

2017-18 Annual Report



cybera

ACCELERATING INNOVATION IN ALBERTA.



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CONVERSATION WITH THE PRESIDENT

Cybera has been laying many foundations this past year. As well as preparing for several major services that will launch in the 2018-19 fiscal year, our staff have already begun one exciting new initiative: helping the next generation of Canadians build their digital literacy skills.

Cybera has partnered with the Pacific Institute for Mathematical Sciences (PIMS) to develop a free online platform, called Callysto, that teaches data science and computational thinking to kids in grades 5-12. This tool has endless applications, and can be used across many subjects: from math, to literature and history. Approaching problems from a computational thinking mindset is no longer just for engineers and scientists!

This is just one of the many projects that our data science team has taken on in the last year. We've worked with government agencies, First Nations communities, educational institutions, and start-ups to give them the tools and know-how to run their own data analytics. Our cloud developers have also seen a big uptake in data applications on our Rapid Access Cloud — 85% of the new processors added to our cloud are being used for machine learning. It's great to see Albertans embracing these next-generation technologies!

Cybera's networking and development teams have wrapped up the pilot phases of our virtual firewall and federated identity management projects, which will be launched as full production services in the coming months. Both will have important time and money-saving implications for K-12 schools in Alberta.

digital life of Alberta and beyond, we are finding more opportunities to work with Canada's First Nations. Recent projects have covered connectivity, health services, and education. In future, we will report annually on progress towards the calls to action in the Truth and Reconciliation Commission report as they apply to our work.

Advocating for improved connectivity remains at the core of what we do. Canadians no longer have the choice of being able to live comfortably without internet. Our jobs require it. Our education requires it. And, with more government services defaulting to online applications, our way of life now depends on it. Yet, many Canadians living in rural areas are still told that internet is a luxury that they must do without. We believe this is unacceptable. The topic of fair access was a major focus of our 2017 Cyber Summit, and one that we continue to reinforce when we meet with governments, internet providers, and community leaders.

That said, we are inspired by new fibre and satellite connections springing up across Canada, and by the growing awareness of the need for equitable internet. Hopefully, together, we can build the digital access that is foundational to our modern way of life!

Robin Winsor
President & CEO

As Cybera continues to expand our role in the

CONNECT



In the last fiscal year, Cybera welcomed 12 new members to its community, bringing our total membership to 98 organizations. Of these 12 additions, seven connected to CyberaNet, bringing the total percentage of Alberta students utilizing our network to 94% (post-secondary), and 62% (K-12). As of March 31, 2018, we connected over 700,000 Albertans.

PEERING AND INTERNET BUYING GROUP SAVINGS

Our network services alone saved members over \$3.4 million in 2017-18. Of this, **Peering** and the **Internet Buying Group (IBG)** generated the majority of those savings. Peering provides direct connections to major content providers, and the IBG is a bulk-buying bandwidth co-op, managed by Cybera. In the last fiscal year, the IBG saw a 40% decrease in its price, dropping from \$3.75/Mbps to \$2.25/Mbps.

GROWING OUR NETWORK

CyberaNet transported +45,000 TB of data in the 2017-18 fiscal year, an increase of over 30% from the previous year. To facilitate this increase, our network team added internet gateway redundancies to both Calgary and Edmonton. We also set up a redundant 10 Gbps connection to the SuperNet Point of Presence in Edmonton, allowing all SuperNet-connected members in the province to automatically reroute their traffic in the event of an outage.

New network hardware installed in one of Cybera's Calgary core routers also increased the network capacity and speed of CyberaNet, paving the way for future expansion. As well, we were pleased to report the completion of the **Edmonton Urban Network** project, a multi-year build to connect Cybera's education members in downtown Edmonton to our high-speed fibre. NorQuest College became the final institution to directly connect via fibre to CyberaNet as part of this project.

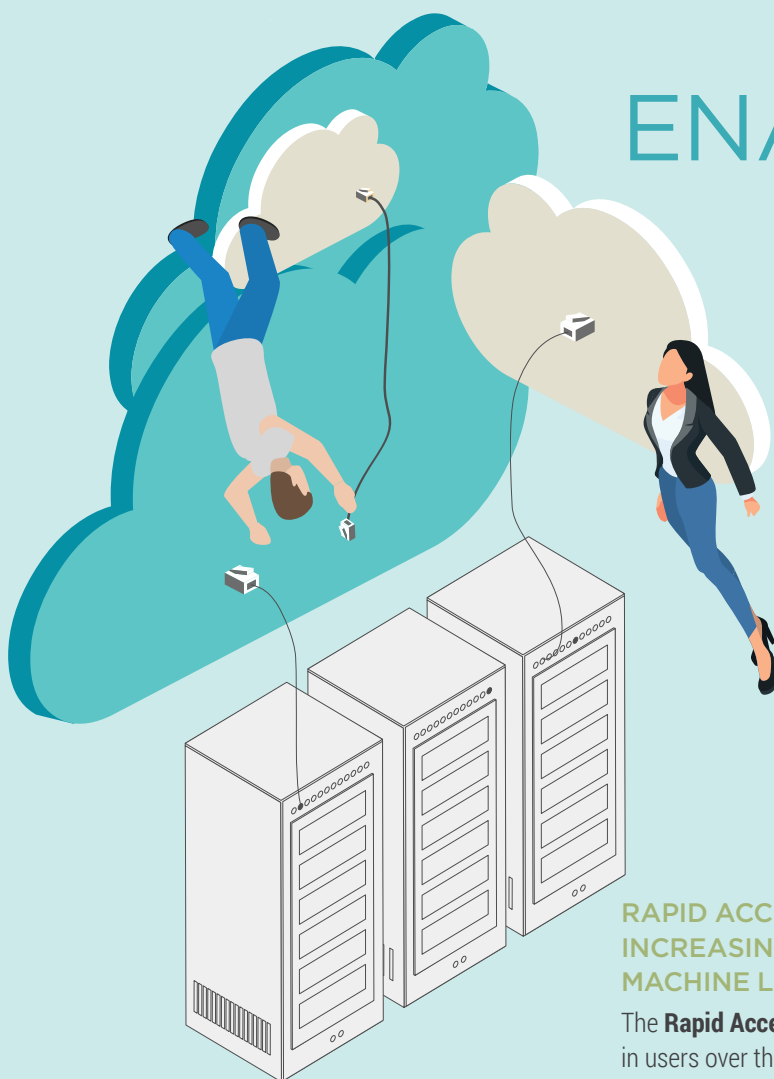
DOMAIN NAME SYSTEM PROTECTION NOW AVAILABLE THROUGH CIRA

Cybera has partnered with the Canadian Internet Registration Authority (CIRA) to offer Alberta's public and education communities improved Domain Name System (DNS) protection and performance. The **D-Zone Anycast DNS** is useful for larger public and education institutions in the province that run their own .ca domain, and are at risk of Distributed Denial-of-Service (DDoS) attacks. The D-Zone DNS Firewall protects educational institutions by: 1) Blocking communications that contain malicious code, 2) Blocking malicious software from reaching host servers, and 3) Continuously updating as new threats are detected. Cybera is now offering one free D-Zone Anycast DNS account to any applicable member.

CONNECTING A EUROPEAN SATELLITE TO THE CANADIAN ARCTIC

In October 2017, the European Space Agency (ESA) launched a state-of-the-art environmental monitoring satellite. Its goal is to collect and transmit detailed air pollution reports, in near real-time, to organizations around the world. Thanks to a concerted effort by Internet Service Providers, the Government of the Northwest Territories, CANARIE, and Cybera, that goal has now been achieved. Working with the DLR German Aerospace Center, the consortium of Canadian network providers managed to get a high speed connection from the town of Inuvik (200 km north of the Arctic Circle) to the National Research & Education Network. Thanks to these efforts, researchers and public leaders now have access to the most advanced air pollution data ever collected, which will help them plan for the future of climate change.

ENABLE



RAPID ACCESS CLOUD INCREASINGLY USED FOR AI / MACHINE LEARNING

The **Rapid Access Cloud** saw a huge bump in users over the last fiscal year. Over 1,460 people registered to use the cloud, an increase of 46% from the previous year. This free and powerful computing resource is available to anyone in Alberta to test their ideas, or conduct computationally-heavy research. To keep up with the growing demand, our operations team increased Cybera's general cloud capacity by 16%, and our graphics processing unit (GPU) capacity by 50%. This latter improvement is particularly valuable to our users in the data science / artificial intelligence / machine learning space, who require massive computing resources. Staff are also taking steps to increase the number of applications available

on the Rapid Access Cloud, and are now hosting three of our largest projects/services (**Callysto**, and the soon-to-be-launched virtual firewall and federated identity services) on this Alberta-based infrastructure.

GROWING DAIR ACROSS CANADA

Since 2011, **DAIR** has continued to offer small-to-medium-sized enterprises across Canada free resources to test, validate, and prove their product or service ideas. Overseen by CANARIE, the program's technical maintenance is provided by Cybera's cloud experts. In the last fiscal year, this team increased the GPU capacity of DAIR, and added a new "Cloud Tracker" feature, which will allow users to monitor their cloud use rates more accurately. They also incorporated new networking capabilities to DAIR, which has allowed advanced users to create their own "networking-as-a-service" environment. As of March 31, 2018, 47 Alberta businesses / entrepreneurs were using DAIR.

DATA SCIENCE TAKES OFF

Following its successful launch in 2016, Cybera's data science team was very busy during the 2017-18 year, with initiatives including:

- Working with a First Nations school authority on two pilot projects to analyze student attendance data;
- Participating in proof-of-concept projects with the Government of Alberta's Open Government group;
- Working with a health data start-up in Calgary to analyze smartphone accelerometer data;
- Collaborating with Alberta Innovates and the Alberta Open Data Initiative to develop a product for storing, combining, and visualizing open data;
- Supporting the data analytics activities

of a Calgary start-up that develops railcar volume measurement devices;

- Working with WestGrid to analyze their system log data;
- Participating in a charity-focused datathon;
- Collaborating with the Alberta Machine Intelligence Institute, Alberta Innovates, and others on a health technology assessment project.

DATA MINING OF CRTC SUBMISSIONS

In early 2018, Cybera launched a **Policy Browser** tool to help Canadians more easily search through the thousands of submissions made to the CRTC's 2015 consultation on "Basic Telecommunications Services." Staff spent a year building a data mining tool to collate and analyze the 65,000+ pages of material submitted to the 2015 consultation. Funded by the Canadian Internet Registration Authority's (CIRA) Community Investment Program, the Policy Browser seeks to clarify how government decisions are potentially affected by public interventions.

CALLYSTO: BRINGING COMPUTATIONAL PROBLEM SOLVING TO K-12 CLASSES

In December 2017, Cybera and the Pacific Institute for Mathematical Sciences (PIMS) teamed up to develop and promote a new K-12 educational platform, called **Callysto**. Our goal is to use coding and data analytics to empower students' computational thinking skills. Callysto is a free, curriculum-based learning and skills development tool that can be accessed from any device with an internet connection. It is funded under the federal government's CanCode program, and is set to run until April 2019. Free teacher training workshops are now being held across Western Canada. For more details, visit Callysto.ca.

SHARE



SHAREIT POSTS HUGE SAVINGS IN FIRST YEAR

ShareIT is Alberta's award-winning IT procurement service run by post-secondary educators. It pools members' hardware and software purchasing needs to increase their negotiating powers with third-party providers. Governed by a collective of post-secondary institutions in the province, and facilitated by Cybera, the service was launched in April 2017. As of March 2018, it had already saved members nearly \$2.3 million. In September 2017, Alberta's K-12 school districts were invited to join the program to purchase equipment from the current agreements, bringing the total number of members to 45. The governing committee is now looking to expand the catalogue of ShareIT offerings to include managed security services and virtualization technologies.

BUILDING AN IDENTITY FEDERATION FOR ALBERTA

In November 2017, Cybera successfully concluded its two-year pilot to develop a federated identity management solution for Alberta K-12 institutions. Federated identity management essentially means that a group of independent organizations have agreed to follow a common set of policies and protocols to allow their staff and students to access shared applications, including Google for Education and Adobe Spark. As well as ensuring a faster and safer login experience for students, the solution reduces the workload for school administrators when it comes to adopting new learning applications. Based on feedback from pilot users, Cybera has set a production launch date for the renamed **Pika Federation** of June 1, 2018.

BUILDING THE VIRTUAL FIREWALL SERVICE

At the end of 2017, Cybera wrapped up the pilot phase of the **Firewall-as-a-Service** project. This pilot saw the successful development of a "virtual" firewall, hosted on Cybera's Rapid Access Cloud, that was tested by six K-12 school districts across Alberta. The goal of the pilot was to reduce the cost of managing firewalls within the K-12 sector. The renamed **Virtual Firewall Service** is set to launch as a production service in April 2018. It will be made available to all Cybera member schools who have bandwidth traffic of under 1.3 Gbps.

ADVOCATE



Canada needs more accessible, affordable internet! This continues to be the rallying cry of Cyberans as our networking and policy experts meet with government, industry, and community representatives. In the last fiscal year, Cybera participated in a Van Horne Institute working group to assist the Government of Alberta in developing a provincial broadband strategy, and also worked with Clearwater County to build a municipal broadband policy framework.

As well, staff participated in the Leadership Council for Digital Research Infrastructure Summit, held in Toronto in June 2017, to discuss the future funding of digital infrastructure across Canada. And we continue to meet regularly with CANARIE, iCAIR (International Center for Advanced Internet Research), and SURFNet to discuss and monitor advances in Research & Education networking.

GOVERNMENT SUBMISSIONS ON CONNECTIVITY NEEDS

In October 2017, Cybera submitted a brief to the House of Commons committee study on "Broadband Connectivity in Rural Canada." Specifically, we focused on what we believe should constitute acceptable high-speed services (we agree with the CRTC minimum target of 50Mbps download and 10Mbps upload for all Canadians), and how the government can encourage competition among internet providers.

We also submitted two interventions to the CRTC: the first in July 2017 on the development of the Commission's broadband funding regime (where we advocated for levelling the playing field for smaller internet service providers), and the second in January 2018 regarding the reseller registration obligation. The goal of the latter submission was to ensure that our member institutions who provide internet services to students aren't required to register

with the CRTC as telecommunications service providers.

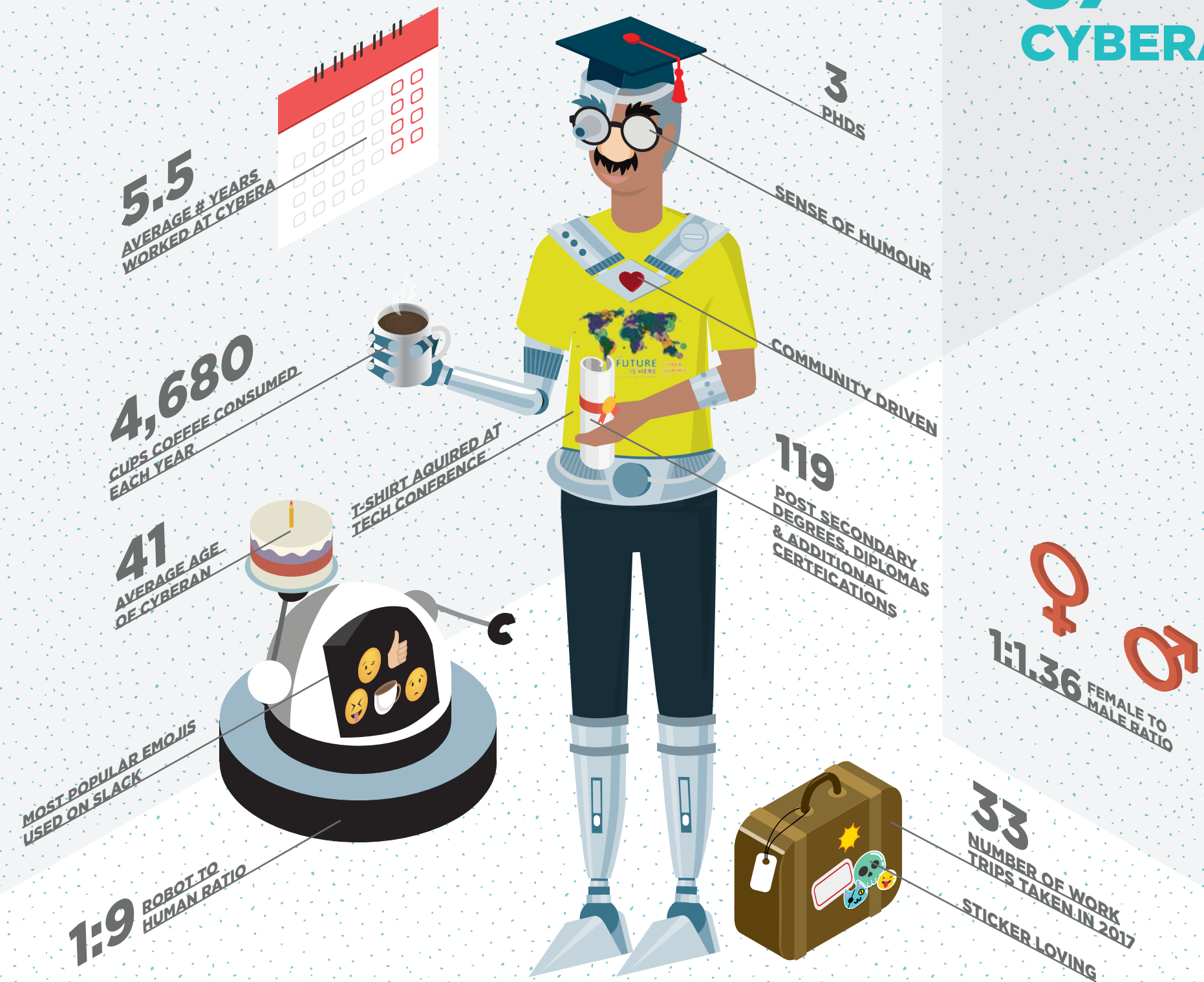
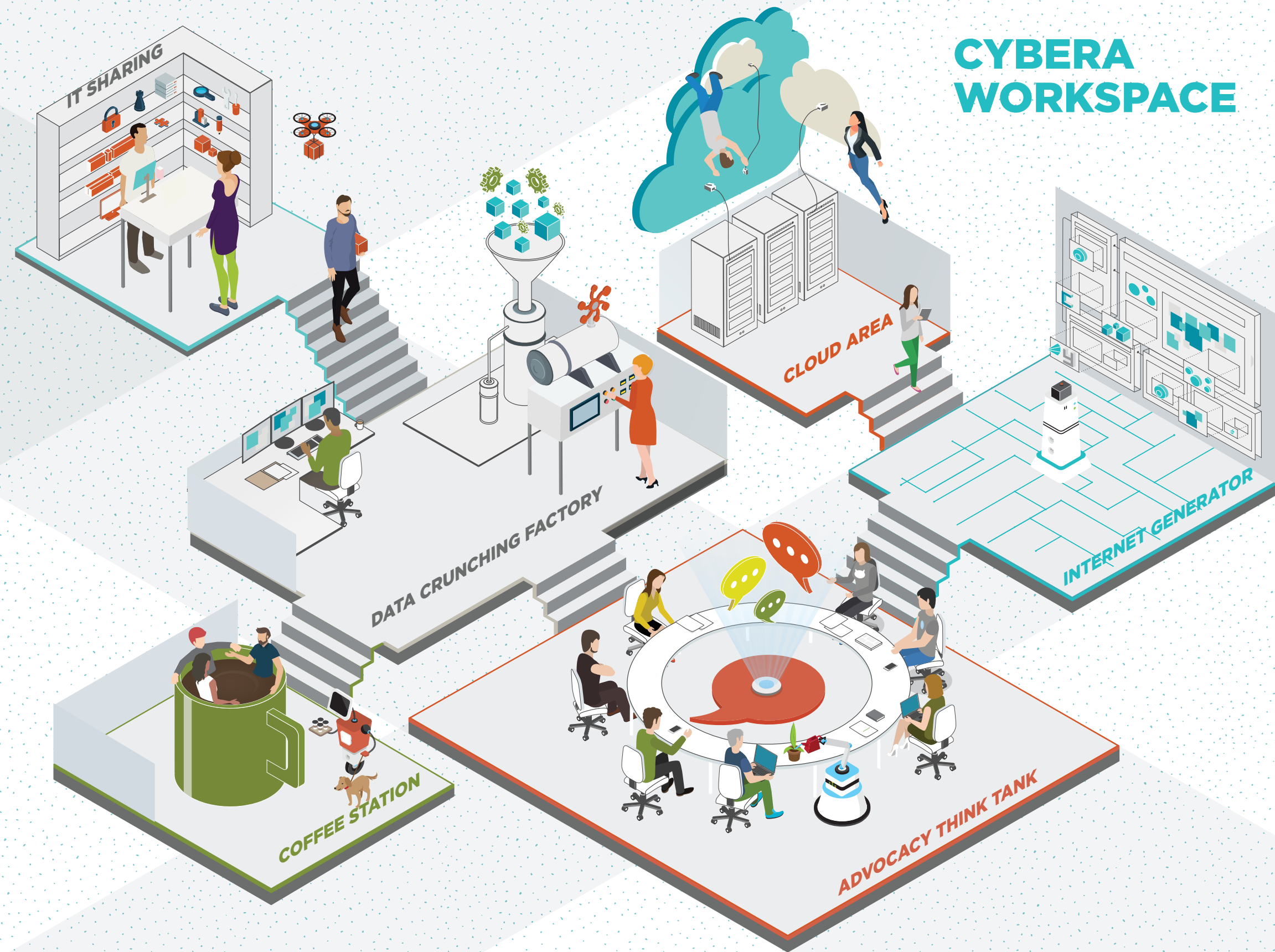
SUPPORTING ALBERTA'S SMART CITIES

In 2017, the federal government announced a \$50-million Smart City Challenge, with the goal of encouraging communities to use innovation, data, and connected technologies to improve the lives of their residents. Cybera is participating on both the City of Calgary's and City of Edmonton's Smart Cities Community Action Teams to develop submissions for the Challenge. The winning community will be announced towards the end of 2018.

INCREASING KNOWLEDGE-SHARING OPPORTUNITIES

In the last fiscal year, Cybera staff presented 26 talks / workshops / lunch and learns in Canada and abroad. This included six presentations on how Albertans can better utilize digital tools, as well as eight technical presentations at conferences on what we have learned through our cloud / networking / data science trials.

AN INSIDE GLIMPSE OF CYBERA



PUBLIC OUTREACH

CYBER SUMMIT 2017

The **2017 Cyber Summit** was held in Banff in November 2017, and centred around the theme: “The Future is Here: It’s Just Not Evenly Distributed”. Over 180 people attended the event, which featured 30 speakers in 16 sessions covering privacy and education, the rural-urban technology divide, and improving



diversity in the workplace. The Summit also included two full-day workshops on virtual reality and smart sensors, which were attended by 60 people. Over 93% of surveyed attendees rated the conference as “good” or “awesome”, and commended the event organizers (Cybera, MRNET and SRNET) for continuing to provide thought-provoking concepts and speakers.

INCREASING CONVERSATIONS

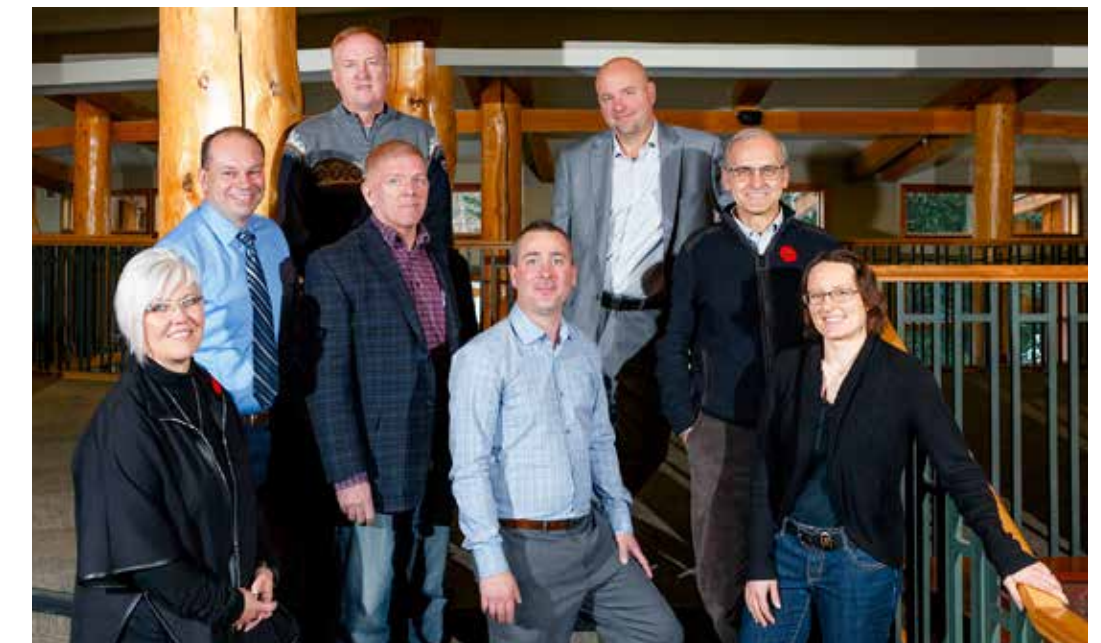
To help our audience adjust to the growing number of services and projects Cybera is taking on, we have released a new member brochure (which can be found online at bit.ly/cybera_brochure). Cybera staff also held a half-day workshop preceding the 2017 Convergence Conference in Calgary to outline all that we do, as well as provide updates on our advocacy efforts. During this workshop, 50+ participants had the opportunity to discuss the technology issues they are facing, of which privacy, security, and network access remained their primary concerns. Cybera will be using their feedback to help build our 2019-22 strategy roadmap.

GROWING MORE SOCIAL

Cybera’s website was visited by over 42,000 people in the last fiscal year, and our Tech Radar blog had over 32,000 views. On social media, Cybera’s Facebook followers increased by 14%, and Twitter followers increased by 9%.

BOARD OF DIRECTORS

The Board of Directors met four times during the last fiscal year. At its November 2017 AGM, Cybera elected two new board members: Brenda MacDonald, Deputy Superintendent of Clearview Public Schools, and Solange Gagnebin, President of High Level Analytics. They replaced Christopher MacPhee, Superintendent of the Canadian Rockies School Division, and Matt Norton, Director of Information Technology Services at Lethbridge College.



2017-18 Fiscal Year Board of Directors at the 2017 Cyber Summit in Banff, Alberta.

(left to right)

Top Row

Peter Garrett - President of Innovate Calgary.

Darryl Vleeming (Chair) - Chief Information Officer at Aurora Cannabis.

Middle Row

Mark Humphries - Chief Information Officer at the University of Lethbridge.

Mike MacGregor (Vice Chair) - Vice Provost and AVP of Information Services and Technology (IST), and a Professor in the Department of Computing Science at the University of Alberta.

Doug Hawkins - Director of Infrastructure Services for the City of Lethbridge.

Bottom Row

Brenda MacDonald - Deputy Superintendent of Clearview Public Schools.

Jaymon Lefebvre - Director of Technology for Wild Rose School Division.

Solange Gagnebin - President of High Level Analytics.

Not Pictured

Susan Skone - Associate Vice-President (Research) and an Associate Professor in Geomatics Engineering at the University of Calgary.

MEMBERS





FINANCIAL STATEMENTS OF CYBERA INC.

YEAR ENDED MARCH 31, 2018

INDEPENDENT AUDITORS' REPORT

To the Members of Cybera Inc.:

We have audited the accompanying financial statements of Cybera Inc., which comprise the statement of financial position as at March 31, 2018, the statements of operations, changes in net assets and cash flows for the year then ended, and notes, comprising a summary of significant accounting policies and other explanatory information.

MANAGEMENT'S RESPONSIBILITY FOR THE FINANCIAL STATEMENTS

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian accounting standards for not-for-profit organizations, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

AUDITORS' RESPONSIBILITY

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

OPINION

In our opinion, the financial statements present fairly, in all material respects, the financial position of Cybera Inc. as at March 31, 2018, and its results of operations and its cash flows for the year then ended in accordance with Canadian accounting standards for not-for-profit organizations.

KPMG LLP

Chartered Professional Accountants
August 24, 2018
Calgary, Canada

STATEMENT OF FINANCIAL POSITION

MARCH 31, 2018, WITH COMPARATIVE INFORMATION FOR 2017

	2018	2017
ASSETS		
Current Assets:		
Cash and cash equivalents	\$ 624,899	\$ 903,737
Accounts receivable (note 2)	679,725	206,677
Prepaid expenses	113,000	57,168
	<u>1,417,624</u>	<u>1,167,582</u>
Property and equipment (note 3)	71,187	78,005
	<u>\$ 1,488,811</u>	<u>\$ 1,245,587</u>
LIABILITIES AND NET ASSETS		
Current liabilities:		
Accounts payable and accrued liabilities	\$ 397,275	\$ 93,802
Deferred revenue (note 4)	54,245	233,921
	<u>451,520</u>	<u>327,723</u>
Net assets (note 5)	1,037,291	917,864
Economic dependence (note 6)		
Subsequent event (note 8)		
	<u>\$ 1,488,811</u>	<u>\$ 1,245,587</u>

See accompanying notes to financial statements.

Approved by the Board:

Signed (Darryl Vleeming, *Chair*)Signed (Mike MacGregor, *Vice Chair*)

STATEMENT OF OPERATIONS

YEAR ENDED MARCH 31, 2018, WITH COMPARATIVE INFORMATION FOR 2017

	2018	2017
Revenues:		
Grant	\$ 2,428,461	\$ 2,475,415
Project	1,881,986	1,482,528
Membership	548,260	508,126
Other	29,624	70,719
Interest	20,801	14,690
	<u>4,909,132</u>	<u>4,551,478</u>
Expenses:		
Project	1,879,675	1,523,835
Infrastructure	1,411,581	1,460,583
Project and partnership development	618,122	603,046
General and administrative	553,658	517,856
Marketing and communications	276,634	294,850
Depreciation	50,035	92,865
	<u>4,789,705</u>	<u>4,493,035</u>
Excess (deficiency) of revenues over expenses	<u>\$ 119,427</u>	<u>\$ 58,443</u>

See accompanying notes to financial statements.

STATEMENT OF CHANGES IN NET ASSETS

YEAR ENDED MARCH 31, 2018, WITH COMPARATIVE INFORMATION FOR 2017

	2018	2017
Net assets, beginning of year	\$ 917,864	\$ 859,421
Excess (deficiency) of revenues over expenses	119,427	58,443
Net assets, end of year	<u>\$ 1,037,291</u>	<u>\$ 917,864</u>

See accompanying notes to financial statements.

STATEMENT OF CASH FLOWS

YEAR ENDED MARCH 31, 2018, WITH COMPARATIVE INFORMATION FOR 2017

	2018	2017
Cash provided by (used in):		
Operations:		
Excess (deficiency) of revenues over expenses	\$ 119,427	\$ 58,443
Add item not affecting cash:		
Depreciation	50,035	92,865
	169,462	151,308
Changes in non-cash working capital:		
Accounts receivable	(473,048)	45,078
Prepaid expenses	(55,832)	(12,088)
Accounts payable and accrued liabilities	303,474	(102,753)
Deferred revenue	(179,677)	(61,908)
	(235,621)	19,637
Investments:		
Purchase of property and equipment	(43,217)	-
Increase (decrease) in cash and cash equivalents	(278,838)	19,637
Cash and cash equivalents, beginning of year	903,737	884,100
Cash and cash equivalents, end of year	\$ 624,899	\$ 903,737

See accompanying notes to financial statements.

NOTES TO FINANCIAL STATEMENTS

YEAR ENDED MARCH 31, 2018, WITH COMPARATIVE INFORMATION FOR 2017

General:

Cybera Inc. ("Cybera") was incorporated on January 12, 1994 under Part II of the Canada Corporations Act as a corporation without share capital as WurcNet Inc. In 1999 it changed its name to Netera Alliance Inc. and in 2007 it changed its name to Cybera Inc. Cybera was continued under the Canada Not-For-Profit Corporations Act on November 27, 2014.

Cybera is an Alberta-based, not-for-profit alliance that manages large-scale inter-institutional information and communication technology projects, including research networks, high performance computing resources, digital content projects and collaboration facilities.

The objectives of Cybera are to provide information and communications infrastructure, project management, advocacy and technical expertise to leverage the resources, skills and services of its members, without preference or partiality to any individual member.

As a not-for-profit organization, the income of Cybera is not subject to tax under paragraph 149(1)(l) of the Income Tax Act (Canada).

1. Significant accounting policies:

The financial statements have been prepared by management in accordance with Canadian accounting standards for not-for-profit organizations.

(a) Revenues:

Revenue from membership dues is recognized evenly over the term of the membership.

Project and grant revenues, which are comprised of contributions towards project and infrastructure costs, is recognized using the deferral method. Under this method, restricted contributions are recognized as revenue when the related project costs are incurred. Restricted contributions received in a period before the related expenses are incurred are accumulated as deferred revenue. Unrestricted contributions are recognized as revenue when received or receivable.

Interest income is recognized when earned.

(b) Project expenses:

As part of the development of applications for high speed networks, Cybera provides funding for certain research and development projects. Cybera charges costs incurred on these projects to operations as incurred. Typically, Cybera does not retain ownership rights in the results of these projects, rather, these rights reside with the project participants on a basis defined in the respective project agreements.

(c) Cash and cash equivalents:

Cybera considers deposits in banks, certificates of deposit and short-term investments with original maturities of three months or less as cash and cash equivalents.

(d) Property and equipment:

Property and equipment is recorded at cost. Depreciation of computer equipment is provided using the straight-line method at a rate of one-third of cost per year.

(e) Donations of services:

Cybera receives from its members and others, donations of professional time and services. The value of these donations is not included in these financial statements as the related fair value cannot be reasonably determined.

(f) Use of estimates:

The preparation of the financial statements in conformity with Canadian accounting standards for not-for-profit organizations requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the dates of the financial statements and the reported amounts of revenues and expenses during the reporting periods. Estimates include the valuation of accounts receivable, estimated life of property and equipment and accrued liabilities. Actual results could differ from those estimates.

(g) Financial instruments:

Financial instruments are recorded at fair value on initial recognition. Freestanding derivative instruments that are not in a qualifying hedging relationship and equity instruments that are quoted in an active market are subsequently measured at fair value. All other financial instruments are subsequently recorded at cost or amortized cost, unless management has elected to carry the instruments at fair value. Cybera has not elected to carry any such financial instruments at fair value.

Transaction costs incurred on the acquisition of financial instruments measured subsequently at fair value are expensed as incurred. All other financial instruments are adjusted by transaction costs incurred on acquisition and financing costs, which are amortized using the effective interest rate method.

Financial assets are assessed for impairment on an annual basis at the end of the fiscal year if there are indicators of impairment. If there is an indicator of impairment, Cybera determines if there is a significant adverse change in the expected amount or timing of future cash flows from the financial asset. If there is a significant adverse change in the expected cash flows, the carrying value of the financial asset is reduced to the highest of the present value of the expected cash flows, the amount that could be realized from selling the financial asset or the amount Cybera expects to realize by exercising its right to any collateral. If events and circumstances reverse in a future period, an impairment loss will be reversed to the extent of the improvement, not exceeding the initial carrying value.

2. Accounts receivable:

Included in accounts receivable are government remittances receivable of \$9,895 (2017 - \$9,172), which include amounts receivable for input tax credits.

3. Property and equipment:

	2018		2017	
	Cost	Accumulated amortization	Net book value	Net book value
Computer equipment	\$ 813,625	\$ 742,438	\$ 71,187	\$ 78,005

4. Deferred revenue:

Deferred revenue represents restricted contributions received that relate to expenses of future years. Contributions are recorded as deferred revenue until the related expenditures have been incurred.

The components of deferred revenue as at March 31 were as follows:

	2018		2017	
Balance, beginning of year	\$	223,921	\$	295,829
Less amounts recognized as revenue in the year		(233,921)		(295,829)
Add amounts received related to expenses of future periods		54,245		233,921
	\$	54,245	\$	233,921

5. Net assets:

In the event of dissolution or winding-up of Cybera, all of its remaining assets, after payment of its liabilities, would be distributed to other not-for-profit organizations by the Board of Directors.

6. Economic dependence and government assistance:

Cybera's future operations are dependent on continued funding from the Alberta Government.

Cybera periodically applies for financial assistance under available government incentive programs. Government assistance relating to research and development expenditures is recorded as a reduction of current year expense when the related expenditures are incurred.

7. Financial instruments and related risks:

Fair value of financial assets and financial liabilities:

Financial instruments include cash and cash equivalents, accounts receivable and accounts payable and accrued liabilities. The fair value of these financial instruments approximates their carrying value due to their short term nature.

(a) Credit risk:

Accounts receivable are subject to minimal credit risk as the majority of the receivables are from government-sponsored institutions. Cash is held at financial institutions that are considered to be creditworthy by Cybera.

(b) Market risk:

Cybera is exposed to the following market risk:

(i) Interest rate risk:

Interest rate risk arises from the holdings of fixed income securities. For every 0.25% change in interest rates, the annual change in interest income would be approximately \$1,206 (2017 - \$2,549).

(c) Liquidity risk:

Liquidity risk is the risk that Cybera will be unable to fulfill its obligations on a timely basis or at a reasonable cost. Cybera is not exposed to significant liquidity risk and manages its liquidity risk by monitoring its operating requirements.

8. Subsequent event:

On April 5, 2018, \$2,250,000 operating grant from the Alberta Government was deposited into Cybera's bank account relating to fiscal 2018-2019 funding.

SUPPORTING LIFE-SAVING MEDICAL RESEARCH

How do you screen billions of drug compounds to find the right one in the most time-effective way? The answer, of course, is to use a supercomputer. For a research team at the University of Alberta, this supercomputer just happens to be located 2,700 km away.

Leveraging the ultra-fast National Research and Education Network, Dr. Michael Houghton and colleagues at the University of Alberta's Li Ka Shing Applied Virology Institute are speeding up the time it takes for life-saving drugs to be identified from months or years, to just weeks.

The research team of virologists is using one of Canada's fastest supercomputers (the SOSCIP 8-rack IBM Blue Gene/Q supercomputer, located in the University of Toronto) to quickly sift through billions of candidate molecules (including cancer-fighting molecules) to find ones with the right therapeutic action.

Even though the research team is in Edmonton, a dedicated network connection (through Cybera, ORION and CANARIE) provides secure access to run the superfast simulations.

"The process and results have been fantastic," says Houghton, who emphasizes that drug discovery can be a laborious process, sometimes taking years to identify potential drugs. Using supercomputers to do drug discovery, Houghton believes, is the future.

"Not only does this use of computational science provide a faster and more powerful way to discover drugs, but it gives us the power to be competitive with the big pharmaceutical companies."





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