DIP Connectivity Component Interim Report

April 2021
Submitted by Scott Leslie, BC Libraries Cooperative

Introduction

At the start of April 2020, a month into the global pandemic, the BC Libraries Cooperative (the Coop) was instructed it had received a one-time funding package of $1.8M from the Province of B.C. to assist B.C. public libraries with digital initiatives and collections. $250,000 was directed specifically to improving internet connectivity and, where possible, support poorly connected public library branches. This work is identified in B.C.'s Strategic Plan for Public Library Service. The Co-op is a key partner to the Ministry of Municipal Affairs' Public Libraries Branch (PLB) and has worked closely with Co-op members to better support their technology infrastructure and better understand the state of connectivity in public libraries throughout BC. Connectivity is critical in the digital age, yet adequate broadband is always in short supply for our members, particularly those in rural or remote locations. Most libraries are faced with both rising costs and expanding opportunities resulting from our increasingly connected society.

The subsequent plans and programs that were put in place will be funded and executed through the end of 2021. Unused funding can be utilized through 2022-23. A regular reporting mechanism is in place through the Co-op/PLB DIP Quarterly Planning meetings and annual report cycle under the General Letter of Expectation. A year into this work we can report some significant progress. This report then covers the work to date and describes some proposed program changes for the 2021-22 fiscal year

Background to Current Work

The last survey on public library connectivity was performed in 2017 and published by the branch in 2018 (cf
https://www2.gov.bc.ca/assets/gov/residents/sports-and-recreation/arts-culture/public-libraries/2018_connectivity_survey_report--20180705_final.pdf) 70 out of 71 BC libraries responded (representing 179 Branches, with one major regional library failing to respond.) This was used as the basis to focus the current activities.

To summarize the 2018 report, 121 of the responding branches (67% of overall branches, representing 35 out of 70 or 50% of responding BC library systems) did not look to need any further assistance based both on the availability of fast internet connection and their own self evaluations of having sufficient network capacity.

This means roughly 50% of libraries in BC, or 35 library systems, appeared as though they might benefit from some network enhancements, though not all self-assessed that way. Need for subsequent support for planning and local technical expertise was also identified in the Connectivity Survey Report and Analysis identified four key recommendations:

1. Facilitate meetings of local stakeholders to share information and work collaboratively on regional connectivity issues
2. Offer annual funding programs for both one-time connectivity infrastructure investments and sustained access to upgraded connectivity offerings
3. Further investigate the specific needs of libraries requiring more complex or significant investment or infrastructure (categories "B" and "C") in order to plan and prioritize next steps
4. Support efforts to develop and promote regional and consortial connectivity offerings

Of these, recommendations 1, 3 and 4 will be best-addressed by providing access to a full-time, project-based consultant to work directly with public libraries. Members continue to identify limited technical network and connectivity knowledge as a barrier in planning and sustaining local connections.

Based on this study and past recommendations, the Co-op proposed 3 separate but related strategies to assist these libraries with the current one-tme funds:

1. Connectivity Top-Up Fund - a number of libraries were found to be in jurisdictions that had faster available internet infrastructure but were not currently using it, often because of cost. This fund offered up to $1200/year over 3 years to supplement their existing internet budget, with a view to allowing them to build a case for sustained increased funding at that rate or higher thereafter.
2. Strategic Network Hardware Fund - throughout our years of engagement with libraries and in discussions in preparation to formulate this plan, the Co-op was informed that, in addition to external connectivity being an issue, the internal networking is also often a problem, and in some cases would need to be expanded in order to facilitate faster external service. The pandemic ironically also created pressures on branches' networks - while closed, they often found

themselves trying to offer their networks outside their buildings to patrons starved for connectivity. Because of this the second element was a fund to provide resources for hardware improvements. Both funds were put in place by early June 2020, so as to be available to branches facing immediate demands and who knew what they wanted to do to meet them.

3. Connectivity Consultant - finally, again and again the Co-op had heard that in addition to funds, small libraries, and some mid-sized ones, were also missing the technical expertise to know what improvements should be made. In addition, some of the connectivity challenges in the province aren't just local, and a holistic overview that engages with funders and telecommunications providers at a higher scale was seen to be able to move the entire sector along quicker. A consultant was hired in late July and a call for engagements started in August 2020.

Connectivity File - What We've Accomplished So Far

Since opening the funds in July, and opening up the consultant for engagements in August, the following (expanded in much greater detail below) have been accomplished:

- 4 libraries successfully received Connectivity Top Up Funds and drastically improved their internet connections.

- 8 libraries successfully received Hardware Funds that have helped overhaul, augment and improve their internal networks

- 11 libraries were actively engaged by the consultant

- In addition, the consultant has produced a number of guides for libraries, is leading a "lendable connectivity" project on behalf of libraries across the province, and has made significant headway in establishing public libraries' significance as internet access hubs with both telecommunications providers and large provincial communications infrastructure funders.

In total 20 individual libraries have so far been helped either through access to the funds or consulting, and in some cases all three. This is **57%** of the libraries identified through the 2018 report as likely requiring improvements to their connectivity. Below is a list of these libraries and the ways in which they have engaged with this funding:

	Consulting	Hardware Fund	Top Up Fund
Chetwynd Public Library	x	x	x
Midway Public Library	x	x	
Beaver Valley Public Library	x		
Fernie Public Library	x		
Nakusp Public Library	x		
Salmo Public Library	x		
Stewart Public Library	x		
Squamish Public Library	x		
Mackenzie Public Library	x		
Southern Gulf Islands Library Commission (Pender Island Public Library)	x		
Fort Nelson Public Library	x		
Prince Rupert Public Library		x	
Greenwood Public Library		x	
Bowen Island Public Library		x	
Richmond Public Library		x	
Penticton Public Library		x	
Grand Forks and District Public Library		x	
Hudsons Hope Public Library			x
Alert Bay Public Library and Museum			x
Invermere Public Library			x

Proposed Changes to DIP Connectivity Projects

Based on the progress to date, as outline in the interim status report, and considering the funds remaining and the timeline that remains to engage the consultant, the following changes to the original Connectivity Project Plan and budget are proposed:

- Reduce Top Up fund budget from $75,000 to $40,000
- Redirect that $35,000 to Network Hardware Fund for new total of $85,000
  - Take off the current spending cap ($1500) for Network Hardware Fund. Expand scope of fund to include network services as well as hardware
- Redirect some of the Consultants time to lead a province-wide effort on Lendable Connectivity (up to 200 hours)
- Redirect some of Consultant's time (~150 hours) to developing a strategy for IT support to small rural libraries in BC
- Reduce consultant's budget from $100,000 to $90,000

The revised budget would thus look like this

Item	Original Budget	Revised Project Budget
Project 1 - 3 year Connectivity Top-Up Fund	$75,000	$40,000 spread over 3 years
Project 2 - One time Connectivity Hardware Fund	$50,000	$85,000
Project 3 - Connectivity Consultant	$100,000	$90,000
Co-op Admin and Coordination Fee	$25,000	$35,000
Total	$250,000	$250,000

Appendix 1 – Detailed Reporting on DIP Connectivity Efforts to April 1, 2021

Library Connectivity Micro-Grants (Projects 1 and 2)
All successful funds awarded can be found, along with the work they enabled, at
https://digiprojects.libraries.coop/connectivity/successful-grantees-to-date/

Connectivity Top Up Fund

The original intake was launched in July 2020. Libraries were invited to apply using this form https://digiprojects.libraries.coop/apply-for-the-connectivity-top-up-fund/ and the announcement went out through multiple channels, including presentations to ABCPLD, the federation coordinators, mass mailous to the Co-op's membership and via website and social media.

To date 5 libraries have applied, 4 approved (1 was redirected to work with the consultant) and a total of $8,969.76 of the budgeted $75,000 (over 3 years) has been awarded to date.

For the most part, libraries who received these funds were able to act immediately to improve their connection speeds as typically this had not been an infrastructural shortfall but a funding one. Reporting on the funds' impact began in late March 2021, with submissions being done via this form http://digiprojects.libraries.coop/connectivity/connectivity-top-up-fund/connectivity-top-up-fund-submit-a-report/ and response required by April 30, 2021 for the current set of fund recipients.

The fund remains open and some additional uptake is expected via consulting engagements.

Strategic Network Hardware Fund

The original intake was launched in July 2020. Libraries were invited to apply using this form https://digiprojects.libraries.coop/connectivity/network-hardware-fund/apply-for-strategic-connectivity-hardware-funds/ and the announcement went out through multiple channels, including presentations to ABCPLD, the federation coordinators, mass mailouts to the Co-op's membership and via our website and social media.

To date, 8 libraries have applied for these funds, 8 have been awarded a total of $10,439 of possible $50,000 available in the fund.

Not all libraries have completed work based on these funds, however reporting on the funds' impact began in late March 2021, with submissions being done via this form https://digiprojects.libraries.coop/connectivity/network-hardware-fund/strategic-network-hardware-fund-submit-a-report/ and response required by April 30, 2021 for the current set of fund recipients. Extensions are being granted to those libraries still undergoing work in order to get meaningful data on the impacts of this funding.

It should be noted that Libraries also received funding for technology upgrades under the $1.2M direct-to-library component of the Province's overall $3M Strategic Plan for Public Libraries grant. This funding preceded the Coop's micro-grant program and may have pre-empted its impact. Limited staff capacity due to COVID-19 may have also resulted in the low uptake of the micro-grant program. PLB's annual reports may provide further insight into the needs of libraries to help us better understand the gaps and opportunities as we move the project forward.

Connectivity Consultant

The Connectivity Consultant, Stephen Forrest, began his work with the Co-op and libraries at the start of August 2020. In that first month the full scope of work was determined and a strategy developed to implement it. It involved the following deliverables:

Deliverable 1: Network Hardware Guide

The first report is a guide for small-mid sized libraries recommending the best hardware and other approaches for interior and exterior (e..g both to telco and for out-of-building connectivity) networking.

The report was completed and published in November. 2020 and is available at https://wiki.libraries.coop/doku.php?id=public:network-tech-guide:start

Deliverable 2: Planning Guide to Leandable Connectivity Projects

The second report is a framework and best practice guide for libraries looking to provide access to patrons from home – this may take the form of device lending, hotspot lending or other. This report may include specific device recommendations.

The report was completed and published in November and is available at
https://digiprojects.libraries.coop/wp-content/uploads/2020/11/Lending-Connectivity-Tools-guide-final-Nov2020.pdf

Deliverable 2B: Lendable Connectivity Working Group

The project scope was recently changed to include consultant assistance in negotiating cell charge reductions for BC libraries to assist them in delivering lendable hotspot devices to patrons of libraries. The role of the connectivity Consultant is defined as

- Lead a working group from various libraries to guide a Lendable Technology project. The 1st meeting of the working group was March 25th.
    - During that first meeting the group set itself the task of developing a model lending policy and a number of target patron profiles..
- Negotiate with cell carriers for an overall discount plan for SIM card rates and other cell devices for use in Public Library initiatives (non-exclusive deals).

Deliverable 3: Library Engagements to Develop Connectivity Improvement Plans

The core work of the consultant is to work with libraries across the province (as self-identified and in consultation with the Co-op) to assist them with planning, and liaising with various levels of government, funders and telecommunications providers to develop plans and proposals to improve their branch connectivity. This may include, but not be limited to, gathering data and research on library needs, local conditions, funding opportunities, and telecommunications offerings in the area.

To date, 13 libraries have applied to work with the consultant, though 2 did not follow up on their initial interest.

Throughout March and April 2021 the consultant reached out directly to any remaining libraries identified in the 2018 survey as having a connectivity deficit but who had not yet availed themselves of either his services or the 2 connectivity funds. This resulted in a few new engagements.

Discussions with Internet Service Providers & Provincial Connectivity Projects

Consultant arranged for a customer support team within Telus to answer calls from BC Public Libraries to assist them with information on services from Telus and with issues on existing Telus services. The spreadsheet is held in the Coop Google files for the project.

As of March 31, 1 of 5 Telus reps has sent very useful info back and 3 others are actively working with internal teams. This has already resulted in 1 library being upgraded and 1 in discussion for upgrade (to 75Mb copper service – service is sold as Telus High Speed Internet service).

Consultant held a meeting with 3 Shaw Customer Support team members and asked for improvements in communication for the BC public libraries with their company. They have assigned a primary liaison for all libraries to a single senior account exec, Thom Spring, who has 3 staff resources available to help libraries. Thom works with the wider public service of BC as well and is well known in Municipal accounts across BC. Shaw have promised to present a sector-wide service proposal for the libraries of BC for a new range of services. Since this is part of a much larger service rollout for as yet unknown products, this may not be immediately revealed.

As of March 31, Shaw promised completion this week but anticipate a 2 week period before the 1st meeting is held to review. In the meantime, they are helping Midway to upgrade and rearrange their Shaw account (Telus are unable to deliver service to this library).

Consultant also connected within BC government to get public libraries on the radar for major connectivity efforts the province funds. Had a number of conversations with the Connected Communities project, resulting in libraries being identified as stakeholders in those projects through their municipal/regional representation. Subsequently Connecting Communities BC forwarded a contact list for all the Regional district reps in Connected Communities plus the contacts for funding organisations like Northern Trust development and Coastal Communities.

Creation of Regional Vendor lists in IT & Network Services

Across consultations, and also based on the Co-op's decade-plus experience serving libraries across BC, it is very apparent that many small and rural libraries lack internal IT

support but also lack good vendor and external consultant support. In an effort to help this situation the consultant started to create a list of possible network/IT support companies that can serve specific geographic regions of the province. However the effort has been slow - the Covid-10 Pandemic is having a major effect on the network integrator and IT support businesses in rural areas of BC. Many companies do not even answer the telephone or answer written queries.

As such this task is currently pretty much at a standstill, however will be reframed as part of the 2nd year repositioning of the DIP connectivity projects.