high quality sustainable transportation options. Continued improvements to active transportation infrastructure and connections to and from campus as well as transit service improvements will be critical to the success of this strategy (See Strategies T-1, A-1, and A-3). Coordination with education and awareness programs (Strategy P-5) and carpooling incentive programs (Strategy P-3) will be critical, as will ongoing program funding (Strategy P-6).

# Programs

**IMPACT:** MEDIUM

## IMPLEMENTATION

### COST

\$\$

### TIMING

Medium-term

### LEAD

Sustainable Transportation  
Program Office + Parking Services

## OBJECTIVES ADVANCED



**2.** Choice and flexibility



**3.** All ages and abilities



**6.** Change and innovation

## STRATEGY P-3

### ENABLE AND INCENTIVIZE CARPOOLING, RIDE-SHARING AND VANPOOLING

Make it easier and more attractive for individuals to carpool by matching drivers with passengers and incentivizing pooled ride-hailing services.

#### OPPORTUNITY

Carpooling or “ride-sharing” can reduce the per-capita impacts and costs associated with commuting by car and decrease parking demand. Establishing a recurring carpool or coordinating an occasional shared ride can be challenging and time-consuming. Currently at UBC Okanagan, there is a patchwork of carpooling incentives such as designated parking spaces, but no central app or system in place to encourage carpooling. This strategy aims to leverage new and emerging technologies that reduce barriers to carpooling by connecting prospective drivers and passengers.

#### ACTIONS

- **ACTION P-3.1** - Offer a suite of carpooling resources to support students, staff and faculty interested in creating their own carpool (e.g. online guides/ toolkits, scheduling templates, etc.). **[1-2 Years]**
- **ACTION P-3.2** - Develop a pilot program to offer free ride matching services for the UBC Okanagan community and to develop and manage incentives, potentially using a third-party supplier. **[2-5 Years]**
- **ACTION P-3.3** - Develop an incentive program for carpool commuting, such as priority parking spaces and/or reduced parking fees. **[2-5 Years]**
- **ACTION P-3.4** - Work with ride-hailing and car sharing companies to incentivize pooled rides using their services. **[2-5 Years]**

#### DEPENDENCIES AND OTHER CONSIDERATIONS

Considerable synergies may be achieved by coordinating carpool incentive programs and ride-matching platforms with the transit and active transportation incentive programs and related education and awareness campaigns (Strategies P-3 and P-5). The success of this strategy will also depend upon reliable ongoing program funding (Strategy P-6).



# Programs

**IMPACT:** MEDIUM

## IMPLEMENTATION

### COST

\$

### TIMING

Short to Medium-term

### LEAD

Sustainable Transportation  
Program Office

## OBJECTIVES ADVANCED



**3.** All ages and abilities



**4.** Active and sustainable modes



**6.** Change and innovation

## STRATEGY P-4

### OFFER E-BIKE / E-SCOOTER PURCHASE PROGRAMS

Partner with local shops to offer discounts for the trial and purchase of e-bikes and e-scooters and offer a rebate to staff and faculty towards e-bike purchases for further incentive.

#### OPPORTUNITY

Electric-assist bicycles and other devices such as e-scooters make it easier to travel for longer distances and with less physical exertion. This dramatically expands the range of commuters that may be able and willing to choose these active modes if they had access to them. E-bikes in particular can make cycling more practical for seniors, older adults, people with reduced mobility, and for anyone travelling longer distances or up steep topography as is found on the UBC Okanagan Campus in the westbound direction. These devices can be expensive, however, and the benefits of their use for commuting are difficult to appreciate without experiencing them firsthand. This strategy aims to overcome these barriers and encourage increased adoption of electric-assist active transportation devices for commuting.

#### ACTIONS

- **ACTION P-4.1** - Partner with local shops to offer UBC staff and faculty discounted or free trials of e-bikes and e-scooters and discounts on their purchase. **[2-5 Years]**
- **ACTION P-4.2** - Offer a direct rebate to UBC staff and faculty who purchase an e-bike for commuting purposes. **[2-5 Years]**

#### DEPENDENCIES AND OTHER CONSIDERATIONS

Supporting e-bikes and e-scooters may depend partially on infrastructure investments identified in Strategy A-2 to provide secure places for people to lock their bikes that would give users peace of mind to leave them parked in designated locations on campus. This program should be closely coordinated with other active transportation incentives (Strategy P-2) and will depend upon reliable ongoing program funding (Strategy P-6).

# Programs

**IMPACT:** MEDIUM

## IMPLEMENTATION

### COST

\$\$

### TIMING

Short to Medium-term

### LEAD

Sustainable Transportation  
Program Office

## OBJECTIVES ADVANCED



**3.** All ages and abilities



**4.** Active and sustainable modes



**7.** Resilience and adaptability

## STRATEGY P-5

### DELIVER ONGOING SUSTAINABLE TRANSPORTATION EDUCATION AND AWARENESS PROGRAMS

Offer programs supporting sustainable transportation such as bike maintenance workshops, beginner cycling information sessions, cycling safety, safe walking tips and safe transit tips.

### OPPORTUNITY

Encouraging behaviour change across UBC Okanagan's diverse population will rely on effective communication, education and awareness through a range of programs and initiatives. Behaviours are most readily influenced as individuals establish new routines and form new habits, so efforts should be focused on new students and newly hired staff and faculty. Sustained change, however, requires reinforcement, so investment in platforms that enable ongoing communication and engagement are critical.

### ACTIONS

- **ACTION P-5.1** - Offer education and awareness programs supporting capacity and behaviour change towards sustainable transportation options, leveraging partnership opportunities with other UBC programs (e.g. sustainability, climate action and wellbeing initiatives) **[1-2 Years]**
- **ACTION P-5.2** - Partner with an existing provider or create new integrated digital transportation platform to communicate transportation updates and provide resources that encourage and support sustainable transportation choices. **[2-5 Years]**
- **ACTION P-5.3** - Establish policies, education and awareness programs for the safe use of shared public realm spaces by pedestrians and cyclists **[2-5 years]**

### DEPENDENCIES AND OTHER CONSIDERATIONS

Ongoing education and awareness programs should be coordinated with incentive programs (Strategies P-2 and P-3) and leverage related infrastructure and service improvements (Strategies T-1 to A-5). These programs will depend heavily upon reliable ongoing program funding (Strategy P-6) and be coordinated by the Sustainable Transportation Program Office (Strategy P-1).

# Policies

**IMPACT:** HIGH

## IMPLEMENTATION

### COST

N/A

### TIMING

Immediate + Ongoing

### LEAD

Sustainable Transportation  
Program Office + Parking Services

## OBJECTIVES ADVANCED



**2.** Choice and flexibility



**6.** Change and innovation



**7.** Resilience and adaptability

## STRATEGY P-6

### ESTABLISH A FUNDING MECHANISM FOR SUSTAINABLE TRANSPORTATION PROGRAMS AND INITIATIVES

Re-invest revenues from less sustainable travel modes into programs, infrastructure and initiatives that encourage more sustainable travel.

#### OPPORTUNITY

Ongoing and predictable funding will be needed to successfully implement the Plan. To avoid impacts to operating budgets, a “closed loop” approach is proposed, where revenues generated from less sustainable modes of travel (e.g. parking revenues) provide this funding. This is a common approach across many post-secondary institutions. This approach also sends a ‘price signal’ that can support behaviour change and daylight some of the hidden costs of commuting by private automobile.

#### ACTIONS

- **ACTION P-6.1** - Allocate a portion of parking permit revenues to fund sustainable transportation programs and initiatives. This could be in the form of a levy or supplemental fee, which should be calibrated based on the availability of alternatives to driving. **[Immediate]**
- **ACTION P-6.2** - Explore additional revenue sources (e.g. pick-up/drop-off fees for ride-hailing) without unduly compromising transportation choice or affordability. **[2-5 Years]**
- **ACTION P-6.3** - Explore alternative funding sources to supplement annual funding (e.g., Federal, Provincial and Municipal funding). **[Ongoing]**

#### DEPENDENCIES AND OTHER CONSIDERATIONS

This strategy is a dependency for nearly all other strategies proposed in the Transportation Plan as there are presently no dedicated staff resources or central funds allocated to carry out the strategies presented. Any increase in parking fees should take into account the relative feasibility of alternatives to driving. The intention of this strategy is not to penalize those that drive to campus when there are limited other options but instead to enable more choice as reliability and quality of alternatives expands.

# Policies

**IMPACT:** HIGH

## IMPLEMENTATION

### COST

\$

### TIMING

Short-term

### LEAD

Centre for Teaching and Learning  
+ Human Resources

## OBJECTIVES ADVANCED



**2.** Choice and flexibility



**6.** Change and innovation



**7.** Resilience and adaptability

## STRATEGY P-7

### STRENGTHEN SUPPORT FOR REMOTE WORKING

Expand upon existing telework policies and practices, encouraging a culture of remote working when possible.

#### OPPORTUNITY

Much, though not all, of the work that takes place at UBC Okanagan can reasonably be done remotely, leveraging technologies. Historically, however, the option to work remotely has not been available to many employees. Barriers to remote work include perceived productivity tradeoffs, workplace culture, individual preferences, and technological constraints. Increasing the proportion of days that staff are able to work remotely will reduce total trip volumes while realizing many other benefits associated with remote work (e.g. employee wellbeing and retention, space utilization and cost savings, etc.).

#### ACTIONS

- **ACTION P-7.1** - Strengthen policies and practices that encourage remote work where feasible, including resources for department heads and managers on best practices and benefits. **[1-2 Years]**
- **ACTION P-7.2** - Develop a classification system for all staff and faculty that indicates a position's relative suitability for remote work. **[2-5 Years]**
- **ACTION P-7.3** - Establish targets for remote working and monitor progress, including data collection on uptake and realized benefits. **[2-5 Years]**
- **ACTION P-7.4** - Enable remote work through the expansion of IT infrastructure that supports a hybrid remote/in-person work model (e.g. laptops, videoconferencing facilities, etc.). **[1-2 Years]**

#### DEPENDENCIES AND OTHER CONSIDERATIONS

The COVID-19 pandemic prompted wide-spread and swift deployment of remote working at UBC. While the long-term effects of this phenomenon remain uncertain, a number of technological and cultural barriers were overcome, which may enable increased remote work going forward. UBC is embarking on a yearlong trial of a hybrid work model starting in September 2021. The learnings of this first year will be critical to understanding the benefits of remote work and informing future adaptations of this strategy.

# Policies

**IMPACT:** HIGH

## IMPLEMENTATION

### COST

\$

### TIMING

Short-term

### LEAD

Centre for Teaching and Learning  
+ Scheduling Services

## OBJECTIVES ADVANCED



**1.** Reduce emissions



**6.** Change and innovation



**7.** Resilience and adaptability

## STRATEGY P-8

### STRENGTHEN SUPPORT FOR ONLINE LEARNING, TEACHING AND RESEARCH

Expand upon existing online teaching and learning opportunities in ways that advance academic plans and do not compromise quality of learning or other educational objectives.

#### OPPORTUNITY

Similar to remote work, online learning, teaching and research has the potential to decrease the number of trips occurring to and from campus. While in-person learning is anticipated to remain central to the UBC Okanagan experience, many activities conventionally delivered in-person are well-suited to online delivery without compromising learning outcomes. Larger lectures that typically involve less interaction, for example, could be offered virtually, while smaller classes, studios and tutorials could be in-person. Virtual learning formats can include on-demand courses, livestreamed courses and a hybrid of virtual and in-class learning. Expanded remote learning options may also generate co-benefits like reduced demand for classroom and informal learning space as well as more flexible student schedules.

#### ACTIONS

- **ACTION P-8.1** - Encourage and support the opportunity for a greater proportion of teaching, learning and research activities to be done online. *[2-5 Years]*
- **ACTION P-8.2** - Continue to work on staggering class times to reduce peak demands on constrained transit services and campus parking space *[Ongoing]*

#### DEPENDENCIES AND OTHER CONSIDERATIONS

The COVID-19 pandemic prompted widespread and swift deployment of expanded distance teaching and learning opportunities at UBC. While it is too early to know what the long-term effects of COVID-19 will be on remote learning in a post-pandemic world, a number of technological and cultural barriers were overcome, which may enable increased adoption going forward.



# Policies

**IMPACT:** MEDIUM

## IMPLEMENTATION

### COST

N/A

### TIMING

Long-term

### LEAD

Campus Planning

## OBJECTIVES ADVANCED



**1.** Reduce emissions



**5.** Mixed use and compact



**7.** Resilience and adaptability

## STRATEGY P-9

### PROVIDE A MIX OF CAMPUS HOUSING, SERVICES AND AMENITIES

Intensify campus development with an increasingly diverse mix of uses.

## OPPORTUNITY

Increasing the variety of services and amenities available on campus would decrease the need for faculty, staff and students to travel off-campus to meet their daily needs. In recent years, UBC Okanagan has dramatically increased the supply of on-campus housing for students, which has reduced the need for students to live off-campus and to commute. A broader mix of housing types on and around campus could enable more students, staff and faculty to live on or near campus, thus eliminating commute trips and enabling more travel by active modes.

## ACTIONS

- **ACTION P-9.1** - Continue to implement the 2015 *Campus Plan* which provides the policy framework for a diverse mix of uses at UBC Okanagan including academic facilities, community amenities, and student housing. *[Ongoing]*
- **ACTION P-9.2** - Investigate the potential for increasing the supply of on-campus housing for students and introducing new housing typologies for faculty and staff to reduce commuting volumes and enable a vibrant 24/7, 365-day campus community. *[5+ years]*
- **ACTION P-9.3** - Advocate for sustainable land use planning within the City of Kelowna that supports the development of new housing options and amenities on and within close proximity to campus. *[Ongoing]*

## DEPENDENCIES AND OTHER CONSIDERATIONS

It will take time to accommodate additional and increasingly diverse uses on and around campus and timing will depend heavily on institutional growth trends, market forces and nearby development activity. Introducing faculty and staff housing on campus may require updates and/or amendments to the *UBC Okanagan Campus Plan* and/or City of Kelowna land use plans and bylaws.

## 4.2 IMPLEMENTATION

The implementation of the strategies previously defined depends on several factors, resources and both internal and external influences. Several key considerations for implementation include:

**The Transportation Plan is the first step to achieving the long-term Vision, but it is not the last.**

The strategies and actions outlined in the Transportation Plan lay the groundwork for implementation. To see them achieved, additional capital and operational investments and resources are required. Achieving the Vision and objectives will require the ongoing support of UBC Okanagan and its partners, along with sustained and prioritized investments. A behavioural and cultural shift towards sustainable travel is also critical for the success of this Plan and its implementation.

**The Transportation Plan will require ongoing commitment and leadership, including resources and monitoring.**

Achieving the Vision will require UBC Okanagan's leadership and commitment to carrying out the suite of strategies identified, including sufficient funding and staff resources to deliver on the priorities of the Plan and monitor progress to ensure the Plan is achieving its desired results.

**Implementation needs to be calibrated to align with available funding and resourcing.**

A financial business case and revenue model will need to inform how much funding is allocated to the suite of strategies and actions, starting with those that are identified as priority, high impact actions.

**Ongoing consultation, collaboration and advocacy is key.**

Many of the initiatives in the Transportation Plan require more detailed input and technical work. UBC Okanagan will need to work closely with partners and the campus community to move forward with the strategies outlined in the Plan. This includes specific collaboration across University departments, continued engagement with faculty and students, and advocating for service improvements and investments from the City of Kelowna, BC Transit and other regional and senior government partners. This important work will help to clarify responsibilities, ensure actions remain relevant to future conditions, and ensure implementation of the strategies is managed well, with defined timelines and resourcing.

**Monitor, review, and update the Transportation Plan on a regular basis.**

As UBC Okanagan begins implementing the strategies, a monitoring and reporting strategy will be needed to measure and communicate progress towards achieving the Vision and objectives. The Transportation Plan will need to be updated to reflect changing priorities and conditions over time.



## Implementation Placemat

A detailed summary of all strategies and the factors required to implement is shown on the following “placemat” page.

This placemat is intended to serve as a quick reference guide to enable further dialogue, collaboration and development of resources to support each identified strategy.

Through technical evaluation and internal dialogue, each strategy was assigned a priority and timeline of implementation. Short-term strategies are expected to be implemented within 0-2 years, medium-term strategies within 2-5 years and long-term strategies in 5+ years. The strategies were also prioritized as having a high or medium benefit based on how they achieve the Transportation Plan targets and objectives. Furthermore, high-benefit strategies were often assigned short-term timeline, while medium-benefit strategies were assigned medium to long-term timeline for implementation.

Cost ranges were identified for all the strategies to provide an indication of the magnitude of investment required for implementation. The cost ranges, as outlined (at right), are representative of both the capital and programming costs required to implement.

FOCUS AREA	STRATEGY	RESOURCE
Transit	T-1. Advocate for Improved Transit Service	staff time
	T-2. Offer a Staff and Faculty Transit Pass	staff time / funding
Active Transport	A-1. Improve Pedestrian and Cycling Connections and Safety	staff time / funding
	A-2. Improve Secure Bike Parking and End-of-Trip Facilities for Cyclists	staff time / funding
	A-3. Enhance Wayfinding for Active Transportation	staff time / funding
	A-4. Enable Shared Micromobility Services	staff time / funding
	A-5. Improve Pedestrian Amenities and Ensure Universal Accessibility	staff time / funding
Vehicles	V-1. Update Parking Pricing Model	staff time
	V-2. Support Adoption of Zero Emission Vehicles	staff time / funding
	V-3. Update Campus Parking Requirements with the City of Kelowna	staff time
	V-4. Limit Parking for Students Living in Residence	staff time
	V-5. Manage and Optimize Curbside Space Usage	staff time / funding
Programs + Policies	P-1. Establish a Sustainable Transportation Program Office	staff time / funding
	P-2. Enable and Incentivize Active Transportation and Transit	staff time / funding
	P-3. Enable and Incentivize Carpooling, Ride-Sharing and Vanpooling	staff time / funding
	P-4. Offer E-Bike / E-Scooter Purchase Programs	staff time / funding
	P-5. Deliver Ongoing Sustainable Transportation Education and Awareness Programs	staff time / funding
	P-6. Establish a Funding Mechanism for Sustainable Transportation Programs and Initiatives	staff time
	P-7. Strengthen Support for Remote Working	staff time
	P-8. Strengthen Support for Online Learning, Teaching and Research	staff time
	P-9. Provide a Mix of Campus Housing, Services and Amenities	staff time

.....  
**TABLE 3:** Implementation Placemat

LEAD <sup>1</sup>	IMPACT	TIMING	OBJECTIVES ADVANCED	PARTNERS	COST <sup>2</sup>
STPO	very high	immediate / ongoing	2, 4, 5	BC Transit, City of Kelowna	\$
STPO	very high	short-term	4, 6, 7	BC Transit, City of Kelowna	\$\$\$\$
STPO	high	ongoing	3, 4, 6	City of Kelowna	\$\$
STPO	high	ongoing	3, 4, 6	N/A	\$\$
CP / STPO	medium	ongoing	3, 4, 7	City of Kelowna	\$
STPO	medium	short-term	4, 6, 7	City of Kelowna	\$
CP / STPO	medium	ongoing	3, 4, 5	N/A	\$
Parking	high	short / long-term	1, 2, 6	N/A	N/A
CP / Parking	medium	short / long-term	3, 6, 7	Fortis BC Electricity	\$\$
CP / STPO	medium	short-term	1, 5, 6	City of Kelowna	N/A
Parking	medium	short-term	4, 5, 7	third party providers	N/A
STPO / Parking	medium	short / medium-term	2, 3, 7	N/A	\$\$
CP / STPO / Parking	high	immediate / ongoing	4, 6, 7	data collection consultant	\$\$\$
STPO	high	short-term	3, 4, 6	BC Transit, City of Kelowna	\$
STPO / Parking	medium	medium-term	2, 3, 6	software/app developer	\$\$
STPO	medium	short / medium-term	3, 4, 6	local businesses	\$
STPO	medium	short / medium-term	3, 4, 7	software/app developer	\$\$
STPO / Parking	high	immediate / ongoing	2, 6, 7	N/A	N/A
CTL / HR	high	short-term	2, 6, 7	N/A	\$
CTL / Scheduling	high	short-term	1, 6, 7	N/A	\$
CP	medium	long-term	1, 5, 7	private development	N/A

Notes:

1. Sustainable Transportation Program Office (STPO), Centre for Teaching and Learning (CTL), Human Resources (HR) Campus Planning (CP)
2. See cost ranges in on page 21, [Table 1](#)



# 5. Monitoring Our Progress

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## 5.1 TARGETS

Achieving the Vision and objectives of the Transportation Plan will rely on a greater proportion of trips being made by sustainable modes of transport like transit, walking and cycling.

To aid in tracking our progress, this Transportation Plan identifies six targets. Two primary “headline targets” are identified related to sustainable travel and GHG emissions, with four “supportive targets” related to specific travel modes.







# Transportation Plan Targets

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## Target 1: Increase Sustainable Transportation Mode Share

- By 2040, at least **55% of all trips** to and from campus will be by **sustainable modes** of transportation (walking, cycling, and transit)

## Target 2: Reduce GHG Emissions

- By 2030 total annual **GHG emissions** associated with commuting will be **reduced by 40%** of 2013 levels (originating from Climate Action Plan 2030 as the commuting target)

## Target 3: Increase Transit Use

- By 2040, at least **35% of all trips** to and from campus will be **by transit**

## Target 4: Increase Walking and Cycling

- By 2040, at least **20% of all trips** to and from campus will be **by active modes** (cycling and walking)

## Target 5: Minimize Automobile Traffic

- Through 2040, total daily **automobile traffic** to and from campus **will not exceed 14,000 vehicle trips per day**

## Target 6: Increase the Share of Auto Trips made by Carpooling, Vanpooling and Ride-sharing

- By 2040 at least **35% of all automobile trips** to and from campus will be **by carpooling, ride-sharing and vanpooling**

## 5.2. MONITORING AND REPORTING

UBC will continue monitoring and reporting on the progress made towards implementing this Plan and advancing its objectives.

The Plan's headline targets (1 and 2) and supportive targets (4 to 6) will be the primary metrics monitored, along with the implementation status of each of the strategies and actions. As the plan is implemented, additional strategies and/or actions may be identified that also advance the Plan's objectives.

A biennial transportation data collection program will continue to be carried out to monitor how travel patterns are changing over time. The University measures the amount of GHG emissions that are produced by campus activities, including commuting, based on the transportation data collected. These continued efforts will be used to track progress against the targets.

Throughout the plan development process, the combined effect of all strategies was analyzed to forecast how their collective benefits are likely to shape travel volumes and choices over time. Based on this analysis, the headline and supportive targets are expected to be achieved by 2040 given continued implementation of the 21 strategies and corresponding actions outlined in this Plan.

As illustrated in [Figure 3](#), a business-as-usual approach would see the number of trips grow while the proportion of trips made by sustainable modes stays more or less the

same. Implementing this Transportation Plan is forecast to decrease total daily trips slightly (2,000 fewer than BAU) and ensure that more trips are made by sustainable modes (55% vs 40% in BAU). This means the vast majority of trip growth between 2019 and 2040 (from 23,500 trips/day in 2019 to 36,000 trips/day in 2040) will be accommodated on sustainable modes, more than doubling the number of daily trips on transit (from 5,500 to 12,000 trips/day), with only a modest increase in the total number of auto trips (from 13,500 to 17,500 trips/day).

As compared to the business-as-usual conditions for parking demand (see [Section 2.1 Key Challenges](#)), the implementation of all strategies and actions identified in this plan is estimated to reduce the demand for parking in 2040 from a total of 5,000 parking stalls down to 3,800 parking stalls. Notably, this demand still exceeds the current supply of parking spaces on campus (3,000) and far exceeds the projected supply once existing lots are redeveloped as envisioned by the Campus Plan. The resulting parking shortfall will be the subject of future infrastructure planning work.

# Appendices

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## APPENDIX 1: POLICY BACKGROUND AND POPULATION ASSUMPTIONS

This Transportation Plan is both informed by and supports the implementation of several important UBC Okanagan plans and policies.

In 2015, the [UBC Okanagan Campus Plan](#) was completed and set the vision and long-term planning framework for the physical development of the campus in support of a pedestrian-oriented, welcoming and sustainable campus. The *Campus Plan* aligns with the University's *Strategic Plan*, including its vision, purpose and values. The [UBC Okanagan Innovation Precinct Structure Plan](#) was completed in 2018 and built upon the *Campus Plan* with a vision and concept for expanding the campus with space for future innovation, partnerships and research north of University Way.

In 2019, [UBC Okanagan Outlook 2040](#) was completed, providing updated forecasts of institutional growth based on three 2040 enrollment scenarios that ranged from 12,700 to 18,000 Full Time Equivalent (FTE) students (compared to roughly 9,300 FTE students in 2019). The Transportation Plan assumes the middle scenario ("Scenario 2") from *Outlook 2040*, where 15,310 FTE students are anticipated by 2040. This means an increase in the total daytime population of the campus (FTE students, faculty and staff) from roughly 11,000 people

in 2019 to around 17,000 people by 2040, an increase of roughly 62%. These forecasts are estimates only, and there are many factors influencing how these population numbers translate into travel behaviour. Accordingly, the University will need to continue to adapt to the changing transportation needs of the campus community over time. This Plan is intended to set us on that course by establishing policies, programs and actions that can be scaled over time.

Climate action has been a priority for UBC for decades, and in 2019, the UBC Board of Governors endorsed the President's Declaration on the Climate Emergency, acknowledging the urgency of the climate crisis and committing to directly respond to it. The Climate Emergency Engagement process was undertaken in parallel with the development of this Plan to understand actions UBC can take on the climate emergency, particularly around accelerating existing actions and identifying new areas of focus that can be integrated into existing plans and processes. The outcomes from the engagement process informed both the UBC Okanagan Climate Action Plan 2030 and this UBC Okanagan Transportation Plan.



## APPENDIX 2: COMMUNITY ENGAGEMENT OVERVIEW

Stakeholder involvement and input from the campus community was crucial in understanding key issues and barriers to changing travel behaviour and to identify and prioritize potential strategies that could best address these barriers. The major components of the Transportation Plan's community engagement included: two virtual stakeholder workshops; two campus-wide virtual public consultations (including a travel behaviour survey).

### STAKEHOLDER WORKSHOPS

Stakeholders were engaged through two virtual workshops to present information on various aspects of the Transportation Plan, and to learn and collect input on key decisions. Workshop #1 was held in the summer of 2020 and focused primarily on the development of a vision, objectives and generating ideas for possible actions and strategies. Workshop #2 was held in the Fall of 2020 during which a set of transportation scenarios were reviewed illustrating the benefits various transportation strategies would have on key performance measures such as parking supply, trips by sustainable or vehicular modes, and GHG emissions. The second workshop concluded with a review and prioritization of proposed actions and strategies and included a discussion on implementation barriers and opportunities.

### PUBLIC CONSULTATION HIGHLIGHTS

The first phase of public consultation was held in November 2020. Over 500 campus community members participated through an online survey and virtual public open house. Feedback was collected on the draft vision, objectives and how the UBC Okanagan community feels about commuting behaviours, remote learning and work, challenges and opportunities.

The second phase of public consultation was held in September and October 2021 and was an important step in finalizing the Plan. Feedback was collected from over 500 members of the UBC Okanagan campus community through an online survey and a virtual public open house. Participants were asked about the Plan's ten high-impact strategies, as well as additional ideas for how the University can support the community in shifting to more sustainable transportation options.

## Who were the Stakeholders?

The stakeholders represented internal UBC departments and external organizations. Within UBC, stakeholders represented UBC Wellbeing, Student Housing and Hospitality Services, Athletics and Recreation, Finance and Operations, Campus Operations and Risk Management, Food Services, Residence Life, Faculty, UBCycles, UBCO Student Union, the Deputy Vice-Chancellor Office, Parking Services, and the Disability Resource Centre. External to UBC, staff from the City of Kelowna's Integrated Transportation department participated in the workshops.

## Stakeholder and Public Consultation Highlight

The vision statement originated from stakeholder input at Workshop #1. In this workshop, stakeholders were organized into five smaller discussion groups. With a facilitator's guidance and using a virtual whiteboard, each participant was asked to identify and list their thoughts, ideas and opinions on three questions:

1. What transformation are we seeking?
2. With who and how is the transformation for?
3. What is the desired outcome of the transformation? Why is it important?

Based on stakeholders' input, two draft vision statements were developed and presented again for further input on what they liked about each statement, what they would change, and what is missing. Feedback on these two statements was refined into the final vision statement that was validated during Public Consultation Phase 1 and carried forward in this Plan.

# Credits

The UBC Okanagan Transportation Plan was developed between Spring 2020 and Fall 2021 and was developed with extensive input of Campus Planning, stakeholders, staff, faculty, students and aided by technical experts from multiple disciplines.

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