

Christina Lake

On the Move

TRANSPORTATION STUDY

FINAL REPORT

OCTOBER 2024



Prepared by:



In Collaboration With:



Executive Summary

The *Christina Lake On the Move* report provides a comprehensive assessment of the transportation challenges and opportunities facing Christina Lake, BC. The report highlights the critical role transportation plays in the region's social and economic vitality and outlines the potential for improved connectivity to drive growth, enhance quality of life, and support sustainability. Drawing on extensive community engagement, innovative transportation solutions, and best practices, this study offers actionable recommendations aligned with the community's vision for sustainable development, economic diversification, and tourism promotion.

Our Process and Community Engagement

The foundation of this report is built upon strong community involvement, featuring over 350 engagement touchpoints through surveys, interviews, and consultations with residents and local businesses. This deep level of engagement ensured that Christina Lake's stakeholders were heard and helped shape solutions that reflect the community's unique needs and aspirations. Through this inclusive process, a series of *Best Fit* criteria were identified to ensure that all proposed recommendations are practical, actionable, and tailored to Christina Lake's specific circumstances.

Best Fit Criteria

To maximize success, a decision-making framework was developed based on the following key criteria:

1. **Ability to Implement** – Feasibility and speed of implementation.
2. **Alignment with Community Vision** – Supports Christina Lake's long-term vision for sustainability and growth.
3. **Resource Efficiency** – Maximizes impact while minimizing resource consumption.
4. **Tourism Potential** – Enhances visitor experience and attracts new economic opportunities.
5. **Sustainability** – Prioritizes environmental preservation and reduces carbon footprints.
6. **Local Economic Impact** – Stimulates local businesses and provides job creation.
7. **Connectivity** – Improves internal and external transportation links for residents and visitors.
8. **Health and Wellness** – Promotes active transportation like cycling and walking.
9. **Safety** – Improves safety for all users, particularly pedestrians and cyclists.
10. **Scalability** – Can be expanded to meet future growth and demand.

Recommended Actions

By applying the *Best Fit* criteria, the top ten recommended actions for Christina Lake's transportation plan were identified. These actions align with community goals, economic growth potential, environmental sustainability, and ease of implementation.

Private Sector Driven Economic Opportunities:

1. Seasonal Shuttle Services
2. Community Shuttle for Residents and Tourists
3. E-Bike Rentals
4. Bike-Sharing Program
5. Freight Consolidation Services

Local Government/Community Driven Programs:

1. Improve Interconnectedness of the Trail Network
2. Dedicated Bike Lanes and Pedestrian Paths
3. Improved Signage and Wayfinding
4. Pop-Up Shops or Mobile Vendors

Key Outcomes

The recommended actions are designed to achieve the following outcomes:

- **Enhanced Internal Mobility:** Proposals to improve non-motorized transportation options, such as trail systems, bike lanes, and pedestrian paths, aim to facilitate movement within the community, boosting access to key attractions and services.
- **Improved Accessibility:** Strengthened transportation connections between Christina Lake and external economic centers will help residents access employment, healthcare, and recreational opportunities, addressing the challenges of rural isolation.
- **Economic Growth:** Solutions like seasonal shuttle services, electric vehicle rentals, and enhanced wayfinding infrastructure are positioned to boost tourism and local businesses, establishing Christina Lake as a forward-thinking destination.
- **Sustainability Focus:** The report highlights the importance of environmentally conscious transportation options, such as electric shuttles, bike-sharing programs, and pedestrian-friendly infrastructure, preserving the natural beauty of the region.

Christina Lake's transportation transformation is about laying the foundation for long-term economic resilience and social cohesion. The report serves as a roadmap, guiding the community through thoughtful planning, engagement, and innovative strategies that ensure sustainable and prosperous growth for years to come.

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1.0 Introduction

“Transportation is more than just a means of getting from one place to another—it’s one of the golden threads that weave communities together, enabling the flow of people and goods. As communities evolve, so too must their transportation systems, adapting to new challenges and opportunities to ensure that everyone can stay connected, empowered, and **on the move.**”

Transportation is more than just a means of moving people and goods; it is the backbone of connectivity and a vital component for the sustainable development of rural and remote communities. In areas like Christina Lake, BC, where geographical isolation presents unique challenges, transportation solutions become the key to unlocking economic potential, enhancing quality of life, and ensuring access to essential services.

For rural communities, transportation is the bridge that connects residents to opportunities—whether it’s accessing employment, education, healthcare, recreation or tourism activities. A well-planned transportation system not only fosters social cohesion by linking residents to the broader region, but it also plays a critical role in driving economic growth. In Christina Lake, where tourism and small businesses are crucial economic drivers, effective transportation solutions can enhance visitor accessibility, boost local businesses, and create new opportunities for income generation.

However, the remote nature of rural areas like Christina Lake also brings distinct challenges. Limited infrastructure, seasonal accessibility, and constrained funding often leave rural communities disconnected from the larger economic ecosystem. Addressing these challenges requires innovative, tailored transportation solutions that not only cater to the current needs but also anticipate future growth. Such solutions must focus on sustainability, adaptability, and inclusivity, ensuring that both residents and visitors can move freely and efficiently throughout the community and beyond.

In this study, we explore how transportation improvements can serve as a catalyst for economic and social revitalization in Christina Lake, positioning the community for long-term growth, resilience, and prosperity.

1.1 Project Purpose and Objectives

The Christina Lake On the Move project set to:

“Evaluate the existing transportation infrastructure, identify gaps and challenges hindering economic growth and tourism development, explore innovative solutions, and develop recommendations to enhance connectivity and accessibility in Christina Lake. The study focused on both permanent year-round transportation solutions and income-generating seasonal opportunities to support local businesses and organizations.”

In achieving this purpose, the following objectives were completed:

- Objective 1:** Identify gaps and challenges in the current transportation services, notably those hindering economic growth and tourism development.

- Objective 2:** Explore innovative solutions and opportunities to improve transportation options.
- Objective 3:** Develop recommendations and strategies to enhance connectivity and accessibility for residents, tourists, and local businesses.
- Objective 4:** Assess the potential for income-generating activities within the transportation sector to support business incubation or develop sustainable business opportunities for local profit and non-profit organizations.

1.3 Focus of Desired Project Outcomes

The catalyst for this engagement is fostering economic development in Christina Lake, with a particular focus on transportation as a critical driver of growth. With this in mind, we have highlighted the following key outcomes,

Increased Movement of People Within Christina Lake

- Improving internal transportation systems increases the likelihood that residents and visitors can efficiently travel within Christina Lake. Enhancing non-motorized options such as interconnected trails, bike lanes, and pedestrian paths will increase connectivity and increase the use of local services and attractions. This boosts economic activity by making it easier for people to move between key tourist areas, businesses, and residential neighborhoods, supporting both tourism and the local economy.

Increased Access to Businesses and Services within Christina Lake

- Improving transportation can create more direct, convenient routes to local businesses and services. This includes better signage, wayfinding, and shuttle services that connect residents and tourists to shops, restaurants, and recreational activities. Facilitating easy access to local businesses not only enhances the visitor experience but also supports the local economy by increasing customer foot traffic and sales.

Improved Staff Accessibility to Employment Opportunities

- This outcome addresses the dual challenge of facilitating easier commutes for staff traveling into Christina Lake for work, as well as enhancing the ability of Christina Lake residents to access employment outside the region. Ensuring that staff can easily reach their workplaces within Christina Lake, whether as residents or outside commuters, supports the growth of local businesses. Also, improving outbound access expands employment opportunities for residents, fostering economic mobility and resilience.

Enhanced Access to External Recreation, Social, Healthcare, and Education Services for Local Residents

- Many Christina Lake residents need reliable transportation options to access services outside the community, including healthcare, education, and social opportunities. By improving the transportation network, residents can more easily access these essential services. This not only improves the quality of life for locals but also helps retain residents by reducing the isolation often felt in rural communities, thereby supporting long-term community stability and growth.

The focus of this study is to create a list of **actionable transportation recommendations** that not only enhances the movement of people within Christina Lake but also increases access to external opportunities, which, in turn, supports the broader economic and social development of the community. These outcomes are designed to ensure that Christina Lake remains a sustainable, connected, and economically vibrant community for both residents and visitors.

1.3 Limitations, Assumptions and Considerations

While this study provides valuable insights and recommendations, it is important to acknowledge certain limitations that may have impacted the findings and conclusions. As with any planning effort of this type and scope, certain limitations are inherent in the methodology employed and the assumptions made. We have attempted to minimize the impact of these limitations. While our analyses are firmly based and valid, and the recommendations derived are credible and realistic, Christina Lake should be aware of these considerations.

General Limitations

The following general limitations are in reference to high level challenges/barriers that are frequently encountered with efforts similar to Christina Lake On the Move.

1. Dynamic Nature of Planning

This plan is not a static document. By design, it proposes projects, initiatives, and actions to be implemented over time. As economic, political, demographic, and social conditions evolve, so must the plan. Certain recommendations may need to be revisited or revised during the implementation phase, even though the core focus and long-term direction remain relevant.

2. Assumptions Regarding Future Conditions

Some assumptions made during the drafting of this report are based on current conditions that may change by the time the recommendations are implemented. Economic trends, policy changes, and tourism patterns may shift, rendering some observations and proposed actions less relevant. However, the broad, long-term objectives of the plan ensure that the strategy will remain adaptable to future changes.

3. Focus on Transportation

This study focuses specifically on transportation challenges and opportunities for Christina Lake. It does not extend to broader aspects of economic development in the region. However, transportation is closely linked to economic development, and the

recommendations in this report should complement the community's larger goals in other areas of development.

4. Regional Data and Broader Context

The project utilizes some regional data and assumptions that reflect broader trends, which may not always precisely align with Christina Lake's specific circumstances. While every effort was made to ensure accuracy, certain observations drawn from regional trends may need to be localized further during implementation.

5. Subject Understanding

While interviews and roundtable discussions with local stakeholders offered invaluable insights, there may be a limitation in that not all participants fully understood the complexities of the transportation issues discussed. In some cases, limited familiarity with new or emerging transportation options might have influenced the feedback provided. As a result, this could affect the overall conclusions drawn from these engagements. However, the input gathered remains highly valuable in shaping solutions that reflect the community's current understanding and needs.



2.0 Approach to Assignment

2.1 Building a Solid Foundation through Community Engagement and Transportation Innovation

The success of transportation initiatives in rural communities like Christina Lake hinges on a thorough understanding of local needs and opportunities. Our approach to the *Christina Lake On the Move 2024 Transportation Study* is grounded in the principle that sustainable transportation solutions must be informed by the lived experiences and aspirations of the community. To this end, we have placed a significant emphasis on community engagement, ensuring that our work is not only responsive to local challenges but also future-oriented, unlocking growth, and fostering economic resilience.

Community Engagement

A cornerstone of this assignment is our commitment to **building a solid foundation** through in-depth community engagement. From the outset, we invested considerable time into establishing meaningful connections with key stakeholders, residents, businesses, and local organizations. This enabled us to fully grasp the unique dynamics of Christina Lake. We conducted extensive engagement efforts, achieving 349 engagement touchpoints through various methods:

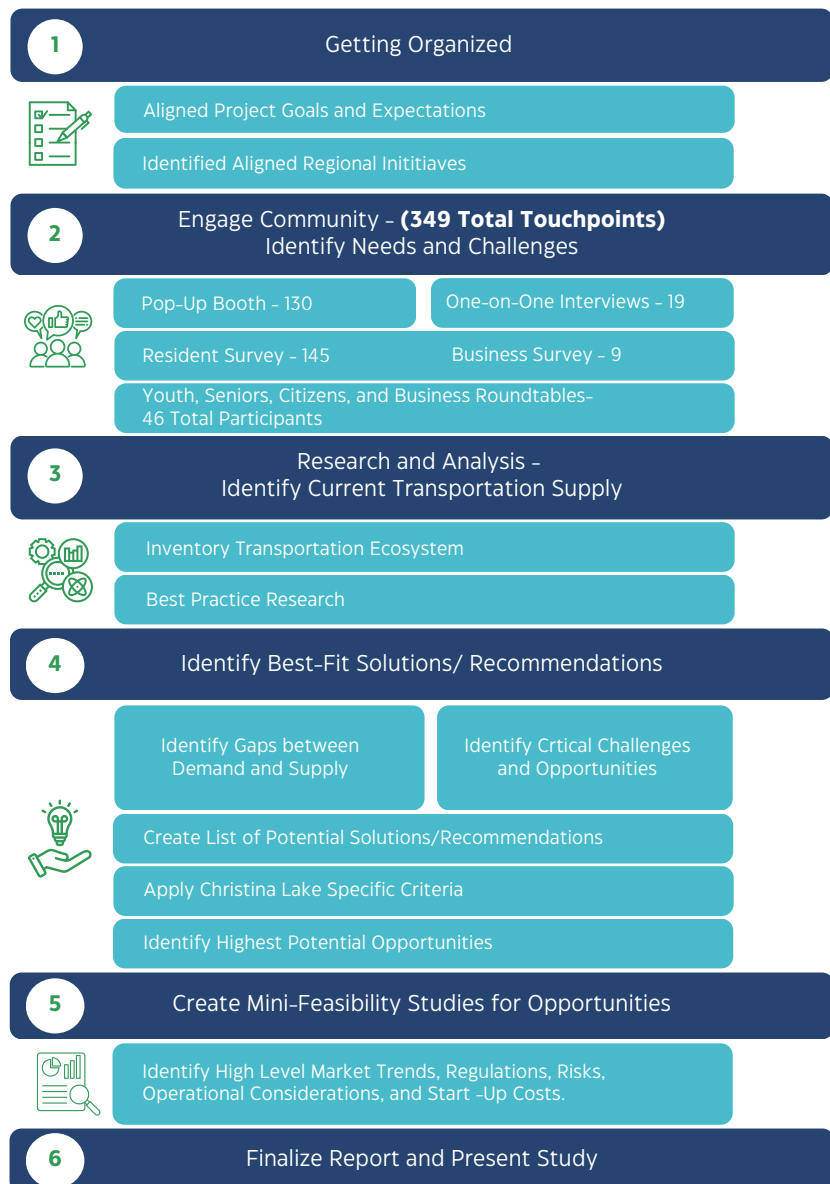


Figure 1 - Multi Stage Approach

- **130 Pop-Up Booth Engagements**, providing a platform for open dialogue and immediate community feedback.
- **11 Business Interviews** and **8 Service Provider Interviews**, offering insights into the economic and service-related transportation needs of the region.
- **145 Resident Surveys** and **9 Business Surveys**, allowing us to gather quantitative data from a wide cross-section of the community.
- **46 Roundtable Attendees**, where focused discussions further deepened our understanding of both challenges and opportunities.

This collaborative approach enabled us to identify not only current transportation barriers but also opportunities for economic development and tourism growth.

Transportation Innovation

Equally important was the comprehensive exploration of **various transportation modalities**. Christina Lake presents unique challenges, but also significant opportunities for creative, sustainable transportation solutions. Our approach included a thorough assessment of existing infrastructure and services, and an exploration of innovative modalities. These were considered alongside more traditional infrastructure improvements to ensure that all viable options were explored. The goal was to develop a flexible, adaptable transportation system that could serve both year-round residents and seasonal visitors, while simultaneously supporting local businesses and enhancing tourism potential.

By combining extensive community engagement with researching of innovative transportation/mobility research modalities, best practices, and the application of case studies, our approach ensures that the final recommendations are both practical and forward-looking. This enables the creation of strategies that address immediate needs while remaining scalable, providing an impactful list of actionable recommendations.

3.0 Contextual Analysis

Progress in Christina Lake’s transportation and connectivity hinges on a deep understanding of the region’s unique landscape which is influenced heavily by both external and internal factors. To achieve this understanding, significant effort was invested in engagement of businesses, residents, citizens, and key stakeholder organizations. This contextual analysis covers five areas of focus as defined below in Figure 2.

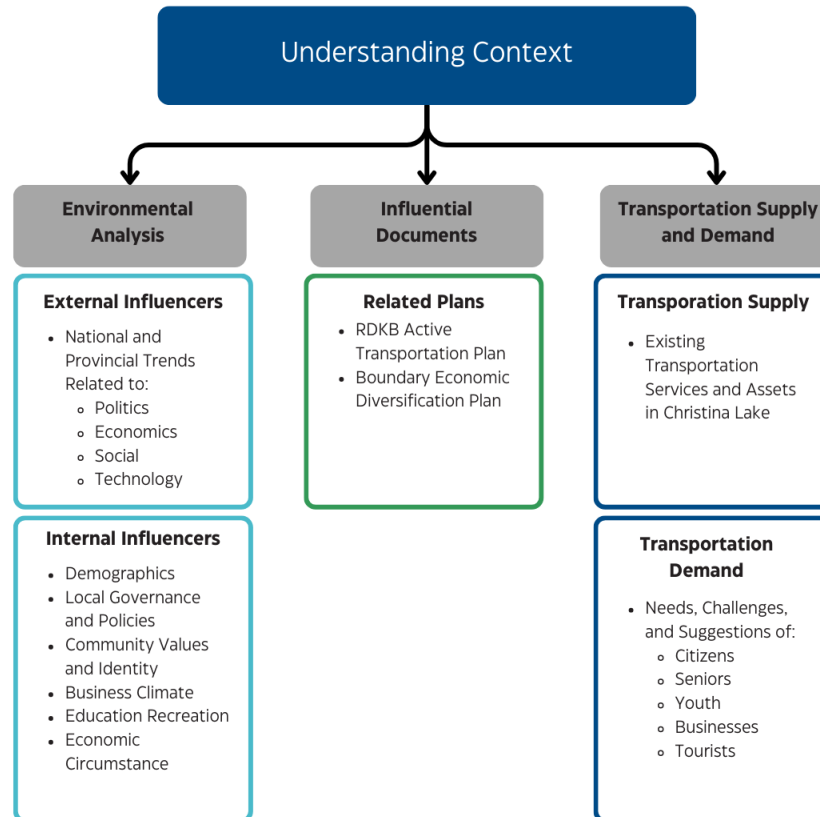


Figure 2. The framework for the Christina Lake contextual analysis

The goal of conducting a contextual analysis was to identify and evaluate factors that are relevant to the current situation and to understand their potential impact on future planning. These insights provide essential guidance for developing practical and effective recommendations.

3.1 External Influencers

Understanding the broader landscape is essential for Christina Lake as it navigates its unique challenges and opportunities. The external environment encompasses various factors—political, economic, social, and technological—that influence the community's strategic approach to transportation and growth. By examining these trends, we can identify potential barriers and leverage points to enhance connectivity and support the region's development goals.



Political Trends

- Both the Government of Canada and the Province of British Columbia have increased prioritization of transportation within planning efforts and budgets, recognizing its importance in rural communities. Multiple strategies and funding sources support the development and implementation of effective transportation plans and solutions in rural communities.
- The Province of BC has placed a focus on Active Transportation in rural communities as typical transportation options (i.e. large infrastructure, bus services) are often more difficult to implement due to viability concerns around population and financial limitations.
- Over previous years, the Provincial and Federal Carbon Tax Policies have increased the cost of transporting people and products.
- The CleanBC Strategy is focusing on enhancing and increasing the prevalence of electric transportation infrastructure such as charging stations.

What does this mean for Christina Lake?

Recent federal and provincial policies reflect a growing commitment to enhancing transportation infrastructure in rural areas like Christina Lake. While recent policy and economic circumstance have raised the cost of transportation, these policies also provide opportunities through funding and incentives for sustainable alternatives. The focus on active transportation and alternative transportation infrastructure, as outlined in the CleanBC Strategy, offers some creative solutions that align with the community's needs. However, ultimately, rural communities must shape their own future by actively engaging and taking charge of these initiatives, particularly with basic needs such as transportation.

Economic Trends

- Canadian businesses are known to lack aggressiveness in seeking growth or chasing potential market opportunities. This can impact the time it takes for a rural community to solve issues or capitalize on opportunities in areas such as transportation.
- The structure of employment in the knowledge economy is shifting to prioritize labour that can be done from home, increasing the prevalence of remote workers.
- A highly stringent business lending and investment environment can be expected in the short-term meaning transportation solutions are more likely to occur through grant or publicly funded opportunities rather than private business.
- While interest rates continue to slowly drop from post-pandemic peaks, consumers across Canada are only starting to feel the impact of this increased spending. A decrease in discretionary spending is expected over the coming short-medium term.
- There has been an increase in rural domestic tourism due to the cost of international travel, causing communities to assess the opportunity for seasonal transportation services (i.e. Haida Gwaii, BC, Waterton Lakes, AB, Fogo Island, NL, Churchill, MB).
- Limited access to a workforce creates significant barriers for businesses in rural and remote communities, and the absence of a robust transportation ecosystem exacerbates these challenges.
- There has been a noticeable shift toward eco-tourism and sustainable travel options, with many tourists preferring destinations that offer environmentally friendly transportation options such as e-bikes, local shuttles, bike rentals, and car-sharing.

What does this mean for Christina Lake?

These economic trends suggest that Christina Lake will need to be proactive in developing transportation solutions that cater to a changing local landscape. With businesses being cautious and a tight lending environment, significant transportation improvements will likely rely on securing public funding and grants. The shift toward remote work and increased rural tourism highlights the need for adaptable and sustainable transport options, such as seasonal shuttles or eco-friendly alternatives like bike rentals. To effectively support both residents and the influx of visitors, Christina Lake must capitalize on these trends by creating a transportation strategy that not only meets immediate needs but also positions the community as a forward-thinking, sustainable destination.

Social Trends

- The senior population (64+) is at historically high levels in Canada putting pressure on infrastructure and systems, such as housing, transportation, and healthcare.
- Rural communities typically have a higher percentage of both youth and seniors than urban centres. These groups require more services than the general public.
- Seniors in rural communities are more likely to attempt to age in place, which requires the community to be well connected for non-motorized accessibility, and well serviced, for when vehicle transport is needed.
- Government, business, and consumer awareness of sustainability and climate change is increasingly prevalent causing changes in policy, mandate, decisions, and actions across the board.

- While there is a trend of individuals and families in Canada moving from urban to rural settings, they are choosing rural communities that are well serviced and in proximity to urban centres. This is driven by affordability, quality of life, and remote work opportunities.

What does this mean for Christina Lake?

With the aging population in Canada reaching historic highs, rural communities like Christina Lake must adapt their transportation ecosystem to meet the needs of both seniors and younger residents who rely more heavily on community services. As people move from urban to rural settings, they seek communities that are not only affordable but also well-connected and service oriented. This trend, combined with a growing emphasis on sustainability, presents an opportunity for Christina Lake to enhance non-motorized accessibility and other group transport options. By investing in comprehensive, inclusive transport solutions, the community can better support its residents while appealing to new families and individuals seeking a high quality of life in a rural environment.

Technological Trends

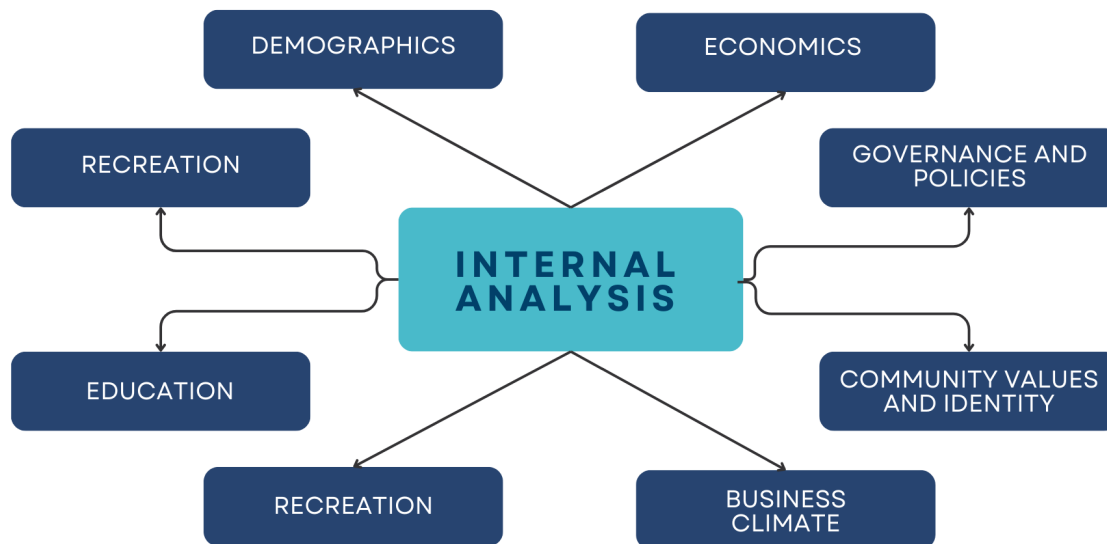
- New consumer facing transportation solutions are driven by tech and innovation such as rideshare apps, scooter and e-bike rentals, and car-share programs.
- Applied artificial intelligence will continue to drive technological growth and progress at significant rates. It is currently being applied across sectors to increase automation and limit reliance on human labour.
- Clean technology and innovation will be the driver of climate change solutions impacting all facets of our lives from transportation to healthcare.
- Future tech solutions like autonomous vehicles and drones are being explored for use in public transport, delivery services, and emergency response.
- Mobility as a service (MaaS) platforms are increasing in popularity integrating various transportation services—such as public transit, ridesharing, bike-sharing, and car rentals—into a single digital interface.
- Exploration of subscription models, transportation providers are offering subscription-based models that give users access to a variety of transport modes for a monthly fee.

What does this mean for Christina Lake?

Technology is reshaping how we move, offering rural communities like Christina Lake the opportunity to harness alternative options such as rideshare apps, e-bike rentals, and car-sharing programs. While these solutions can be difficult to implement due to lower population density and infrastructure constraints, they could become more viable as technology becomes increasingly adaptable and user-friendly. As these innovations evolve, they offer promising alternatives that can better meet the unique needs of rural areas, ultimately enhancing local mobility and positioning Christina Lake as an accessible and forward-thinking destination.

3.2 Internal Influencers – Community Level

To gain a thorough understanding of the landscape impacting transportation in Christina Lake, a detailed review of both internal and external factors was conducted. This internal evaluation involved in-depth interviews with key stakeholders, analysis of significant publications and reports, and a thorough assessment of previous and ongoing initiatives. By identifying the region's landscape, this analysis lays the groundwork for strategic planning and provides a clear direction for future transportation related efforts.



Demographics

Christina Lake's demographic profile presents both unique challenges and opportunities for developing transportation solutions. With a higher proportion of seniors and a smaller youth population, the community's transportation needs differ from urban regions with a different demographic composition. Transportation systems must be designed to cater to the specific needs of seniors, seasonal workers, and tourists. The fluctuating population due to tourism further complicates planning, as the demand for transportation shifts dramatically between seasons.

- When compared to provincial and national averages, Christina Lake has:
 - Significant increase in the population (21.7%) from 2016 to 2021 from 1,337 to 1,627
 - The summer population in Christina Lake increases from 1,627 to an estimated $\pm 7,000$ seasonal residents and visitors.
 - A significantly lower than average youth population in the 0-14, 15-24, and 25-34 age groups.
 - A significantly higher than average senior population in the 55+ age group.
 - A higher-than-average median age by 20 years.
 - A lower-than-average median household income.
 - A higher-than-average unemployment rate.

- A lower-than-average workforce participation rate.
- **The aging population** necessitates transportation solutions that provide accessible, reliable, and senior-friendly options, particularly during the winter months when weather conditions may limit mobility. The lack of a younger workforce also underscores the need for transport systems that can attract seasonal workers to support the tourism economy during peak seasons.
- **Seasonal fluctuations** in the population of approximately 7,000 seasonal residents and visitors present a major transportation challenge. During the summer, there is a significant increase in tourists, which increases demand for transportation services, including public transit, rental services, and shuttles. However, it is difficult to capitalize on this demand due to the small winter population. Balancing the limited winter-season demand with the high summer demand means solutions must be creative, scalable, and flexible to demand.
- **Workforce transportation** is another critical aspect. Given the lower workforce participation rate and high unemployment, there is an opportunity to create transportation links to nearby regions, such as Grand Forks, to help residents access more stable year-round employment. This could also support efforts to retain youth and younger adults by improving access to job opportunities outside of Christina Lake.

Local Governance and Policies

Local governance plays a pivotal role in the planning and implementation of transportation initiatives. Christina Lake's transportation system faces challenges due to fragmented governance structures. Without a central municipal government, multiple bodies, such as the Regional District of Kootenay Boundary (RDKB) and the Ministry of Transportation and Infrastructure, are responsible for different aspects of the infrastructure. This makes coordination and planning complex, particularly given budgetary and capacity constraints.

- As it is not a municipality, Christina Lake is governed by multiple bodies that create challenges in developing and maintaining its infrastructure.
 - Services such as zoning, land use planning, solid waste management, and emergency services fall under the purview of RDKB.
 - The Ministry of Transportation and Infrastructure handles roads, highways, and related infrastructure, which often limits the ability of Christina Lake to directly implement transportation improvements.

Despite these challenges, Christina Lake benefits from active community groups advocating for change and driving smaller transportation initiatives. These community-led initiatives could help address gaps in local governance when it comes to transportation improvements.

Community Values and Identity

The people of Christina Lake place a high value on sustainability, health, and preserving the area's natural beauty. As identified through the ±350 successful touchpoints and conversations conducted during the engagement, these values are mirrored in their transportation needs and preferences. Future transportation strategies must respect the community's desire for environmentally friendly solutions and sustainable growth.

- As a community, Christina Lake values having its voice heard, and all community members, including businesses, residents, and visitors, actively participate in decision-making processes.
- Sustainability is key, and residents seek solutions that preserve the natural environment while encouraging outdoor activities such as water sports, hiking, and biking.
- The community places a strong emphasis on health and wellness, making active transportation options like bike-sharing programs, walking paths, and pedestrian-friendly infrastructure a priority for future development.
- Residents typically want to minimize environmental impact with solutions such as electric vehicles, solar-powered transport options, and non-motorized pathways.
- There is a desire for, sustainable growth that aligns with the community's identity, which includes a balance between improving mobility and preserving the tranquillity and environmental integrity of the area.
- Any transportation solutions should prioritize connectivity and quality of life for both residents and tourists, rather than focusing only on tourism-driven mobility solutions that can alter the community and local way of life.
- Residents also value inclusivity, seeking transportation solutions that are accessible to all age groups, including seniors and youth, ensuring equitable access to community services, recreational activities, and local businesses.

Business Climate

The seasonal nature of business activity in Christina Lake significantly impacts the demand for transportation solutions. During the summer months, there is a need for transportation options that support tourism, such as shuttle services and rentals. However, during the off-season, the business environment struggles due to limited year-round services. Due to the disparity between summer and the winter seasons, many business owners do not stay open during the winter, limiting local product and service options for residents. Key characteristics of the business climate include:

- Business activity in Christina Lake is highly seasonal, with most businesses closing during the winter months. This decreases the demand for transportation solutions outside of the tourist season.
- The absence of reliable transportation options during the off-season makes it difficult for businesses to attract year-round customers and sustain operations. This impacts both workers, who struggle with commuting, and consumers, who have limited access to services.
- Local businesses that depend on tourist foot traffic face challenges due to a lack of transportation infrastructure, such as shuttles or rentals, which would help visitors move around the area more easily during peak season.
- During the summer months, there is a strong need for seasonal transportation services like shuttles or bike rentals to help tourists access local businesses and recreational areas, enhancing their ability to support the local economy.
- The lack of transportation options for workers also affects businesses' ability to attract employees, particularly in a rural setting where commuting can be challenging without public transit.

- Current transportation links between Christina Lake and Grand Forks are exclusively by vehicle, which limits the Lake's customer and workforce base.

Education

Students rely on school buses or parents driving to travel to Grand Forks or within Christina Lake for school. Improving transportation for students could help ease the burden on families and provide youth with better access to extracurricular activities and part-time jobs.

- Christina Lake is part of School District 51, which runs a four-day school week. The four-day school week creates challenges for families in arranging transportation and activities.
- School buses transport students to Grand Forks and within Christina Lake once per day, limiting flexibility for after-school activities. Parents must arrange rides for kids staying after school.
- Limited transportation options reduce students' ability to engage in extracurriculars or part-time jobs, impacting their independence.
- Parents face difficulties in providing transportation for activities outside school hours, increasing barriers on attending social/extracurricular opportunities for themselves and their children
- These transportation barriers make it less likely that youth remain in the community after high school.

Recreation

Christina Lake's identity is deeply connected to outdoor recreation, making transportation to recreational areas a key priority. The lack of public transportation or rentals means that tourists must rely on private vehicles to access activities such as hiking, biking, and watersports.

- Outdoor recreation is the backbone of Christina Lake's identity, attracting tourists year-round.
- Many recreational opportunities, including more diverse options, are located in nearby Grand Forks, requiring residents and tourists to travel for activities.
- Access to local recreational activities like hiking, biking, and watersports is difficult without a vehicle, as there are no public transportation or rental options.
- The reliance on private vehicles to access both Christina Lake and Grand Forks creates a transportation barrier, particularly for tourists or residents without access to a car.

Economic Circumstance and Infrastructure

Christina Lake's economy is heavily reliant on tourism, and employment opportunities are often seasonal, creating transportation barriers for year-round residents and youth. Retail leakage to nearby regions due to limited local services further emphasizes the need for transportation solutions that connect residents to external commercial hubs.

- Christina Lake's economy is heavily dependent on seasonal tourism, but transportation limitations hinder tourists from accessing local products and services beyond immediate tourist areas.

- The lack of year-round transportation options, such as public transit or shuttle services, restricts mobility for both residents and tourists, impacting their ability to support local businesses.
- Youth often leave the community due to the lack of accessible transportation options to nearby employment hubs and year-round job opportunities within Christina Lake.
- Lack of local transportation options combined with the lack of a fulsome product and service offering means residents leave the region all together to shop in larger commercial centres.
- The region lacks transportation infrastructure to support employment-ready commercial lands such as highway accessible truck stops, limiting potential business growth and diversification.
- Highway 3 provides critical access, but without sufficient transportation links or public transit options, it remains underutilized in supporting local economic growth.
- While Highway 3 provides critical access, the region's infrastructure needs investment in telecommunications and employment-ready commercial lands to support economic growth. Improved transportation infrastructure could help alleviate some of the economic challenges by connecting Christina Lake to larger commercial centers.



Tourism

Tourism plays a vital role in the Christina Lake community, particularly during the summer months when the population swells with visitors drawn to the area's natural beauty and outdoor activities. Understanding the seasonal demand, key attractions, and tourist demographics is crucial for informing the Christina Lake Transportation Study. Below is an overview of the factors influencing tourism and how they shape the need for effective transportation solutions in the region.

Seasonal Population and Tourism Demand

- While Christina Lake has a permanent population of approximately 1,627 residents, this number increases significantly during the summer as vacation homes, resorts, and adventure services cater to the influx of visitors.
- Christina Lake experiences a significant increase in population during the summer months, with estimates suggesting that the population rises to approximately 7,000 seasonal residents and visitors. This influx is largely driven by the area's popularity as a recreational destination, attracting tourists for outdoor activities such as hiking, biking, and water sports.

Key Attractions

- Christina Lake is a popular summer destination, attracting both national and international visitors. Known for having some of the warmest waters in Canada, the area offers a variety of outdoor activities like swimming, boating, and hiking. This makes it a prime vacation spot during the warmer months.
- The region is celebrated for its extensive trail systems, including the Trans Canada Trail, Dewdney Trail, and Kettle Valley Railway Trail, attracting hikers, bikers, and nature enthusiasts. Christina Lake Provincial Park and Gladstone Provincial Park offer scenic spots for camping and recreation.
- In addition to water-based activities such as fishing, kayaking, and powerboating, the area also offers golfing, and mountain biking, making it a versatile destination for a range of visitors.

Tourist Demographics

- Christina Lake's primary visitors include families, adventure tourists, and eco-tourists seeking outdoor experiences in a relatively secluded and pristine environment.
- Christina Lake, BC, is situated along the U.S. border neighbouring Washington State. Its close proximity to the border, particularly to the Laurier crossing, makes it easily accessible for American visitors, especially those from the Spokane area, which is about a 2-hour drive away.
- Seasonal tourists are common, with summer bringing a significant influx of visitors interested in water sports, hiking, and camping. In contrast, winter visitors tend to seek quiet retreats or outdoor activities like snowshoeing and cross-country skiing.
- Additionally, Christina Lake attracts a growing number of wellness and nature-focused tourists, drawn to the area's peaceful surroundings and outdoor recreational opportunities, aligning with the region's focus on sustainability and health.

Seasonal Tourism Patterns

High Season (June to August):

Summer is the peak tourist season, with visitors flocking to enjoy water sports, hiking, and camping. The lake's water temperature averages around 71°F (22°C), and local accommodations, including motels, RV parks, and campgrounds, are often at full capacity. July and August are the busiest months, drawing families and outdoor enthusiasts to the pristine beaches and trail systems (Christina Lake, Climate-Data).

Shoulder Seasons (Spring and Fall):

- **Spring (April-May):** Visitors start arriving for fishing, hiking, and golfing, although numbers are lower compared to the peak summer months. The average temperature in May is around 52.8°F (11.5°C) (Climate-Data).
- **Fall (September-October):** Tourists still enjoy the lake's serene beauty and fall activities, though the crowds are smaller. Fall is also a popular time for weddings and family reunions (Climate-Data, Christina Lake).
- **Low Season (Winter: November to March):** Tourism slows significantly during winter, but the area still attracts visitors for cross-country skiing, snowshoeing, and other winter sports. Proximity to ski resorts like Red Mountain helps maintain a smaller but steady flow of winter tourists (Christina Lake).



3.3 Transportation Ecosystem – Supply

Identifying the assets and services within Christina Lake's transportation ecosystem is a critical component of identifying and validating gaps. This section identifies the current transportation assets and services within Christina Lake, including everything from roadways and parking facilities to emergency services and specialized services. From this inventory, key findings and gaps are recorded. Cross referencing this supply with the needs and demand of the community will provide validated gaps in the transportation ecosystem to be addressed.

Transportation Services

Transportation services refer to the various means and systems used to move people and goods from one place to another. These services encompass a wide range of options, including public transit, private vehicles, non-motorized options, and specialized services.

Table 1 Transportation Services

Category	Asset
Public Transit	
Bus Routes	School Bus Routes for Students
	East CL to GF
	Christina Lake - Ponderosa - Nursery - Valley Heights
Other Public Transit	None
Non-Motorized Services	
Bike Rentals and Repairs	Wildways Adventure Sports
Watersports Rentals - Non Motorized	Wildways Adventure Sports
	Christina Lake Marina
	LifeJackets from the GF Rec Centre
Motorized Services	
Car Rentals	None
Taxi Services/Rideshare	Informal RideShare/Taxi Services through Facebook Pages
	Volunteer Services for Seniors Transportation - Medical/Recreational Trips
	No Taxi
Boat and Watersport Rentals	Wildways Adventure Sports
	Christina Lake Marina
	Devil Drag Motorsport Rentals
Water-Taxi Services	Christina Lake Marina
Accessibility Services	
Senior Services	Boundary Country Family Services Transport Services - Grocery, Medical, Social
	Shuttle Offered by Local Doctors Office for Appointments and Prescriptions
Handi-Dart or Accessible Shuttle	None
Emergency Services	
Emergency Services	Boundary Regional Fire Resuce
	Christina Lake Fire Rescue
	Grand Forks Fire Department
Miscellaneous Services	
Miscellaneous Services	Wildways Rentals - Shuttle for Bikers to Stewart Creek
	Hiking Equipment Rentals through Library

Key Findings and Gaps in Transportation Services

1. Limited Public Transit Options

- **Issue:** There is no public transit service available in the region, outside of school bus transit.
- **Impact:** Reduced accessibility for residents and visitors, leading to increased reliance on personal vehicles, and limiting mobility for those without access to a car.

2. Inadequate Non-Motorized Services

- **Issue:** Limited availability of non-motorized transportation options like walking paths or trails that connect the three regions of Christina Lake.
- **Impact:** Reduced walkability and accessibility within the community, particularly for those who rely on these modes for local travel.

3. Accessibility Service Gaps

- **Issue:** Limited accessibility services for individuals with disabilities, particularly in remote or less populated areas.
- **Impact:** Lack of inclusivity and mobility options for disabled residents and visitors, impacting their quality of life and participation in community activities.

4. Motorized Services Constraints

- **Issue:** Limited options for motorized transportation services, such as taxis or ride-shares, especially during peak tourism seasons.
- **Impact:** Transportation bottlenecks and inconvenience for visitors, potentially impacting the tourism experience and economic benefits.

Transportation Assets

Transportation assets refer to the physical and operational resources used to support and facilitate the movement of people and goods within a transportation system. These assets encompass a broad range of infrastructure, vehicles, equipment, and supporting facilities necessary to ensure efficient and effective transportation services.

Category	Sub-Category
Road Infrastructure	
Highways and Major Roads	Highway 3
	West Lake Drive
	East Lake Drive
	Santa Rosa Road -> Old Rosland Cascade Hwy
	Sander Frontage Road
	Bakery Frontage Road
	Fife Road
	McRae Road
	British Columbia 395
	Stewart Creek Road
Bridges	Highway 3 - Over Christina Creek
	BC 395 - Over Kettle River
	Pedestrian Bridge - Over Christina Creek (TO COME)
Tunnels	None
Major Intersections	Highway 3 - West Lake Road
	Highway 3 - East Lake Road
	Border Crossing - Cascade Port of Entry
Non-Motorized Transport	
Cycling Lanes on Roads	Limited Bike Lanes on Major Roads
Walking/Hiking/Cycling Trails (Over 35 Trails)	KVR - Main Trail
	Fife Road Trails
	Gladstone Provincial Park Trails
	Santa Rosa Trails
	Stewart Creek Trails
Pedestrian Sidewalks	North Lake Trails
Crosswalks	Limited sidewalks throughout Christina Lake
Crosswalks	Two cross walks across Highway 3, reported to be unsafe due to limited lighting and signage. Winter usage is more dangerous due to snow, ice, and decreased visibility.
Parking Facilities	
Public Parking Lots	CL Welcome Centre
	KVR - Santa Rosa Road
	Stewart Cree Road Parking
	Deer Point Trail Parking
	Christina Lake Provincial Park
	Huckleberry's/Fork in the Road/Canada Post Parking
	Bakery Frontage Road Parking
	Sand Dollar/Daycare Parking
Private Parking Lots	Schuli Resort
	Skands Campground
	Blue Mountain Lodge
	Christina Lake Marina
EV Charging Stations	CL Welcome Centre
Specialized Transport Assets	
Taxi Stands/Hubs	None
Ride-Sharing Pick-Up Points	None
Shuttle Service Stops	Wildways Adventures Rentals for Recreation
Accessibility Assets of Note	Floating Chair at Beach
	Mobi-Mat
Tourism Transport	None
Freights and Goods Movement	
Freight Routes	Highway 3
	BC 395
Logistics Hubs	Cascade Reload (Arrow)
Emergency and Safety Services	Boundary Regional Fire Rescue
	Christina Lake Fire Rescue
	Grand Forks Fire Department
Clubs and Organizations	
Clubs and Organizations	ATV Club
	Ski and Snowboard Club
	Hiking Equipment through Library

Table 2: Transportation Assets Inventory

Key Findings and Gaps in Transportation Assets

1. Cycling Infrastructure Limitations

- **Issue:** There is a lack of dedicated cycling lanes on major roads, forcing cyclists to ride on highways, which poses safety concerns for both bikers and vehicles.
- **Impact:** Limited connectivity and reduced safety for cyclists, deterring use of biking as a mode of transportation.

2. Pedestrian Accessibility Issues

- **Issue:** Christina Lake is not pedestrian-friendly, with limited sidewalks and crosswalks, particularly along highways. Some existing pedestrian infrastructure, such as bridges and crosswalks, are reportedly unsafe.
- **Impact:** Restricted mobility for pedestrians, leading to fewer non-motorized transportation options for residents and visitors, especially youth and seniors.

3. Absence of Specialized Transport Services

- **Issue:** There are no taxi hubs, ride-sharing pickup points, shuttle stops, or dedicated tourism transport options. Essential services such as car rentals, taxis, and shuttles are also not available.
- **Impact:** Residents and tourists are forced to rely on private vehicles, limiting transportation alternatives and accessibility, especially during peak tourist seasons.

4. Community-Led Transportation Initiatives

- **Strength:** Local organizations, such as those involved in the Kettle Valley Rail (KVR) trail, are taking the initiative to maintain and push forward transportation-related projects.
- **Impact:** Grassroots efforts are valuable, but larger systemic solutions are needed to comprehensively address transportation gaps in the community.

5. No Public Transit Services

- **Issue:** Christina Lake lacks public transit options, which severely limits mobility for residents without access to private vehicles, including youth, seniors, and lower-income households.
- **Impact:** This creates a mobility gap, particularly for accessing services, employment, and social opportunities, leading to social isolation for some groups.

3.4 Transportation Ecosystem – Demand

The transportation needs of Christina Lake's residents and visitors are diverse and multifaceted, reflecting the unique challenges faced by different community groups, including general citizens, youth, seniors, business owners, and tourists. This demand analysis aims to identify the specific transportation needs and barriers experienced by each group, alongside proposed solutions to address these challenges.

General Citizens

This group includes the year-round residents of Christina Lake, consisting of families, individuals, and diverse community members. They are the primary users of local infrastructure and services, and their needs reflect the everyday challenges of living in a small, rural community. Issues like accessibility, safety, and connectivity within and beyond the town are critical to their quality of life and overall well-being.

Needs/Challenges:

Category	Issues
Within Christina Lake	- Narrow bridge paths and trail breaks create accessibility issues.
	- Rockslides and elemental dangers, particularly in Santa Rosa, pose safety hazards.
	- Limited pedestrian infrastructure along Highway 3.
	- High traffic speeds despite posted limits and few crosswalks reduce pedestrian safety.
	- Dependency on private vehicles due to lack of rideshare options and awareness of services.
	- Trail network fragmented, resulting in an inability to fully utilize it and connect all subregions of the community.
To and From Christina Lake	- Icy roads, wildlife, and landslides make travel hazardous, especially on the Paulson Pass.
	- High cost and limited public transportation options restrict access.
	- Border crossing hours and lack of services for an aging population limit mobility.
	- Economic constraints and safety concerns, including the need for reliable highway cameras.

Suggested Solutions from General Citizens:

- Construction of a non-motorized bridge for safer bike and pedestrian travel.
- Establishment of lit walk/bike paths and dedicated footpaths along Highway 3.
- Introduction of rideshare services and lower speed limits to enhance safety.
- Creation of a water taxi service and improved trail connectivity.

- Development of a public transportation system, including shuttles to ski hills and car share options.
- Compete trail network connecting all area of the community.
- Improvements to road safety, including ice management and working highway cameras.
- Enhanced services for seniors and better awareness of existing transportation resources.
- Deployment of a grocery truck service to deliver essentials to neighborhoods.

Youth

The young people of Christina Lake, including students and teenagers, are at a pivotal stage in developing their independence and social lives. Transportation barriers can limit their access to education, social events, and job opportunities, impacting their personal growth and integration into the community. Ensuring that youth have reliable and safe transport options is essential for their active participation in community life.

Needs/Challenges:

Category	Issues
Within Christina Lake	- Limited social and recreational activities lead to boredom.
	- Safety concerns along highways and lack of sidewalks or safe pathways.
	- Dependency on parents and neighbors for transportation limits their independence.
To and From Christina Lake	- Reliance on others for rides due to the lack of public transportation.
	- Limited flexibility leads to missed opportunities and social interactions.
	- Limited opportunities to access employment outside of Christina Lake.

Suggested Solutions from Youth:

- Implementing a **bus or shuttle system** to connect different parts of Christina Lake and nearby areas.
- Introducing **Lime Scooters, public bikes, and a trolley system** to offer safe and independent transportation options.
- Enhancing awareness of events and activities through a **community app or calendar platform**.
- Creating more activities and venues at the Lake to reduce the need for travel.

Seniors

This group comprises older adults and retirees who are vital to the community's social fabric. Many seniors face mobility and accessibility challenges, particularly during winter months when road conditions are poor. Providing tailored transportation solutions helps them maintain independence, access healthcare, and participate in social activities, enhancing their quality of life.

Needs/Challenges:

Category	Issues
Within Christina Lake	- Safety concerns with road conditions, particularly in winter.
	- Limited sidewalks and poorly lit paths create accessibility issues.
	- Dependency on others for accessing essential services.
To and From Christina Lake	- High cost and limited availability of transportation services (e.g., taxis).
	- Difficulty coordinating routine appointments due to lack of transportation.
	- Economic constraints and winter road conditions make travel challenging.

Suggested Solutions from Seniors:

- **Collaboration with SD 51** to utilize school buses for seniors during off seasons.
- Development of a **community bus service** that is pet-friendly and accessible.
- Implementing better **lighting and pathways** to improve safety within Christina Lake.
- Encouraging **rideshares programs and better coordination** of existing transportation resources.

Business Owners

Local entrepreneurs and employers form the backbone of Christina Lake's local economy. They rely on a steady flow of customers and employees, which can be hindered by transportation issues such as limited public transit and seasonal road conditions. Improving transportation can help businesses attract and retain staff, increase customer access, and ensure steady economic growth year-round.

Needs/Challenges:

Category	Issues
Transportation and Accessibility	- Lack of public transportation and shuttle services hinders both customer access and employee commuting for many businesses.
	- Seasonal fluctuations create challenges for business operations and staffing, causing many businesses to not be open during the winter.
	- Insufficient public parking, especially during peak seasons. Tourists and visitors do not always know where to park for access to services/activities.
Employee Recruitment and Retention	- Transportation barriers make it difficult to attract employees, especially in a rural setting.
	- Housing affordability and seasonal employment contribute to workforce instability.

Suggested Solutions from Business Owners:

- Introducing **shuttle services** and developing **paved path systems** for bikes and pedestrians.
- Enhancing **signage and wayfinding** to improve service awareness and customer navigation.
- Considering **co-op housing** and developing **four-season trails** to make the area more attractive to employees year-round.



3.5 Synergies Between the RDKB Active Transportation Plan and Christina Lake On the Move Transportation Project

Effective transportation infrastructure plays a crucial role in ensuring the sustainability and vitality of rural communities like Christina Lake. Both the **Christina Lake On the Move Transportation Project** and the **Regional District of Kootenay Boundary (RDKB) Active Transportation Plan** aim to enhance regional connectivity, support tourism, and promote sustainable travel options. As Christina Lake continues to evolve, developing transportation solutions that accommodate both the resident population, and the influx of seasonal visitors is key to driving economic growth and improving quality of life.

The RDKB Active Transportation Plan offers valuable insights and actionable recommendations that can significantly inform and complement Christina Lake's transportation strategy. By analyzing the common goals, challenges, and opportunities presented in both plans, this section identifies critical synergies that can help Christina Lake develop a more integrated and future-oriented transportation system. These synergies underscore the importance of building an active transportation network that prioritizes accessibility, sustainability, and community health while supporting the region's long-term economic development goals.

1. Active Transportation Vision Alignment

- Both the RDKB Active Transportation Plan and the Christina Lake Transportation Project share the vision of promoting a healthier more connected community. The RDKB plan emphasizes creating a safe, accessible multi-use active transportation corridor that connects key destinations like schools, employment areas, and recreational spots. Similarly, the Christina Lake study aims to enhance transportation connectivity, reducing car dependency, and promoting community sustainability.

2. Infrastructure Gaps and Opportunities

- The **RDKB Plan** identifies barriers such as limited infrastructure, safety concerns, and poor inter-community connectivity as hindrances to active transportation adoption. Similarly, Christina Lake's lack of sidewalks, bike lanes, and pedestrian-friendly infrastructure poses similar challenges. In both cases, opportunities include enhancing cycling routes, improving surface conditions, and increasing safety through better lighting and maintenance.
- **Christina Lake** can leverage recommendations from the RDKB Plan, such as introducing protected bike lanes and multi-use pathways to improve internal connectivity, safety, and promote non-motorized transport options.

3. Community Integration and Multi-Modal Solutions

- Both plans emphasize the importance of **multi-modal transportation options**. The RDKB Plan suggests integrating public transit with active transportation routes, which is crucial for Christina Lake as well.
- The inclusion of all groups, (i.e. seniors, children, and disabled) is highlighted in both plans, ensuring inclusivity and making the transport system accessible and safe for all.

4. Enhancing Tourism and Economic Growth

- The RDKB Plan outlines the importance of active transportation routes in supporting local businesses and promoting tourism. Christina Lake, as a popular tourist destination, stands to benefit from improved transportation infrastructure that makes it easier for tourists to access key destinations like beaches, hiking trails, and local shops.
- Seasonal transportation options, such as shuttle services, water taxis, and bike rentals, are critical recommendations that can be adapted to Christina Lake's tourism-focused economy, enhancing visitor experience while supporting the local economy year-round.

5. Public Engagement and Community-Centered Solutions:

- Both the RDKB Plan and the Christina Lake Transportation Project emphasize **community engagement**. The success of transportation projects in rural areas relies heavily on understanding and addressing the needs of local residents and businesses. By incorporating feedback from surveys, interviews, and stakeholder discussions, both plans ensure that transportation solutions are tailored to the unique dynamics of the region.

4.0 Transportation Development Challenges and Opportunities

Transportation plays a critical role in shaping the economic and social fabric of communities like Christina Lake. The ability to efficiently move people and products both to and from the region, as well as within its boundaries, directly impacts the sustainability and growth of local businesses, tourism, and the quality of life for residents. Given Christina Lake's unique geography, seasonal population fluctuations, and reliance on tourism, the region faces distinct challenges in developing an effective transportation network. However, these challenges also present opportunities to innovate and implement sustainable, community-oriented solutions that align with Christina Lake's values and goals for long-term growth. This section explores the key challenges and potential opportunities related to transportation in and around the Christina Lake region, identifying areas for improvement and strategic action.

4.1 Moving People and Products to and From Christina Lake

Challenges:

Seasonal Population Swings:

- **Population Fluctuation:** Christina Lake experiences a significant seasonal population increase due to tourism. The fluctuation in residents and visitors creates a challenge in justifying year-round transportation solutions, as demand drops dramatically in the off-season.
- **Economic Viability of Solutions:** Transportation services, such as shuttles or logistics services for products, may struggle to reach the critical mass required for financial sustainability outside peak tourist months.

Limited External Transportation Options:

- **Lack of Public Transit:** There are no existing public transportation services to connect Christina Lake with larger economic centers like Grand Forks, Trail, or outside regions like the Okanagan. This limits access to essential goods, services, and labor markets for residents and business owners.
- **Road Infrastructure Issues:** Seasonal road hazards, such as icy roads and landslides on the Paulson Pass and Highway 3, make traveling dangerous and unreliable, particularly in winter. This reduces the community's accessibility and limits the ability to attract tourists year-round.

Rising Transportation Costs:

- **Carbon Tax and Fuel Prices:** The increase in fuel prices due to federal and provincial carbon tax policies raises the cost of transporting goods and people to and from Christina Lake. This impacts tourism and the cost of goods for local businesses.
- **Distance from Major Markets:** Christina Lake's geographic isolation means higher logistical costs for transporting products and goods to the region, which can discourage new businesses from establishing operations in the area.

Tourism Dependency and Seasonality:

- **Tourist Reliance on Private Vehicles:** Christina Lake is heavily dependent on summer tourism, and most tourists arrive by private vehicle due to the lack of alternative transportation options. This leads to road congestion and safety issues during peak seasons while leaving a surplus of underutilized capacity during the off-season.
- **Limited Freight Transport Options:** Businesses struggle to transport products due to the absence of dedicated freight or commercial transport services to the region. This limits the growth of local industries reliant on supply chain logistics.

Governance and Funding Constraints:

- **Multiple Governance Bodies:** As Christina Lake is governed by several organizations (e.g., the Regional District of Kootenay Boundary and the Ministry of Transportation), coordinating transportation improvements is slow and funding scarce. This complexity can delay much-needed infrastructure projects and transportation service implementation.

Opportunities:

Leveraging Targeted Funding and Grants:

- **Funding:** Utilize rural development funds and transportation-specific grants to create pilot projects that address Christina Lake's unique seasonal dynamics, such as flexible transportation services that can scale up or down based on demand.

Promoting Non-Motorized Transport:

- **Trails:** Capitalize on the community's commitment to sustainability by developing a robust network of safe, interconnected trails and pathways that cater to both residents and visitors, reducing the dependence on private vehicles.

Community-Driven Transport Solutions:

- **Community Led Solutions:** Foster a grassroots approach to transportation by empowering local groups and organizations to lead small-scale, targeted initiatives like rideshare programs, bike co-ops, or community bus services.

Rural and Regional Transportation Networks:

- **Partnerships with Nearby Communities:** Collaboration with surrounding towns such as Grand Forks to create a regional transit system could help reduce transportation costs, support workforce mobility, and improve access to goods and services.
- **Ride-Sharing Programs:** Developing a rural rideshare program for residents and visitors could provide a flexible and cost-effective solution for addressing the transportation gap in and out of Christina Lake during both peak and off-season periods.

4.2 Moving People and Products Within Christina Lake

Challenges:

Limited Internal Transportation Infrastructure:

- **Lack of Public Transit:** Christina Lake has no public transit system, which forces residents and tourists to rely on private vehicles. This creates accessibility issues for those without cars, including youth, seniors, and tourists, limiting their ability to move within Christina Lake.
- **Pedestrian and Cyclist Safety Issues:** The lack of sidewalks, crosswalks, and designated cycling lanes within Christina Lake makes it dangerous for pedestrians and cyclists. Highway 3 is particularly challenging to navigate for non-vehicle users, which deters active transportation options.

Geographic and Economic Isolation:

- **Geographic Spread:** Christina Lake's population is dispersed across three main areas (North, South, and East), which makes connecting different neighborhoods challenging. This isolation is compounded by the lack of cohesive transportation routes or services within the community.
- **Limited Economic Activity in Off-Season:** The highly seasonal business environment results in many businesses closing during winter, reducing the need for transportation services during those months. The absence of year-round employment also means limited opportunities for local transit-based jobs.

Social and Demographic Barriers:

- **Aging Population:** With an aging population, there is an increased need for accessible transportation for seniors, who may be unable to drive. The lack of reliable transit options poses challenges for seniors accessing healthcare, grocery stores, and social activities.
- **Youth Mobility:** Youth in Christina Lake face challenges accessing recreational activities, education, and jobs due to the lack of independent transportation options. They rely heavily on parents or neighbors for rides, which limits their participation in the community and economic life.

Environmental and Infrastructure Limitations:

- **Seasonal Road Conditions:** Road conditions within Christina Lake, especially during winter, can make travel difficult, affecting both residents and local businesses. The need for regular maintenance and improvements to infrastructure like bridges and trails is a constant challenge.

Opportunities:

Development of Active Transportation Infrastructure:

- **Bike Lanes and Pedestrian Paths:** Developing dedicated bike lanes and pedestrian walkways can improve internal connectivity. This will enhance safety and encourage non-motorized transport, aligning with the community's focus on sustainability.
- **Shared Mobility Programs:** Introducing bike-share programs within Christina Lake would provide flexible alternatives for short-distance travel between residential areas and commercial or recreational sites.

Localized Shuttle or Bus Services:

- **Community Shuttle for Residents and Tourists:** Implementing a community-based shuttle service that connects key areas (e.g., residential zones, beaches, parks, and business hubs) can address the transportation needs of both year-round residents and visitors. Seasonal adaptations could cater to the summer influx of tourists while providing vital services in winter for locals.
- **School Buses for Senior Transportation:** During off-hours, the local school bus system could be repurposed to provide transportation for seniors, addressing their need for access to healthcare, groceries, and social events.

Innovative and Technological Solutions:

- **On-Demand Micro transit and Ridesharing:** An app-based on-demand ride-sharing service could offer a flexible and affordable transportation option for residents and tourists. This would help overcome the low population density challenge while providing safe and convenient travel across the community.
- **Car-Sharing and Peer-to-Peer Vehicle Rentals:** Developing a peer-to-peer vehicle-sharing system where residents can rent out their vehicles to others would reduce the need for car ownership and provide flexibility for those who only need occasional vehicle access.

Improved Connectivity and Road Safety Measures:

- **Road and Bridge Improvements:** Investments in upgrading the roadways, particularly bridges, and adding safety features like lighting, signage, and crosswalks will improve overall connectivity and make moving people and products safer and more efficient within Christina Lake.
- **Trail Connectivity:** Expanding and maintaining trail networks for non-motorized transport (biking, walking) between residential areas, recreation sites, and commercial centers will reduce congestion and improve internal accessibility.

By focusing on these challenges and opportunities, Christina Lake can develop a transportation system that meets the needs of its residents and visitors, supports economic growth, and enhances the overall quality of life in the community.

5.0 Exploring Innovative Transportation Solutions

As the region strives to enhance connectivity for residents and visitors alike, it must consider innovative transportation solutions that cater to its seasonal fluctuations, scenic environment, and commitment to sustainability. By adopting forward-thinking transportation models, Christina Lake can improve accessibility, reduce its environmental footprint, and foster local economic growth.

The transportation solutions explored below are categorized into four key areas:

1. Public Transportation
2. Active Transportation
3. Shared Mobility
4. Alternative Transportation

These categories offer a variety of solutions designed to address Christina Lake's distinct needs, supporting eco-friendly travel and ensuring accessibility for all users. By implementing these innovative approaches, Christina Lake can transform into a more connected, sustainable, and economically vibrant community.

5.1 Public Transportation Solutions

Electric Shuttles:

Introduce small, eco-friendly electric buses that operate on fixed routes, connecting key areas like beaches, parks, and residential zones. These shuttles would run year-round, with increased frequency during the tourism season, reducing congestion and emissions.

Benefit: Reduces vehicle congestion, lowers carbon emissions, and improves access to popular destinations.

Micro Transit:

Deploy an on-demand micro transit service using small, app-summoned vehicles, designed for rural areas with low population density. Micro transit is a tech-enabled, shared transportation service that lives in the space between traditional fixed route transit and ride hailing technology. It uses dynamic routing and scheduling based on real-time rider demand, utilizing vehicles such as vans, shuttles, or buses. This service can help bridge the gap in public transit where fixed routes may not be feasible.

Benefits:

- Offers flexible, convenient transport options in low-density areas, enhancing mobility and access for all.
- Encourages tourism by offering convenient, sustainable transportation, which can boost local businesses and services. Additionally, the shuttle system could create local jobs in maintenance, operation, and logistics while enhancing the overall visitor experience, leading to increased tourist spending.

Community Shuttle Services:

Organize locally managed shuttles to transport residents and tourists, especially during peak tourist seasons. These services can focus on areas with limited car access, catering to both local commuting needs and tourism-related mobility.

Benefits:

- Provides accessible and affordable transport for both residents and tourists, reducing car dependence.
- Enhances local businesses by improving access to shops, restaurants, and attractions. The service also creates jobs and fosters year-round tourism, leading to increased spending in the community.

5.2 Active Transportation Solutions

Bike-Sharing Programs:

Implement docked or dockless bike-sharing services, providing affordable and easy access to bicycles for short trips. This would reduce traffic congestion and encourage residents and tourists to explore the area by bike.

Benefits:

- Promotes healthy, eco-friendly transportation while reducing road congestion.
- Attracts tourists who prefer sustainable travel options, leading to increased visits to local attractions and businesses. It also boosts demand for bike-related services, creating new economic opportunities.

E-Bike Rentals:

Offer electric bike rentals to make it easier to travel through hilly areas or for longer distances. E-bikes would appeal to both tourists and locals looking for a convenient transportation option.

Benefits:

- Increases the appeal of biking as a transport option, especially for those who need to travel longer distances or navigate hilly terrain.
- Increases foot traffic to local businesses and reduces the need for parking, creating a more walkable and attractive environment for both residents and visitors.

Pedestrian and Cycling Infrastructure:

Develop safer, more accessible pedestrian trails and bike lanes, including designated paths for electric scooters. This would improve internal connectivity and reduce reliance on motorized vehicles, promoting healthier, more sustainable transportation options.

Benefits:

- Enhances pedestrian and cyclist safety, encouraging more active forms of transportation.

- Enhances tourism by offering scenic routes that attract eco-tourists and adventure travelers. This increases business for local cafes, shops, and tourist services along these pathways.

Greenways and Bicycle Superhighways:

Build eco-friendly walking and cycling paths that link major areas like downtown, parks, and tourist destinations, encouraging active transportation modes like walking, biking, and running.

Benefits:

- Provides a scenic, safe, and sustainable alternative to vehicle use, promoting a healthier lifestyle and reducing emissions.
- Connects residents and visitors to local businesses and services, enhancing access to employment and retail, thus stimulating local economic activity.

5.3 Shared Mobility Solutions

On-Demand Ridesharing (Rural Model):

Set up a community-driven, rural-friendly ride-sharing service, allowing residents and tourists to book rides through an app. This flexible service could fill the gap where public transit does not reach.

Benefits:

- Increases transportation options in areas underserved by public transit, offering flexibility and affordability.
- Reduces the environmental footprint and parking needs, making the area more attractive for development and tourism, which in turn benefits local businesses.

Car-Sharing Programs:

Develop a program where locals and tourists can access shared vehicles for specific periods, reducing the need for private car ownership. This would also help reduce parking demand and vehicle congestion in busy areas.

Benefits:

- Reduces the need for personal vehicle ownership while cutting down on parking congestion.
- Reduces the environmental footprint and parking needs, making the area more attractive for development and tourism, which in turn benefits local businesses.

Vanpooling:

Organize vanpool services for workers and residents who commute regularly. This option reduces the number of cars on the road and helps lower individual transportation costs.

Benefits:

- Lowers commuting costs and reduces traffic congestion by encouraging shared rides.
- Improves access to employment opportunities, increasing workforce mobility and reducing transportation barriers for local businesses.

Peer-to-Peer Vehicle Sharing:

Enable locals to rent out their personal vehicles to visitors or residents, creating an alternative to traditional car rental services while ensuring better utilization of existing vehicles.

Benefits:

- Provides an affordable, flexible alternative to car rentals, increasing vehicle efficiency in the community.
- Creates an additional revenue stream for residents and increases access to transportation, promoting greater mobility and local spending.

5.4 Alternative Transportation Solutions

Seasonal Boat-Shuttle Services:

Implement water-based transportation services, such as ferries or boat taxis, to move people across Christina Lake during peak seasons. This scenic transportation option would reduce road congestion while adding to the tourism appeal of the region.

Benefits:

- Reduces road traffic while providing an eco-friendly and enjoyable transport option for tourists.
- Allows isolated tourists to access local services and products resulting in increasing seasonal spending, especially for businesses that cater to outdoor recreation and hospitality. While creating another business and economic opportunity.

Electric ATVs/Golf Carts for Short Distances:

Offer low-speed electric vehicles for short-distance travel around Christina Lake. This option would be ideal for tourists exploring the lake's scenic areas and would provide a fun, sustainable transport mode.

Benefits:

- Offers a convenient and sustainable solution for short-distance travel while appealing to tourists.
- Increases operational efficiency for local businesses, while creating innovative jobs in logistics and drone technology.
- Creating business and economic opportunities.

Drone Delivery Services:

Use drones for delivering small packages, groceries, or medical supplies to remote homes and businesses. This service would assist with delivery of essential goods, especially for seniors or those with limited mobility.

Benefits:

- Provides a fast, convenient way to deliver essential goods, especially for hard-to-reach locations or those with limited mobility.
- Increases operational efficiency for local businesses, while creating innovative jobs in logistics and drone technology.

5.5 General Infrastructure and Accessibility Improvements

Improve Interconnectedness of the Trail Network:

Enhance the connectivity of existing pedestrian and biking trails by creating a seamless network that links residential areas, key tourist destinations, local businesses, and recreational sites throughout Christina Lake. The goal is to ensure that trails are easily accessible and encourage more residents and tourists to engage in active transportation.

Benefits:

- Promotes eco-friendly transport, improves access to businesses and recreational areas, and reduces traffic congestion by encouraging non-motorized travel.
- Increases foot traffic to local businesses and encourages eco-tourism, driving spending in local shops, services, and hospitality.

Improved Signage and Wayfinding:

Install better signage and wayfinding systems throughout the community, helping both residents and visitors navigate services, trails, and transportation options more easily.

Benefits:

- Enhances the overall travel experience by making navigation easier and more efficient.
- Improves the visitor experience, encouraging longer stays and repeat visits, which increases spending at local businesses and attractions.

Trail and Pathway Enhancements:

Expand and improve non-motorized pathways, including hiking and biking trails, to ensure safe and convenient movement around Christina Lake.

Benefits:

- Encourages active transportation and improves safety for all users, including cyclists and pedestrians.
- Attracts tourists interested in outdoor activities, boosting business for retailers and service providers catering to these visitors.

Street Lighting and Safety Enhancements:

Add streetlights and improve road safety measures, particularly on pedestrian paths and cycling lanes, ensuring that residents and visitors can travel safely during the night.

Benefits:

- Increases nighttime safety for pedestrians and cyclists, reducing accidents and improving the quality of life.
- Enhances community safety and attractiveness, promoting investment in local businesses and increasing property values.

5.6 Solutions Specific to Businesses

For businesses operating in Christina Lake, transportation is a key factor in maintaining efficient operations, ensuring smooth access for both staff and customers, and expanding market reach. The rural setting and seasonal tourism patterns present unique challenges for local businesses in terms of employee commuting, product delivery, and customer accessibility. To overcome these obstacles, businesses can adopt strategies that support staff commuting, improve the delivery of products and services, and enhance access for both locals and tourists.

Staff Assistance

Cooperative Housing for Employees

Develop co-op housing models or partner with local developers to offer affordable housing for seasonal and permanent employees. This will reduce transportation challenges for staff commuting from farther areas.

Benefit: Reduces commuting time and costs, increases employee retention, and ensures staff are close to their workplace.

Seasonal Shuttle Services for Employees

Partner with transportation providers or organize shuttle services during peak seasons to transport staff between Christina Lake and nearby towns. This could run during specific shifts or be available for flexible employee needs.

Benefit: Enhances employee satisfaction by easing their commute, especially for those without personal vehicles.

Carpool Incentives for Staff

Implement a carpool program, where businesses offer incentives (such as gift cards or bonuses) for employees who carpool. Set up an app or board to help coordinate ridesharing among staff.

Benefit: Reduces parking demand, lowers fuel costs for employees, and promotes a more sustainable workplace.

Delivery of Products and Services

Business-Managed Delivery Services

Establish a business-run delivery service that ensures customers can receive products without needing to visit the physical location.

Benefit: Increases sales by providing an easy delivery option, caters to seniors or residents with limited mobility, and reduces reliance on external delivery providers.

Partnership with Local Delivery Platforms

Partner with local or regional delivery services (e.g., Canada Post, couriers) to expedite the delivery of local products, especially during peak tourist seasons. Focus on offering next-day or same-day delivery within Christina Lake and nearby regions.

Benefit: Provides fast, reliable delivery options that meet customer expectations and increases the competitiveness of local businesses.

Drone Delivery Services

Implement drone deliveries for small products or essential items, especially to hard-to-reach locations within Christina Lake. This is especially valuable for deliveries of groceries, medicines, and other urgent items.

Benefit: Reduces logistical challenges in difficult-to-access areas and provides quick, efficient service, especially during high demand periods.

Local and Tourist Access to Services/Products

Pop-Up Shops or Mobile Vendors

Set up mobile vendors or pop-up shops near key tourist areas during peak seasons. These temporary locations can sell products or offer quick services like bike rentals, refreshments, or local crafts.

Benefit: Increases visibility and access for tourists who may not visit central business areas and offers flexibility in expanding services during the busy season.

Enhanced Signage and Information Kiosks

Install more effective signage and information kiosks around key areas like the beach, parks, and popular tourist spots. These kiosks should offer information about available services, products, and directions to nearby businesses.

Benefit: Improves tourists' access to local businesses, increases foot traffic, and enhances overall visitor experience.

Local and Tourist Shuttle Services to Key Business Areas

Create shuttle services that run on fixed routes between major tourist accommodations, parks, and local businesses. This allows visitors to access services without needing personal vehicles.

Benefit: Eases transportation challenges for tourists, reduces parking issues, and ensures local businesses receive more visitors.

Getting Products Out of Christina Lake

Freight Consolidation Services

Work with local businesses to consolidate shipments when sending products out of Christina Lake. By grouping deliveries, businesses can save on logistics costs and ensure efficient transportation of goods to regional hubs.

Benefit: Reduces shipping costs, increases shipment efficiency, and minimizes environmental impact by reducing the number of trips required.

Collaboration with Regional Distributors

Partner with regional distributors to streamline the supply chain for products leaving Christina Lake. Businesses can coordinate to ensure their products are included in larger distribution networks, reducing costs and transit times.

Benefit: Improves supply chain efficiency, lowers transportation costs, and ensures faster delivery of products to larger markets.

E-commerce Fulfillment Partnerships

Establish partnerships with third-party e-commerce fulfillment centers that handle packaging, shipping, and order processing for goods sold online. This is especially relevant for local artisans or food producers aiming to reach markets beyond Christina Lake.

Benefit: Expands business reach to broader markets, increases online sales, and reduces the logistical burden of handling orders in-house.

Product Transportation by Water

Utilize seasonal boat services for product transport across Christina Lake, especially for heavy or bulky goods. This can serve as a cost-effective way to move goods to nearby locations without the need for road transport.

Benefit: Offers an eco-friendly transportation option that reduces road congestion and logistical costs.

5.7 Solutions for Youth

Youth Bus or Shuttle System:

Establish a dedicated bus or shuttle service designed specifically for youth, allowing them to travel independently to employment, school, recreational facilities, and social activities.

This service would reduce their reliance on parents for transportation and improve their access to key locations both within Christina Lake and to nearby areas.

Benefit: Increases mobility and independence for young residents, supporting their social and educational needs.

Activity and Social Space Development:

Develop more local activities, clubs, and social spaces for youth to engage in within Christina Lake. This would reduce the need for young people to travel outside the community for entertainment or socialization.

Benefit: Keeps youth engaged locally, fostering a stronger sense of community and reducing transportation demands.

Scooter and E-Bike Rentals:

Provide e-scooter and e-bike rental services aimed at youth to facilitate local transportation. These services would offer affordable, eco-friendly transportation options, particularly for short distances.

Benefit: Encourages active transportation, reduces car reliance, and promotes sustainable habits among younger populations.

Community App for Youth Engagement:

Launch a community-focused app or digital platform where youth can find event listings, transportation options, and social engagement opportunities. This app would also provide real-time transportation updates, allowing young people to plan trips more effectively.

Benefit: Improves access to information about local activities and helps youth feel more integrated into community life.

5.8 Solutions for Seniors

School Bus Utilization for Seniors:

Collaborate with School District 51 (SD 51) to use school buses for senior transportation during off-school hours. This would provide a low-cost transportation solution for seniors, helping them access services and social activities without the need for additional resources.

Benefit: Maximizes the use of existing infrastructure, providing seniors with reliable and cost-effective transport options.

Community Bus Service for Seniors:

Establish a community bus service specifically designed for seniors. The service would feature wheelchair accessibility, friendly routes, and convenient stops, enabling seniors to access healthcare, grocery stores, and social events without needing a private vehicle.

Benefit: Enhances mobility for seniors, allowing them to maintain their independence while reducing isolation.

Grocery Delivery Services for Seniors:

Expand and promote grocery delivery services tailored to seniors, ensuring they can access necessary supplies without leaving their homes. This service would be particularly valuable during the winter months or for seniors with mobility issues.

Benefit: Provides a convenient and essential service that reduces the need for travel, improving quality of life for seniors.

Street Lighting and Safe Crosswalks for Seniors:

Improve street lighting and create safer pedestrian crosswalks, particularly in areas frequently used by seniors. This would enhance safety for seniors traveling on foot or using mobility aids, especially during the evening or winter months.

Benefit: Increases pedestrian safety and accessibility for seniors, ensuring they can navigate the community with confidence.



6.0 Identifying Best Fit Actions

It is crucial for communities to identify criteria that help determine which ideas or recommendations best align with their unique context, needs, and desired outcomes. These criteria guide the selection of actions, especially when resources for local economic development are limited. Balancing resource constraints with effectiveness ensures efficiency.

During the community engagement process, including ±350 touchpoints with citizens and businesses, eight key criteria emerged. These criteria were used as a decision-making tool to prioritize the most viable actions, ensuring alignment with community goals for maximum success and long-term impact.

6.1 Criteria for Best Fit

1. Ability to Implementation

- **Description:** This criterion assesses the feasibility and ability to implement a proposed action. Actions that are less complex and require fewer resources can create early successes, building momentum for larger, more ambitious initiatives.
- **Why Applied:** In transportation planning, low-hanging fruit can create immediate positive impacts, allowing for visible progress while building support for more complex projects.

2. Alignment with Community Vision and Values

- **Description:** Ensures that proposed actions are aligned with Christina Lake's core values and long-term vision. This includes priorities like sustainable development, economic diversification, and promoting tourism.
- **Why Applied:** Any transportation solution should reflect and reinforce the community's values and vision, fostering cohesive and meaningful growth.

3. Sustainability of Economic and Social Impacts

- **Description:** Evaluates whether the action will create long-lasting economic benefits and positive social impacts, such as enhancing employment opportunities and improving quality of life.
- **Why Applied:** Sustainable actions ensure that Christina Lake's economy and social fabric remain resilient, reducing dependency on external factors or short-term solutions.

4. Environmental Sustainability

- **Description:** This criterion measures the environmental impacts of the recommended actions. It evaluates how much they contribute to reducing emissions, conserving natural resources, and supporting the region's ecological health.

- **Why Applied:** Environmental sustainability is crucial for preserving Christina Lake's natural beauty, a major draw for tourists, while aligning with long-term climate action goals.

5. Retains/Strengthens Local Economic Base

- **Description:** Assesses how much the action helps retain or strengthen local businesses, increases employment opportunities, or supports the growth of local industries.
- **Why Applied:** Maintaining and growing the local economic base is critical for Christina Lake's long-term economic vitality and community well-being.

6. Protection and Enhancement of Local Infrastructure

- **Description:** Evaluates whether the recommended actions help protect, preserve, or improve existing transportation and community infrastructure.
- **Why Applied:** Investments in transportation should aim to maintain and improve infrastructure, avoiding costly repairs or negative impacts on roads, utilities, and public spaces.

7. Impact on Community Resources (Capacity and Human Resources)

- **Description:** Measures the strain or benefit the action places on local human resources and capacity. This includes evaluating if the community has the required workforce, skills, and time to implement the recommendation.
- **Why Applied:** Transportation actions must be realistic in terms of local capacity, avoiding overburdening existing human resources.

8. Financial Feasibility (Internal Resources Required)

- **Description:** Looks at the financial resources required to implement the action, considering whether the cost is within the region's budget or requires external funding.
- **Why Applied:** Transportation decisions need to be financially feasible, ensuring they do not place an undue financial burden on local governments or businesses.

6.2 Recommended Actions

In order to identify the Top ten (10) Recommended Actions for Christina Lake's transportation plan, the Best Fit Criteria were applied to each action listed in Section 5.0. The selected actions are based on their alignment with community goals, potential for economic growth, environmental sustainability, and ease of implementation. Below are the top ten (10) actions along with a rationale for their selection.

Categorizing the Recommendations

It is important to delineate the **type of tactics or recommendations** based on which stakeholders will be responsible for driving the initiatives. Below, the recommendations are divided into two groups: **Private Sector Driven** and **Local Government/Community Driven**.

Private Sector Driven Economic Opportunities:

1. Seasonal Shuttle Services
2. Bike-Sharing Program
3. Water taxi and Boat Shuttle Services
4. Community Shuttle for Residents and Tourists
5. E-Bike Rentals
6. Freight Consolidation Services

Local Government/Community Driven Programs:

1. Improve Interconnectedness of the Trail Network
2. Improved Signage and Wayfinding
3. Dedicated Bike Lanes and Pedestrian Paths
4. Pop-Up Shops or Mobile Vendors

6.3 Recommendations Explained

These top ten (10) recommended actions represent a comprehensive approach to addressing the transportation and mobility needs of Christina Lake. By implementing these actions, the community can foster economic growth, enhance tourist experiences, and support sustainability, all while promoting a more connected and accessible environment for both visitors and residents.

These transportation solutions are designed to enhance both **economic development** and **lifestyle quality** in Christina Lake. Each action is briefly explained and provides a set of benefits, including economic gains, healthier lifestyles, and environmental sustainability.

1. Seasonal Shuttle Services

- **Concept:** A seasonal shuttle service that operates during peak tourist months, connecting major destinations like campsites, beaches, and local businesses. This reduces road congestion while providing tourists with an easy and eco-friendly way to explore.
- **Benefits:**
 - **Economic Growth:** Increases visitor mobility, boosting local business spending.

- **Tourism Appeal:** Makes remote attractions more accessible, enhancing the visitor experience.
- **Community Benefit:** Eases traffic, improving quality of life for both tourists and locals.

2. Improve Interconnectedness of the Trail Network

- **Concept:** Connecting the existing trails around Christina Lake creates a seamless network for walkers, cyclists, and tourists. This encourages outdoor activities and non-motorized transportation.
- **Benefits:**
 - **Tourism Growth:** Promotes eco-tourism by providing easier access to outdoor recreation.
 - **Economic Impact:** Drives foot traffic to businesses near trails.
 - **Community Health:** Encourages physical activity and wellness for all users.

3. Bike-Sharing Program

- **Concept:** Launch a bike-sharing program that allows residents and tourists to rent bikes for short-distance trips. This would reduce car dependency and promote sustainable, active transportation.
- **Benefits:**
 - **Eco-Tourism:** Attracts visitors seeking eco-friendly transportation options.
 - **Revenue Generation:** Creates a rental income stream for the community or local entrepreneurs.
 - **Active Living:** Encourages healthier lifestyles through increased cycling.

4. Improved Signage and Wayfinding

- **Concept:** Installing clear, consistent signage and wayfinding across the community will help residents and tourists easily navigate between key points of interest, like parks, trails, and businesses.
- **Benefits:**
 - **Tourism Growth:** Reduces confusion, allowing tourists to explore more areas.
 - **Visitor Experience:** Makes navigation easy and stress-free.
 - **Community Benefit:** Enhances access to services and local attractions.

5. Water Taxi and Boat Shuttle Services

- **Concept:** A water taxi service that operates across Christina Lake, providing an eco-friendly alternative to road transport for tourists and residents traveling between beaches, campgrounds, and local shops.

- **Benefits:**
 - **Sustainable Tourism:** Reduces road traffic while offering a scenic travel experience.
 - **Revenue Generation:** Provides fare-based income while increasing lakefront business traffic.
 - **Tourism Appeal:** Enhances the visitor experience with a unique, scenic mode of travel.

6. Community Shuttle for Residents and Tourists

- **Concept:** A year-round shuttle that serves both residents and visitors, connecting key locations in Christina Lake to and from Grand Forks. It supports local mobility and reduces the need for private vehicles.
- **Benefits:**
 - **Economic Growth:** Boosts spending by improving access to local businesses.
 - **Resident Support:** Provides essential transportation for those without cars.
 - **Tourism Enhancement:** Simplifies transport for visitors, encouraging longer stays.

7. E-Bike Rentals

- **Concept:** Launch an accessible e-bike rental service to offer tourists and residents an eco-friendly, accessible way to explore Christina Lake's trails and more remote attractions.
- **Benefits:**
 - **Tourism Growth:** Attracts eco-conscious tourists looking for green travel options.
 - **Revenue Generation:** Provides a rental income stream for local businesses or entrepreneurs.
 - **Healthy Living:** Encourages physical activity through a fun, convenient travel option.

8. Dedicated Bike Lanes and Pedestrian Paths

- **Concept:** Develop dedicated bike lanes and pedestrian paths to encourage safer, greener travel options for cyclists and walkers, reducing car dependency.
- **Benefits:**
 - **Safety Enhancement:** Improves safety for pedestrians and cyclists.
 - **Tourism Appeal:** Attracts outdoor enthusiasts looking for safe, active transportation options.

- **Sustainability:** Encourages non-motorized transportation, reducing emissions.

9. Pop-Up Shops or Mobile Vendors

- **Concept:** Introduce pop-up shops and mobile vendors in high-traffic areas during the peak season. This gives local entrepreneurs a flexible way to serve tourists and residents.
- **Benefits:**
 - **Economic Growth:** Increases local revenue, especially during tourist seasons.
 - **Tourism Attraction:** Enhances the visitor experience by providing convenient retail options.
 - **Entrepreneurial Support:** Offers a low-barrier way for local businesses to engage with tourists.

10. Freight Consolidation Services

- **Concept:** Centralize freight deliveries to reduce the number of delivery trucks on the road. This helps businesses save on logistics costs while reducing traffic congestion.
- **Benefits:**
 - **Economic Efficiency:** Lowers delivery costs for businesses through consolidation.
 - **Environmental Sustainability:** Reduces vehicle emissions and road traffic.
 - **Community Benefit:** Improves road safety and air quality, creating a more pleasant environment for residents.

Each of these recommended actions is designed to foster **economic development, improve quality of life**, and support a **sustainable, active community** in Christina Lake. By implementing these strategies, Christina Lake can become a more connected, eco-conscious, and tourist-friendly destination, benefiting both its residents and visitors.

7.0 Rural Transportation Case Studies

7.1 Case Study: Lake Tahoe, California/Nevada, USA

"Programs like TART Connect have been game-changers for Lake Tahoe. By offering free, on-demand transportation, we've not only helped reduce traffic and pollution but also made it easier for visitors and locals alike to access businesses, trails, and recreational sites. Our community has benefited greatly from these sustainable transportation solutions, and it's exciting to see how they enhance both our economy and our environment."

— Stephanie Holloway, Deputy County Executive Officer, Placer County

Background:

Lake Tahoe, situated on the border between California and Nevada, is a popular year-round tourist destination known for its scenic beauty, outdoor recreation, and small-town charm. Like Christina Lake, Lake Tahoe is a rural community with a strong reliance on tourism, facing transportation challenges due to its fluctuating seasonal population, geographical constraints, and the need for sustainable solutions. With a similar makeup of both residents and seasonal visitors, Lake Tahoe has implemented a number of innovative transportation methods to improve connectivity, reduce congestion, and promote sustainability.

Challenges:

1. **Seasonal Congestion:** The influx of tourists during peak seasons (summer and winter) led to heavy traffic congestion, particularly around popular recreation areas.
2. **Environmental Impact:** The local ecosystem was being affected by the increasing number of cars, with pollution and noise disturbing Lake Tahoe's natural beauty.
3. **Limited Public Transit Options:** Prior to implementing transportation innovations, public transit options were sparse, forcing residents and visitors to rely heavily on personal vehicles.
4. **Accessibility:** The region's remote nature made it difficult for visitors to move easily between recreation sites, lodging, and other key attractions without access to a personal vehicle.

Innovative Transportation Solutions Implemented:

1. Electric Shuttle Service ("TART Connect")

- **Overview:** Lake Tahoe introduced an on-demand, app-based electric shuttle service called **TART Connect**, which operates during peak seasons and connects key areas such as beaches, ski resorts, hotels, and downtown hubs.
- **Impact:**
 - Reduced traffic congestion during tourist-heavy seasons.

- Lowered emissions in environmentally sensitive areas.
- Provided an eco-friendly and convenient transportation option for tourists who do not have access to personal vehicles.
- Offered free or low-cost rides, making it accessible to all economic groups.
- **Applicability to Christina Lake:** Christina Lake could benefit from a similar electric shuttle service to reduce the reliance on personal vehicles and improve connectivity between campgrounds, beaches, hiking trails, and local businesses.

2. Bike and Scooter Sharing Programs

- **Overview:** Lake Tahoe implemented a bike and electric scooter sharing program to provide tourists and locals with affordable, easy-to-use transportation alternatives for short trips.
- **Impact:**
 - Reduced short-distance car trips and parking demand near recreational sites.
 - Encouraged active transportation modes, improving public health and reducing pollution.
 - Integrated well with scenic bike paths and trails, making the experience part of the local tourism appeal.
- **Applicability to Christina Lake:** With its outdoor tourism focus, Christina Lake could introduce a bike and e-scooter rental program to offer an active, scenic, and environmentally friendly way for visitors to move between key attractions.

3. Water Taxi and Shuttle

- **Overview:** To take advantage of Lake Tahoe's large lake, the community introduced seasonal **water taxis** that shuttle visitors between popular beaches, marinas, and restaurants.
- **Impact:**
 - Reduced road congestion by utilizing the lake for transportation.
 - Provided a scenic, enjoyable transportation option that doubles as a tourist attraction.
 - Reduced environmental impact compared to individual car trips around the lake.
- **Applicability to Christina Lake:** Christina Lake could implement water taxis during the summer months to transport visitors between beach areas, campsites, and key attractions, reducing road traffic and enhancing the visitor experience.

4. Multi-Use Greenways and Trails

- **Overview:** Lake Tahoe expanded its **network of multi-use trails**, providing pedestrians and cyclists with safe, designated paths that link popular recreational spots, town centers, and residential areas.

- **Impact:**
 - Encouraged non-motorized transportation, reducing vehicle usage and congestion.
 - Promoted eco-tourism by enhancing the appeal of outdoor activities.
 - Connected residents and tourists to businesses, helping to stimulate the local economy.
- **Applicability to Christina Lake:** Christina Lake can benefit from the development of greenways and multi-use paths that link downtown with campgrounds, trails, and lakeside areas, creating a more pedestrian and cyclist-friendly environment.

5. Integrated Transit Pass

- **Overview:** Lake Tahoe introduced an integrated **transit pass** that can be used for multiple transportation services, including shuttles, buses, and water taxis, making it easier for tourists to navigate the region without a personal vehicle.
- **Impact:**
 - Simplified the process of using public and shared transportation, increasing ridership.
 - Improved the efficiency of the transit system by offering seamless transitions between different modes of transportation.
 - Provided tourists with a stress-free way to explore the area without needing to drive.
- **Applicability to Christina Lake:** Offering an integrated transit pass could encourage visitors to use a combination of shuttles, bikes, and water taxis, enhancing their experience while reducing vehicle dependency.

Results & Lessons for Christina Lake:

Lake Tahoe's innovative approach to transportation, particularly its focus on sustainability and multi-modal solutions, has resulted in:

- **Decreased congestion:** Traffic bottlenecks around key areas have been reduced, particularly during peak tourist seasons.
- **Environmental benefits:** The shift towards electric vehicles, bike paths, and water-based transport options has lessened the community's environmental impact.
- **Improved visitor experience:** Tourists now have more transportation options, allowing them to enjoy the lake's natural beauty and attractions without the stress of navigating traffic.
- **Economic boost:** Increased connectivity has stimulated local businesses, as tourists can more easily access various parts of the community.

Key Takeaway for Christina Lake:

By implementing similar transportation innovations, Christina Lake could reduce congestion, support sustainability, and boost local tourism. The introduction of electric shuttles, bike rentals, water taxis, and integrated transportation passes would align with the community's environmental goals and enhance both resident and visitor experiences.

7.2 Case Study: Bar Harbor, Maine, USA

“Programs like the Island Explorer have revolutionized how we manage tourism in Bar Harbor. With seasonal shuttle services and eco-friendly alternatives, we’ve minimized traffic congestion and environmental impacts, making it easier for visitors to explore both the town and Acadia National Park.”

— Local Tourism Official, Bar Harbor, Maine

Background:

Bar Harbor is a small coastal town with a population of approximately 5,500, primarily known as a gateway to Acadia National Park. During peak summer months, Bar Harbor’s population significantly increases as tourists visit for its outdoor recreation and natural beauty, leading to transportation challenges such as traffic congestion and parking shortages. To address these challenges, Bar Harbor has implemented multiple transportation solutions to accommodate both residents and the seasonal influx of visitors.

Challenges:

1. **Seasonal Congestion:** The summer influx of tourists creates heavy traffic congestion, particularly around downtown and Acadia National Park.
2. **Parking Issues:** Limited parking facilities in town and at popular attractions lead to frustration and longer travel times for visitors.
3. **Environmental Impact:** Increased car traffic impacts air quality and increases the carbon footprint in environmentally sensitive areas like Acadia National Park.

Innovative Transportation Solutions Implemented:

1. Island Explorer Shuttle

- **Overview:** A free seasonal shuttle service that connects Bar Harbor with Acadia National Park and nearby communities. The service runs during the peak tourist season and is designed to reduce traffic and parking issues.
- **Impact:**
 - Decreased congestion by providing an alternative to private vehicles.
 - Reduced emissions and environmental impact, especially in the park.
 - Enhanced visitor satisfaction by providing easy access to key destinations.

2. Bike Rentals

- **Overview:** Local bike rental services provide tourists with an eco-friendly option to explore the park and town without a car.
- **Impact:**
 - Increased use of non-motorized transportation.
 - Reduced demand for parking near busy attractions.

- Promoted eco-tourism, contributing to the town's sustainability goals.

3. Pedestrian Pathways

- **Overview:** Development of walkable trails connecting downtown Bar Harbor with surrounding recreational areas, making it easier for visitors to move around without cars.
- **Impact:**
 - Improved accessibility to local businesses and attractions.
 - Enhanced visitor experience and higher foot traffic to local shops and restaurants.

Results & Lessons for Christina Lake

Bar Harbor's approach has successfully reduced congestion and improved the overall visitor experience. By offering eco-friendly transportation options like shuttles and bikes, Bar Harbor has minimized the environmental impact of its tourism industry. Christina Lake could benefit from a similar model by implementing shuttle services and promoting non-motorized transportation options to accommodate its seasonal tourist population.

7.3 Case Study: Stowe, Vermont, USA

"In Stowe, our seasonal shuttles and bike-sharing programs have improved access to our recreational areas while helping us manage the seasonal influx of tourists more sustainably." — Local Government Representative, Stowe, Vermont

Background:

Stowe, a small town of around 4,300 people, is a well-known destination for both winter sports and summer outdoor activities like hiking and cycling. With significant tourist activity during both the winter and summer seasons, Stowe faces challenges similar to those of Christina Lake, particularly with respect to transportation and congestion. To manage this influx, the town has implemented several transportation solutions that improve mobility while promoting sustainability.

Challenges:

1. **Seasonal Traffic Surges:** During both winter ski season and summer hiking season, traffic congestion increases dramatically.
2. **Parking Shortages:** Popular ski resorts and trailheads face parking shortages during peak tourist seasons.
3. **Environmental Strain:** Heavy vehicle traffic impacts air quality and the local environment.

Innovative Transportation Solutions Implemented:

1. Seasonal Shuttle Services

- **Overview:** Free shuttle services connect downtown Stowe with nearby ski resorts and hiking trails during peak seasons, providing an alternative to driving.
- **Impact:**
 - Reduced vehicle traffic and parking issues at key tourist spots.
 - Improved accessibility for visitors, leading to higher tourist satisfaction.
 - Decreased environmental impact from reduced car usage.

2. Bike-Sharing Program

- **Overview:** A seasonal bike-sharing program provides a sustainable way for tourists to explore the town and nearby recreational areas without relying on cars.
- **Impact:**
 - Encouraged active, eco-friendly transportation options.
 - Alleviated parking congestion by offering a flexible alternative to driving.
 - Increased foot traffic to local businesses.

3. Pedestrian-Friendly Downtown

- **Overview:** Infrastructure improvements made downtown more walkable, encouraging tourists to explore the town on foot.

- **Impact:**
 - Reduced the need for short-distance car trips.
 - Supported local businesses by increasing pedestrian traffic.
 - Improved the overall visitor experience.

Results & Lessons for Christina Lake

By implementing shuttle services and bike-sharing programs, Stowe has successfully managed its seasonal population surges while promoting sustainability. Christina Lake could adopt a similar approach, utilizing shuttles and non-motorized transportation to enhance visitor mobility, reduce congestion, and boost local business.

7.4 Case Study: Eureka Springs, Arkansas, USA

"Our trolley system and bike rental programs have been a game-changer for Eureka Springs. Tourists can now move easily through our historic downtown without the need for cars, benefiting both our local economy and the environment."

— Local Tourism Official, Eureka Springs

Background:

Eureka Springs, with a population of about 2,100, is a historic town known for its scenic beauty, springs, and outdoor recreational activities. The town faces significant seasonal tourism surges, particularly during the spring and summer, which cause congestion in its narrow streets. Eureka Springs has implemented several transportation solutions to alleviate these issues and improve the visitor experience.

Challenges:

1. **Congestion in the Historic Downtown:** The town's narrow streets become congested during peak tourist seasons, making parking and driving difficult.
2. **Limited Parking:** There is limited space for parking in the historic downtown area, causing frustration among visitors.
3. **Environmental Concerns:** Increased traffic impacts the town's air quality and historic charm.

Innovative Transportation Solutions Implemented:

1. Trolley System

- **Overview:** Eureka Springs has a year-round trolley system that expands service during the tourist season, providing a low-cost transportation option for visitors.
- **Impact:**
 - Reduced vehicle uses in the congested downtown area.
 - Made it easier for tourists to access attractions without the need for a car.
 - Improved air quality and preserved the town's historic character.

2. Bike Rentals and Electric Scooters

- **Overview:** Local businesses offer bike and electric scooter rentals for tourists to navigate the narrow, hilly streets.
- **Impact:**
 - Encouraged sustainable, non-motorized transportation.
 - Alleviated parking and traffic issues in downtown areas.
 - Provided a fun and flexible transportation option for tourists.

3. Pedestrian-Friendly Infrastructure

- **Overview:** Improvements to sidewalks and pedestrian paths made the downtown area more walkable, encouraging tourists to explore the town on foot.
- **Impact:**
 - Increased foot traffic to local shops and restaurants.
 - Reduced vehicle congestion, especially in areas with limited parking.
 - Improved visitor satisfaction by making it easier to navigate the town without a car.

Results & Lessons for Christina Lake

Eureka Springs' combination of trolleys, bike rentals, and pedestrian-friendly infrastructure has successfully addressed seasonal congestion and enhanced the visitor experience. Christina Lake could implement similar solutions to manage its seasonal tourism and improve connectivity while maintaining its environmental and cultural integrity.

Key Takeaways for Christina Lake

By looking at how small, tourism-heavy communities like Bar Harbor, Stowe, and Eureka Springs have managed their seasonal populations, Christina Lake can adopt similar multi-modal transportation solutions. These include implementing seasonal shuttle services, promoting bike rentals, and enhancing pedestrian-friendly infrastructure, which would reduce congestion, boost eco-tourism, and improve the overall visitor experience.

8.0 Operationalizing the Recommendations

While an accompanying report has been created to assist community members in implementing the recommended actions for Christina Lake, this section provides a high-level, six-step critical path. Operationalizing these recommendations will require broad support and long-term commitment from local stakeholders. To help Christina Lake transition smoothly from planning to action, we have outlined a series of milestones and activities to guide the process.

Step 1 – Create a Transportation Team

- **Goal:** Form a dedicated team or committee that will oversee the implementation of transportation initiatives.
- **Actions:** Include representatives from the local government, tourism board, local businesses, and community groups. This team will coordinate activities, secure funding, and ensure stakeholder alignment.

Step 2 – Assign Roles and Develop a Timeline Based on Action Plans

- **Goal:** Establish a clear roadmap outlining the key phases of implementation, ranging from short-term victories to long-term objectives, ensuring that each action has a designated leader and a realistic timeline.
- **Actions:** Break each recommendation down into specific, manageable tasks. Assign responsibilities to relevant stakeholders (e.g., transportation team, local government, businesses), and create a timeline with deadlines for each phase. Allocate the necessary resources—such as funding, personnel, or partnerships—to meet each goal effectively. This ensures accountability and keeps the project on track from start to finish.

Step 3 – Secure Funding and Resources

- **Goal:** Identify and secure the financial and human resources needed to implement each recommendation.
- **Actions:** Apply for local, provincial, and federal grants, seek partnerships with local businesses, and explore potential for private sector investment in areas like shuttle services and e-bike rentals.

Step 4 – Engage the Community and Stakeholders

- **Goal:** Foster community buy-in and involve key stakeholders in the planning and implementation phases.
- **Actions:** Hold public consultations, workshops, and town hall meetings to gather input and adjust plans based on community feedback. Keep stakeholders informed through regular updates and progress reports.

Step 5 – Begin Pilot Projects

- **Goal:** Test select transportation solutions on a smaller scale before full-scale implementation.

- **Actions:** For example, launch a **seasonal shuttle pilot program** during peak tourism months or initiate a **bike-sharing program** in one high-traffic area. Use these pilots to gather data, adjust strategies, and build community support.

Step 6 – Measure Success and Adjust

- **Goal:** Monitor the progress of each initiative using key performance indicators (KPIs).
- **Actions:** Track metrics like usage rates, economic impact on local businesses, and reductions in road traffic and emissions. Use the data to refine and scale up successful initiatives.

By following these steps, Christina Lake can successfully move from planning to execution, ensuring the recommended transportation solutions are effectively implemented. This structured approach allows for **community involvement, strategic planning, and measurable outcomes** that will benefit both residents and tourists.

9.0 Concluding Thoughts

The **Christina Lake On the Move Transportation Plan** is not just a set of recommendations—it is a **course of possibility** charted by the collective voices and insights of nearly 400 community members. This plan is the result of the **shared ideas, beliefs, and values** that were brought to light through public engagement, consultation, and collaboration. These contributions have created momentum, laying the groundwork for a future where Christina Lake can thrive through better connectivity, accessibility, and sustainability.

The journey toward improving transportation in Christina Lake is a reminder of the **power of community**—of how coming together with a common purpose can generate solutions that benefit everyone. The discussions and exchanges that took place through this process were not only about identifying immediate needs but also about envisioning what Christina Lake could become when residents, businesses, and leaders collaborate to achieve shared goals.

The true strength of this plan lies in the **shared commitment** of the community to work together. It serves as a reminder that the greatest progress is made when diverse voices come together to share their hopes, concerns, and visions for the future. Through this collective effort, Christina Lake has created a path forward, full of potential and possibility, for a stronger, more connected, and prosperous community.