Broadband Strategic Framework
2016/17 - 2019/20
Introduction

Working with Basin communities and rural areas to improve connectivity

High-speed Internet connects citizens, enables businesses to remain competitive in a global economy, supports education, helps attract and retain youth and augments the delivery of health and government services. It can improve the quality of life, well-being and prosperity of Columbia Basin residents as well as the sustainability of smaller and rural/remote communities.

Columbia Basin Trust (the Trust) recognizes that, in order to be successful, our region needs better high-speed connectivity. Yet in many areas, there isn’t adequate telecommunications infrastructure or services available. To some extent, the region’s low population and challenging geography for infrastructure development means there isn’t necessarily a business case for a traditional telecommunications provider to make the desired levels of service available.

To meet the needs of residents and communities, the Trust has made broadband one of its strategic priorities. In 2011, it created a wholly owned subsidiary, the Columbia Basin Broadband Corporation (CBBC), to work toward providing connectivity to a broadband network across the region and fostering the development of services over that network.

The Trust provides funding support for CBBC’s ongoing operating costs, and the costs of activating CBBC’s fibre optic network in the region. See map on page 7.

A significant portion of CBBC’s initial goal has been achieved: to activate the regional network. We are now working with communities and rural areas to interconnect them to the network, while exploring and pursuing opportunities to expand the network where appropriate.

As the telecommunications industry is constantly evolving and the needs of communities and rural areas continue to change, this plan is intended to guide CBBC’s activities for three years to 2020. CBBC expects that its roles, objectives and tactics will need to be revisited and adjusted. In the long term, the Trust is committed to helping residents take part in the digital world.
Background

Since 2013, CBBC has:

- Activated a ~900km scalable network, future proofing for the region’s increasing bandwidth demand.

- Finalized an agreement with the Regional District of East Kootenay to activate 120km of its dark fibre and interconnect that fibre to the CBBC network.

- Completed an innovative 36km submarine fibre cable deployment in Kootenay Lake between the communities of Balfour and Kaslo.

- Started providing service to rural Internet Service Providers (ISPs); we now serve a number of different ISPs at various network points of presence across the network.

- Increased its number of local government customers.

- Supported communities to develop last mile fibre networks (Nelson, Trail and Kaslo) and built and activated a last mile network (Rossland).

- Received over $5 million in funds from the federal government, provincial government and regional districts to improve rural broadband to over 12,000 households.

- Built its knowledge in fibre network development and management.
CBBC Roles

1. **Network Operator**: CBBC will continue operating its network and any additions to it, ensuring overall reliability.

2. **Wholesale Provider**: CBBC will act as a wholesale provider to Internet service providers reselling services over the CBBC network.

3. **Service Provider**: CBBC will be a direct service provider only in special circumstances when serving anchor tenants (e.g. public sector entities or large industry).

4. **Funding Partner**: CBBC will partner on funding initiatives that allow it to leverage its resources and pursue the objectives in this plan.

5. **Broadband Innovation Advocate**: CBBC will enable innovative efforts to use broadband that further social and economic impact.

CBBC’s mission is to advance social and economic development in the Basin through the development and use of broadband technology.
Objectives

A: Expand the availability of affordable broadband in the Basin.

CBBC will focus its efforts on increasing the availability of affordable broadband around the Basin. By expanding the physical network and developing the required infrastructure, CBBC can connect service providers to remote and rural communities and enable them to offer high quality services to Basin residents.

Tactics

1. Develop last mile fibre networks in Basin communities, both through independent (CBBC-led) builds and builds undertaken in partnership.
2. Develop reliable information on the current availability of high-speed Internet within the region.
3. Expand the physical CBBC fibre optic network.
4. Interconnect rural Internet service providers.
5. Support rural Internet service providers in providing high quality and affordable services.

B: Enable and facilitate social and economic development initiatives that use broadband technology and the CBBC network.

Robust broadband services are integral to ensure that communities in the Basin remain relevant and vibrant through access to fundamental online services and have the ability to fully participate in the digital economy. This objective also aligns with other Trust objectives in areas such as economic development, housing and recreation infrastructure.

Tactics

1. Facilitate the development and support the implementation of intelligent community strategies.
2. Assist anchor tenants in developing and implementing broadband use strategies.
C: Increase utilization of the CBBC network.

CBBC will increase the number of Internet Service Providers and anchor tenants utilizing its network to create economies of scale. Internet Service Providers in the Basin have the option of subscribing to affordable wholesale Internet bandwidth, and in turn those services can be offered to residents at reasonable rates.

**Tactics**

1. Interconnect rural Internet service providers.
2. Provide and market services directly to potential anchor tenants.
3. Develop value propositions for commercial use of the CBBC network by potential end users and directly market the network to such users.
Glossary

**Activate**: To complete work on a section of fibre optic network so that signals can pass through it.

**Bandwidth**: The amount of data that can be transmitted in a fixed amount of time and is usually expressed in megabits per second (Mbps).

**Broadband**: A way of transferring many digital signals at once using any combination of fibre optic or other cable and wireless signals.

**Broadband network**: Interconnected fibre optic, other cable and wireless links as well as networking equipment and other related infrastructure that enables and supports a high-speed connection between devices.

**Connectivity**: The state of being connected to high-speed Internet.

**Dark Fibre**: Unused/inactivated fibre optic cable.

**Fibre optic network**: A linked series of equipment and fibre optic cables made up of many glass strands, each about the thickness of a human hair; the fibre is located underground and above ground across the Basin and can transmit very large amounts of data by converting it to light signals that move at high speed and high volume.

**High-speed Internet**: Access to the Internet at a data transfer rate of at least 5 megabits per second for downloads and 1 megabit per second for uploads, which is much faster than those provided by the standard dial-up connection of only 56 kilobits per second.

**Internet service providers**: Organizations that provide Internet services to customers.

**Last mile**: The extension of the network into a community or rural area, and particularly the infrastructure needed to reach individual households and businesses, as compared to CBBC’s Basin-wide network, which may be viewed as the “first mile.”

**Service providers**: Organizations that provide a wide range of Internet and non-Internet services e.g. data backup, videoconferencing, financial systems, GIS, telephone and television.