

PIVO

**2020/21
ANNUAL
REPORT**



ALBERTA INNOVATES

“

**A pivot is a change
in strategy** without
a change in vision.

Eric Ries, Entrepreneur & Author



Contents

5	Message From Our Chairperson	26	GOAL 3
6	Message From Our CEO		Drive the generation of discoveries and developments that positively impact Alberta and its industries by leveraging partnerships, collaborations and emerging technology platforms.
7	Accountability Statement	30	GOAL 4
8	Executive Summary		Accelerate and broaden the use of innovative products, technologies and processes.
10	Context	35	GOAL 5
12	The COVID Pivot		Be recognized globally as a leading innovation engine.
15	Results & Achievements	37	Outlook for a Recovering Alberta
17	GOAL 1	40	Management Discussion & Analysis
	Make the lives of Albertans better today and for generations to come by contributing to a diversified economy, cleaner and sustainable environment, and healthier communities.	43	Capital Plan & Leasing Arrangements
21	GOAL 2	44	Management's Responsibility for Reporting
	Cultivate a world-class research and innovation system that meets the needs of Alberta.	45	Statutory Report
		46	Audited Financial Statements

We are

A FUNDER AND SERVICE PROVIDER:

- We support post-secondary researchers, entrepreneurs and companies of all sizes with our investments.
- We offer targeted funding programs, services and expertise to achieve the province's research and innovation (R&I) priorities.

A PARTNER AND COLLABORATOR:

- We support networks and collaborations to ensure our clients are connected to the right resources at the right time – helping them succeed (or fail) faster.
- We offer applied research and advanced manufacturing expertise and industrial facilities at our two subsidiaries – to help clients test, scale and validate ideas and prototypes.

A CONVENER AND CONNECTOR:

- We advance the growth and scale of innovation by bringing together innovators, industry and thought leaders.

About us

We are a provincially funded corporation dedicated to advancing research and innovation in Alberta. Our activities and impacts are aligned with Government of Alberta priorities and contribute to work in many areas of government and by our partners.



11 Locations



2 Subsidiaries

InnoTech Alberta Inc.

C-FER Technologies (1999) Inc.



Employees

587 FTEs

Message from Our Board Chairperson



Brenda Kenny PhD

For a century, Alberta Innovates and its predecessors have been an integral part of the province's scientific and economic history. The Scientific and Industrial Research Council was the first of its kind in Canada when it was founded in 1921. Since then, the Province has used science, research and innovation to help Albertans grow and thrive. Today, Alberta Innovates is focused on the next 100 years.

As we look towards recovery and beyond, Alberta Innovates' purpose to drive discovery and commercialization through research and innovation has never been clearer. Our broad partnerships, talented people and foresight are focused on delivering innovative solutions that enhance Albertans' well-being, improve environmental performance, support Alberta industry and entrepreneurs, and position our province for the future.

Our research and innovation priorities are aligned with the Province's priorities. Beyond backstopping major economic sectors, our research and initiatives also enhance Alberta's environmental, social and governance position and competitiveness. For example, we've found that emerging technologies are reducing greenhouse gas emission intensities for specific oil sands production pathways. We're working with industry to develop next-gen technologies like solvent-enhanced extraction and partial upgrading. We're developing cost-effective wellsite reclamation technologies and advancing biofuel research. We're also advancing innovations in carbon capture and utilization, and our smart grids are reducing municipal power consumption. These are all meaningful contributions to net-zero goals, as well as being economic development opportunities.

Examples of the impact of our work feature throughout this report, from our support for Nobel Prize-winning medical science to the development of industry-changing advanced materials like carbon fibre, and prize-winning carbon capture and utilization technologies.

This is a unique and crucial time in Alberta's history. The convergence of technologies, and rapid advances in such areas as the use of big data and sensors, is opening new markets and opportunities for Alberta. We are well-positioned, given our past results and future focus, to meet global opportunities for Alberta business to compete and to solve problems in areas of health, water, food and climate.

Alberta Innovates will continue to deliver innovation impact for the whole province, working in collaboration with industry, governments, agencies and small and medium enterprises to lever resources and reinforce Alberta as a leader in research and innovation as it transitions to a future full of opportunity.

Innovation has been a driving force behind Alberta's economy for the last century. It is a mindset that has carried Albertans through the hard times and the booms. As the future comes at us faster than ever, innovation will be essential to our prosperity over the next hundred years.

Message from Our CEO



Laura J. Kilcrease

Despite the challenges brought by the pandemic, Alberta Innovates and its subsidiaries continued to perform at a high level.

Through the pandemic and economic downturn, we've continued to use research and innovation and broad connections to deliver solutions that will help accelerate the transition to Alberta's future.

Alberta Innovates pivoted early in the pandemic to support 18 Alberta-led COVID research projects from prevention studies to clinical trials and disease modelling.

Through our partnerships and programs, additional funding and supports are assisting over 2,000 businesses to not just survive the pandemic, but to thrive afterward.

Our \$25-million small business accelerators will attract global firms and investment and contribute to 900 new companies and 20,000 new jobs once they are operational in the coming year.

Reshaping health partnerships is allowing entrepreneurs and researchers to use technologies and data to create meaningful digital health solutions. The focus is shifting to more personal wellness and an individual's quality of life to improve health outcomes while reducing costs to the care system.

Our \$108-million Canadian Agri-Food Automation and Intelligence Network is now fully operational and has launched two funding calls advancing smart agriculture technologies.

We received \$50 million in funding over three years through the Province's Technology Innovation and Emissions Reduction (TIER) program. An additional \$180 million was leveraged from other sources across 23 TIER projects that were selected. The projected greenhouse gas emission reduction for these projects is 740,000 tonnes per year at the completion of the program, or the equivalent to removing over 160,000 cars from the road each year.

InnoTech Alberta and its clients and stakeholders have advanced the technology for reclaiming abandoned gas wells, and their use of isotopes is supporting improvements in groundwater monitoring for the oil sands.

C-FER Technologies is assessing risk around underground CO₂ storage and identifying the technology gaps that could impede the transition to a hydrogen-based economy.

Several research teams were able to extract carbon fibre strands from bitumen and will be producing at scale in the next phase, bringing closer the reality of an entirely new value-add industry in Alberta.

In 2020, we also quickly moved our signature INVENTURE\$ event to a successful online platform. In doing so, we reached new audiences with engaging topics and turned INVENTURE\$ from a three-day event to a year-round community showcase of innovation. Overall, we've had more than 10,000 people from more than 60 countries register for 105 webinars on topics ranging from water innovation, digital health and small modular reactors to entrepreneurial growth and resiliency.

You'll find other examples of how Alberta Innovates is addressing Alberta's present challenges and future opportunities in the pages that follow.

I'm very proud of the contributions Alberta Innovates employees have made to create positive impacts for Albertans through this challenging year.

What we've started this year is just the beginning of the positive outcomes that will be seen for many years to come.

Accountability Statement

The Alberta Innovates Annual Report for the year ended March 31, 2021, was prepared under the Board's discretion in accordance with the Alberta Research and Innovation Regulation, and the ministerial guidelines established pursuant to the Alberta Public Agencies Governance Act (APAGA) and the Fiscal Planning and Transparency Act. All material economic, environmental or fiscal implications, of which we are aware, have been considered in preparation of this report.

Original signed by Brenda Kenny

Chairperson

May 27, 2021

Date of Approval of Financial Statements

Executive Summary

The story of 2020–21 is one of adaptation in the face of adversity. Like all Albertans, our program teams and corporate services at Alberta Innovates, our partners and collaborators, and our clients coped with the health threat and economic challenges of the COVID-19 pandemic.

At the onset of the pandemic in March 2020, we pivoted rapidly to respond to the health threat and teamed up with our partners to invest in COVID-19 projects led by Alberta researchers and clinicians. We provided much-needed supports to our clients in small and medium enterprises (SMEs) to help them be resilient and come back stronger.

At the same time, we continued to implement our longer-term strategy to refine our research and innovation (R & I) investments in five focus areas that show great potential for Alberta: the entrepreneurial ecosystem, artificial intelligence, digital health, innovative hydrocarbon products and smart agriculture.

In our Results and Achievements section we report our results based on key performance indicators established in Business Plan 2020–23. This section also highlights new programs and initiatives we launched in these focus areas during 2020–21 to advance emerging technologies. In doing so, we are building on Alberta's traditional strengths and laying the groundwork for the province to realize future economic success and diversification, improve health outcomes and optimize environmental performance.

Alberta Innovates started the fiscal year with a reduced budget and workforce due to provincial financial constraints. Despite that and the major operational disruption caused by the pandemic, our corporation showed strong progress in sharpening its programming in areas of need and greatest opportunity for the province while generating a good return on investment.

We kept up a high level of activity throughout the year. Some highlights during 2020–21:

- We created two province-wide entrepreneurial programs with federal funding, to help Alberta tech SMEs adapt and thrive.
- We took the first step in a new initiative to vault Alberta's promising startups and SMEs through scaleup and growth faster by announcing a request for proposals for the development of three or more technology/business accelerators. This is a major undertaking that will help to diversify Alberta's economy by supporting entrepreneurship and innovation in new technology areas.
- We accelerated development of technologies for large-scale production of carbon fibre and advanced manufacturing products made from Alberta's vast reserves of bitumen with our \$15-million Carbon Fibre Grand Challenge.
- Twenty-three "shovel-ready" projects aimed at economic development, job creation and GHG emission reduction were selected for funding. This program is supported by an investment of \$50 million – over three years – from the Government of Alberta's Technology Innovation and Emissions Reduction (TIER) Economic Recovery Program.

- We adopted a digital health strategy to transform care delivery and surround Albertans with the health and wellness resources they need – where and when they need them. We pivoted our health investment portfolio to capitalize on the global market opportunity to integrate emerging digital technologies into the health industry. This included the expansion and re-engineering of our core health commercialization program.
- We significantly increased our investment in the Campus Alberta Small Business Engagement Program, through an expanded partnership with the Natural Sciences and Engineering Research Council (NSERC). This has created more opportunities for SMEs to access Alberta's world-class research institutions to develop and commercialize their new technology innovations.
- We continued to affirm our support for the Alberta Machine Intelligence Institute (Amii) by providing an additional \$4 million, along with \$5 million from the province's TIER system.
- The Smart Agriculture and Food Digitization and Automation Challenge was launched in July 2020 to develop smart technologies that will sustainably increase productivity, reduce the cost of production or increase the value of the agri-food industry. Eight projects were selected to receive a total of \$3 million in funding.
- Our applied research subsidiary InnoTech Alberta is working with regulators and industry to develop innovative, effective and economic technologies to accelerate the decommissioning process of inactive oil and gas wells, and repair leaking wells prior to decommission. Alberta has a backlog of more than 97,000 inactive oil and gas wells that need to be closed. About 40,000 active and inactive wells (including some already closed) are leaking methane and other gases.
- InnoTech Alberta successfully hosted the NRG COSIA Carbon XPRIZE competition for new and emerging CO₂ conversion technologies to help solve climate change. Five finalist teams from Canada and the U.S. competed at the [Alberta Carbon Conversion Technology Centre \(ACCTC\)](#) during 2020–21. Three of the five competitors will remain at the ACCTC to continue to develop and refine their technologies.
- Our applied research subsidiary C-FER Technologies began several projects to help industry transition to a low-carbon energy future. These ongoing projects include performance testing of downhole flow control devices used in SAGD processes in the oil sands to reduce energy and water consumption, and hydrogen-related projects. Other projects are developing a risk assessment framework for CO₂ underground storage wells and facilities associated with carbon capture, utilization and storage (CCUS), and assessing the integrity of geothermal wells.

Throughout 2020–21, we maintained a strong presence in the R&I system and supported our clients when they needed us most. This is reflected by the increased proportion of clients (94 per cent) with a positive client experience .

Please browse our Annual Report for more details and stories that reflect the value of Albertans' investments in research and innovation through Alberta Innovates.

Context

ALBERTA HAD TO NAVIGATE
SEVERAL CHALLENGES IN 2020.
THE ONSET AND SUBSEQUENT
WAVES OF THE COVID-19
PANDEMIC IMPEDED ECONOMIC
ACTIVITIES THE WORLD OVER.



ACCORDING TO STATISTICS CANADA, ALBERTA'S ECONOMY SHRANK BY \$27.3 BILLION IN 2020 COMPARED TO 2019, A DECREASE OF 8.2 PER CENT.¹

The pandemic demanded businesses and citizens live and act in new and different ways, through ingenuity, increased use of existing technologies and innovation. Innovation also led to the rapid development of COVID vaccinations. Vaccination rollout gained significant momentum in Alberta at the end of 2020–21, renewing Albertans' sense of optimism and paving the way to the lifting of restrictions and economic recovery.

Alberta has been bolstered by rising oil prices, with global oil demand growing as countries begin to return to pre-pandemic levels of activity.

As the province dealt with the impact of the pandemic on our citizens and economy, Alberta Innovates pivoted from business as usual to confront the challenges of the COVID-19 pandemic head-on. We found ways to do more with less on the heels of a \$86-million reduction in our budgeted expenses from the Government of Alberta in 2019 (a drop of nearly 30 per cent) which necessitated the downsizing of our employee workforce and program activities. We describe our rapid COVID response on p. 13.

We also had an exceptionally busy year in other respects. We reduced our programming in some areas and sharpened our focus in others by launching several new programs and initiatives to realign our activities with our strategic priorities. See the Executive Summary for an overview of these activities and the Results and Achievements section for the details.

"After the brutal provincial recession of 2015–16 and the near-recession of 2019, 2020 was poised to be a turnaround year for Alberta. The pandemic prevented this and the economic pain was exacerbated by the oil price crash and subsequent production cuts."

ATB Financial

¹ ATB Financial, *The Owl*, May 4, 2021.

The COVID Pivot

PROMOTING HEALTH
AND ECONOMIC
RECOVERY THROUGH
INNOVATION



ONE OF THE DEFINING GLOBAL EVENTS OF 2020-21 WAS THE ONSET OF THE COVID-19 PANDEMIC. ALBERTA INNOVATES, ITS CLIENTS AND PARTNERS RESPONDED RAPIDLY TO ADDRESS THE HEALTH CRISIS.

Alberta Innovates joined with the Canadian Institutes of Health Research (CIHR) in funding numerous projects by Alberta researchers who immediately set their sights on battling COVID. They submitted proposals ranging from vaccines to testing and treatments, to forecasting COVID spread. In the business world, SMEs pivoted to making COVID products and showed resilience in weathering the storm.

PROGRAM HIGHLIGHTS

- Early in the pandemic Alberta Innovates co-ordinated closely with CIHR, the provincial government and health system partners. We supported 18 COVID projects led by Alberta researchers and clinicians. Total investment by all partners was \$8.4 million including our contribution of \$3.6 million, spanning multiple fiscal years.
- A critical component of managing the COVID response was the timely and co-ordinated assessment of companies that offered assistance and innovation to Alberta Health Services and the Ministry of Health. Alberta Innovates helped customize the EDGE platform which enabled seamless sharing of information among companies involved in personal protective equipment, communications, testing, virtual care, etc.
- Digital health came to the forefront during the pandemic, broadening and accelerating the way care is delivered. Health systems, caregivers and patients had to find new ways to work and interact while managing health needs. Many Albertans opted for telemedicine health appointments rather than visiting in person. At Alberta Innovates, we implemented a digital health strategy to advance technologies that will accelerate improvements in the quality and long-term

sustainability of our health system and the health of Albertans. We articulated the strategy in our 2021-24 Business Plan and a range of activities to move digital health forward.

- We partnered with Pfizer Canada and the Ministry of Jobs, Economy and Innovation to support University of Calgary researcher Dr. Jia Hu to work with the office of the Chief Medical Officer of Health, to understand and address COVID vaccine hesitancy through surveys, focus groups and social media machine learning.
- We received \$1.3 million from the federal government's Regional Relief and Recovery Fund, through Western Economic Diversification Canada, to help SMEs cope with the pandemic. With this funding we co-hosted a Growth & Resiliency webinar series with Mount Royal University, featuring guest speakers who covered topics ranging from growth and adjustment during and after COVID, to marketing, sales and strategy in a world of disruption. The recorded presentations are still available for viewing [here](#). We also created two province-wide entrepreneurial funding programs in October 2020 to help tech SMEs adapt and thrive – the [Alberta Innovation Network GrowthX Program](#) and the [Innovation Relief and Recovery Program](#). (See the results on p. 30). We topped up the program with \$350,000 of our own funding, spread over multiple fiscal years, after hearing from entrepreneurs they needed more support.

To support Albertans' mental health during the ongoing stress of the pandemic, Alberta Health Services collaborated with the online service [Togetherall](#) to provide Albertans aged 16+ access to a digital platform that provides self-guided resources and a peer-to-peer support community moderated by clinical counsellors and trained helpers. The ARECCI (A pRoject Ethics Community Consensus Initiative) review process through Alberta Innovates provided relevant feedback and suggestions to strengthen the Togetherall evaluation project and overall improvement of its ethical soundness.

SUCCESS STORY

EDMONTON COMPANY DEVELOPS MADE-IN-ALBERTA COVID TESTING KIT

Applied Quantum Materials (AQM), an SME supported by Alberta Innovates, struck a deal with Alberta Health Services to provide the province's provincial laboratory system with COVID-19 testing kits. AQM's proprietary technology kits include magnetic nanoparticles that allow the lab to isolate and extract nucleic acids (RNA/DNA) related to COVID.

The agreement strengthened Alberta's medical supply chain by providing a made-in-Alberta solution to combat the pandemic, and helped to ensure the province was less vulnerable to shortages from international suppliers.

Alberta Innovates supported AQM in developing nanotechnology applications through our Strategic Research Projects and Campus Alberta Small Business Engagement grants. The company also participated in our Executive Business Advisor Program, which provides ongoing executive coaching and support to rapidly growing technology companies.



"AQM is a great example of how innovative companies can pivot and apply technologies across sectors, in this case from using nanomaterials to produce energy to using them for COVID diagnostic testing. We're happy to have supported AQM on its path and look forward to its future innovations."

Laura Kilcrease, CEO, Alberta Innovates

Results & Achievements

Innovation is the catalyst for sustainable jobs, economic and community strength, improved health and environmental benefits. As Alberta's largest and only cross-sectoral research and innovation agency, we are uniquely positioned to propel great ideas forward.

We work with our partners and clients to create new opportunities and forge a healthy, sustainable and prosperous future for Albertans.



Despite budgetary and pandemic challenges, our program areas, researchers, companies and entrepreneurs adapted.

This Annual Report highlights results and achievements related to activities we outlined in our 2020–23 Business Plan. It demonstrates our transparency as a publicly funded agency and accountability to our largest shareholder, the Government of Alberta, to our stakeholders and to Albertans. Of note, the performance targets outlined in the business plan were not revised to reflect an \$86-million reduction in our budgeted expenses from the Government of Alberta in 2019.

Alberta Innovates systematically collects outcomes results on an annual basis through our post-investment survey and annual outcome survey. The post-investment survey is designed to collect information from SMEs that completed funding between 2016 and 2020, and follows each SME annually for a five-year period. Annual outcome surveys collect outcome information from active non-SME clients (researchers, students and others) who had grants with Alberta Innovates in 2020–21.

Individual programs are designed with specific objectives that may not cover the full research and innovation continuum of Discover, Develop and Use. As such, the key performance indicators (KPIs) outlined for our corporate goals may not apply to each program.

We encourage you to explore the many other exciting successes achieved by our clients and program areas over the past year by checking out our news and stories on our website and YouTube channel, and by listening to our SHIFT podcast and checking us out on social media.

Our 2020–23 Business Plan identified five focus areas for our investments – Entrepreneurial Ecosystem, Artificial Intelligence, Digital Health, Innovative Hydrocarbon Products and Smart Agriculture. We chose these areas to help address challenges facing Alberta, and build on the skills and expertise we have developed in the R&I system over many years.

Goal 1

Make the lives of Albertans better today and for generations to come by contributing to a diversified economy, cleaner and more sustainable environment, and healthier communities.



GOAL 1 PERFORMANCE MEASURES

	Actuals 18-19	Actuals 19-20	Target 20-21	Actual 20-21
# of new hires (jobs) in Alberta from R&I investment	2,079	2,389	3,130	2,460
Net SME revenue growth for every \$1 of Alberta Innovates funding	\$6.29	\$7.37	\$6.02	\$4.90
% of SMEs supported by Alberta Innovates that are exporting	42%	48%	42%	52%
# projects with GHG emissions reduction	65	127	75	146
# projects leveraging digital health technologies to improve the lives of Albertans	–	–	10	100

There was a significant reduction in employment in Alberta during 2020. Despite this, our clients reported a modest growth in the number of people they employed, albeit lower than our target. There was a marked reduction in net SME revenue growth during 2020. More than half of our post-revenue companies (companies with sales) reported an increase in revenue in 2020, but this was outweighed by a significant fall in revenue amongst our top-performing companies, presumably due to the impact of COVID on markets. With a continued focus on our areas of priority, we increased our investments in clean technology and digital health, resulting in a larger number of projects in these areas.

PROGRAM HIGHLIGHTS

- Alberta Innovates is accelerating development of technologies for large-scale production of carbon fibre and advanced manufacturing products made from Alberta's vast reserves of bitumen. The first phase of the \$15-million Carbon Fibre Grand Challenge began in July 2020 with 19 teams from Canada, the U.S. and Australia being funded to convert asphaltenes from Alberta oil sands into carbon fibre, a material that is functionally superior to many conventional materials used in transportation, infrastructure, construction and consumer products. Several teams demonstrated they could produce carbon fibre strands from Alberta bitumen. Phase 2 of the competition was announced in March 2021, with \$3 million in co-funding from a pan-Canadian network with a diverse membership called the Clean Resource Innovation Network.

Commercial markets for non-combustion products from bitumen could quadruple the current value of Alberta's bitumen output. Markets for carbon fibre and other asphaltene products are valued at an estimated \$84 billion annually. Greenhouse gas (GHG) emissions would be reduced at the point of consumption as bitumen is diverted from combustion. This grand challenge is part of a broader Alberta Innovates clean technology initiative called Bitumen Beyond Combustion. InnoTech provided samples to the competitors from its new Asphaltene Bank. Asphaltenes are organic molecules found in bitumen.

- In July 2020, we announced 17 successful recipients in our Digital Innovation in Clean Energy (DICE) competition which aims to advance emerging tech in the resource industry. The awarded projects leveraged \$13 million from industry sources, or **\$4.44** for each \$1 invested by Alberta Innovates.

- The Government of Alberta provided \$50 million – over three years – to Alberta Innovates through the province's TIER Economic Recovery Program, to support projects that demonstrate a reduction in greenhouse gases and an improvement in industrial energy efficiency. From the nearly 270 expressions of interest we received, 23 "shovel-ready" projects aimed at economic development, job creation and GHG emission reduction were ultimately selected for TIER funding. These projects are leveraging nearly \$180 million from other sources, or **\$3.60** for each \$1 of TIER investment. If commercialized, the technologies have a market potential for reducing GHGs by 11.7 megatonnes by 2030.
- Alberta Innovates and Emissions Reduction Alberta (ERA) sponsored a life cycle analysis of oil sands GHG emissions. The study, published in December 2020, has been widely accepted as the most credible information source related to oil sands GHG emission and supports the oil sands industry in driving its Environmental, Social and Governance (ESG) performance.
- In 2020–21 we adopted a digital health strategy to transform care delivery and surround Albertans with the health and wellness resources they need – where and when they need them. We pivoted our health investment portfolio to capitalize on the global market opportunity to integrate emerging digital technologies into the health industry. This saw the expansion and re-engineering of our core health commercialization programs (AICE-Validate and AICE-Market Access) as well as our Extended Reality program (xR). We also launched ImplementAB.dighealth, a program to develop models of care that put the needs of the patient first. As well, we invited researchers to advance precision health through our AICE-Concepts program, and we are investing in talent that can support the digital health ecosystem. Digital health empowers Albertans to improve their health outcomes through the use of technologies including mobile applications, electronic medical records, wearable devices and more. Many such technologies are being developed by innovators right here in Alberta and resulting in a growing digital health economy leading to jobs, revenue and exports.
- Several projects at C-FER Technologies are helping industry transition to a low-carbon energy future. Performance testing of downhole flow control devices used in solvent-assisted SAGD processes in the oil sands aims to reduce energy and water consumption, and the associated GHG emissions. Hydrogen-related projects are identifying technology gaps that might impede the transition to a hydrogen-based economy and work is being completed with pipeline operators to enable hydrogen transportation in legacy natural gas pipeline systems. Other projects are developing a risk assessment framework for CO2 underground storage wells and facilities associated with carbon capture, utilization and storage (CCUS) and assessing the integrity of geothermal wells, including the feasibility of novel downhole pumping systems.
- Direct economic impact of InnoTech Alberta to the province is estimated at \$818 million for 2020–21. That's equivalent to \$47 in direct economic impact for every \$1 of government investment in InnoTech, based on a methodology adopted from Innoventures Canada (I-CAN™), a not-for-profit organization that focuses on commercializing research.
- The Ministry of Environment and Parks Oil Sands Environmental Monitoring Program is using InnoTech's unique expertise in groundwater/surface water interactions, and its expertise in the use of isotopes to characterize water movement, to develop and implement an effective groundwater monitoring program for the oil sands.
- A collaborative project led by InnoTech with Petroleum Technology Alliance Canada (PTAC), Northern Alberta Institute of Technology (NAIT), Vertex and other stakeholders developed best practices and decision support tools to speed the certification process for particular types of well sites. If adopted by the Alberta Energy Regulator, the recommendations would typically produce an estimated cost savings of \$100,000 for each qualifying well.

Alberta has a backlog of more than 97,000 inactive oil and gas wells that need to be closed. Another 100,000 wells soon will be inactive and also need proper closure. About 40,000 active and inactive wells (including some already closed) are leaking methane and other gases into the atmosphere. Some are leaking into groundwater.

InnoTech is working with regulators and industry to develop innovative, effective and economic technologies to accelerate the decommissioning process of inactive oil and gas wells, and repair leaking wells prior to decommission. InnoTech believes it has enough evidence that, with the new methods and sealants, the cost for remediating leaking wells can be reduced by half – down to about \$3 billion – with better outcomes.

Innovation in Alberta began **100** years ago

Professor Karl Clark joined the Alberta Innovates legacy organization called the Scientific and Industrial Research Council (SIRCA) when it was formed by the government of the day in 1921.

Clark's early work at SIRCA unlocked the potential of the oil sands and eventually led to the creation of a multi-billion-dollar industry that brought prosperity to Alberta for decades.

Today, as we scan the horizon for new possibilities, we are investing in non-combustion uses for Alberta bitumen to reduce emissions and create new prosperity in the low-carbon world of the future.

"Alberta has the potential to transform global advanced materials markets and produce billions in new revenue for the province from bitumen feedstock. By bringing the best ideas from around the world into Alberta, we can expedite the development of these new technologies and position Alberta as a leader in this area."

Laura Kilcrease, CEO, Alberta Innovates

"Doctor Karl Clark at University of Alberta, Tar Sands department, Edmonton, Alberta." 1929 by McDermid Studio. Courtesy of Libraries and Cultural Resources Digital Collections, University of Calgary

Goal 2

Cultivate a world-class research
and innovation system that meets
the needs of Alberta



GOAL 2 PERFORMANCE MEASURES

	Actuals 18-19	Actuals 19-20	Target 20-21	Actual 20-21
# of clients accessing R&I infrastructure supported by Alberta Innovates	620	770	800	660
# people (trainees, researchers, entrepreneurs, etc.) supported	1,040	1,210	1,100	1,445
% of clients with a positive client experience	76%	87%	85%	94%

There was a moderate decrease in the number of clients accessing C-FER and InnoTech services, largely related to the downturn in global oil demand, to near 2018-19 levels. We increased our support to the R&I system through the launch of new programs, including several in direct response to COVID. Many of these programs were made possible through the partnerships that Alberta Innovates cultivated with provincial and federal organizations. In a time of economic turmoil and with the support of our partners, Alberta Innovates maintained a strong presence that supported our clients when they needed us most. This is reflected by the increased proportion of clients with a positive client experience.

PROGRAM HIGHLIGHTS

- The Smart Agriculture and Food Digitization and Automation Challenge was launched in July 2020 to develop smart technologies that will sustainably increase productivity, reduce the cost of production or increase the value of the agri-food industry. The program received 49 expressions of interest, with \$3 million in funding ultimately being awarded to eight projects whose combined project costs were \$10.7 million.
- The newly developed Alberta Innovates Data Enabled Innovation – Graduate Student Scholarship program is supporting 66 students in its inaugural year.
- We teamed up with Innovate Calgary to offer the Life Sciences Fellowship, to help life science researchers develop entrepreneurial skills so they can navigate the commercialization process and create successful startups, with a particular focus in digital health. Less than one year into the program, which began in April 2020, the first two cohorts (eight fellows) secured more than \$1 million in further grant funding, generated \$575,000 in revenue and created 10 full-time jobs.
- Our Technology Development Advisors (TDAs) supported 2,100 clients and held nearly 1,030 client meeting in 2020-21. This was nearly double the number of clients and nearly 300 more client meetings compared to the previous year.
- With our funding and thought leadership we are contributing to the digitization of critical health research and innovation assets through several health system collaborations, including the Inquiry Module in Connect Care, the REB Exchange, the provincial Clinical Trials Management System (OnCore), the EDGE platform, AbSPORU (Alberta Strategy for Patient Oriented Research SUPPORT Unit) and clinical trials. These collaborations streamline processes, create efficiencies and improve health outcomes – ultimately positioning Alberta as a leader in health research and innovation that attracts investment.

“Talent retention is vital to strengthening our economic growth. Fellowship programs provide an avenue for innovation-focused talent to diversify their skills and accelerate their careers as entrepreneurs.”

John Wilson, President & CEO, Innovate Calgary

“A province-wide Clinical Trials Management System (CTMS) is an important step to give Alberta a competitive advantage and will lead to a multitude of benefits for Albertans. We look forward to the continued work on the initiative in partnership with Alberta Innovates and our provincial Strategy for Patient Oriented Research Support Platforms.”

*Marcello Tonelli MD, SM, MSc, FRCP(C)
Associate VP (Health Research), University of Calgary*

- InnoTech Alberta successfully hosted the [NRG COSIA Carbon XPRIZE](#) competition for new and emerging CO₂ conversion technologies to help solve climate change. The US\$20-million XPRIZE sought to inspire development, demonstrate and de-risk CO₂ capture, conversion & utilization technologies in a semi-commercial scale environment, to accelerate implementation and adoption at industrial sites. Five finalist teams from Canada and the U.S. competed at the Alberta Carbon Conversion Technology Centre (ACCTC) during 2020-21. Three of the five competitors will remain at the ACCTC to continue to develop and refine their technologies.
- C-FER is currently building two major systems for testing equipment that will assist industry in de-risking new technologies and developing new operating and maintenance procedures. C-FER's Special Environments Laboratory is being upgraded to enable testing of large pipeline specimens in hydrogen and other corrosive environments, with funding provided by industry clients and by the Government of Alberta through the TIER program. The Spill Simulator for Inland Waterways will test the performance of oil leak detection and spill response equipment used on inland waterways. Funding is being provided by TC Energy, Trans Mountain Pipeline, Enbridge, B.C. Oil and Gas Commission, Western Economic Diversification Canada and Alberta Innovates.
- In 2020-21 C-FER worked on 185 projects with 170 different clients from Canada, the U.S. and other countries. About 75 per cent of their clients were energy producers, service providers, equipment manufacturers or technology developers. Pipeline operators and other clients such as industry groups, government and universities made up the remainder.

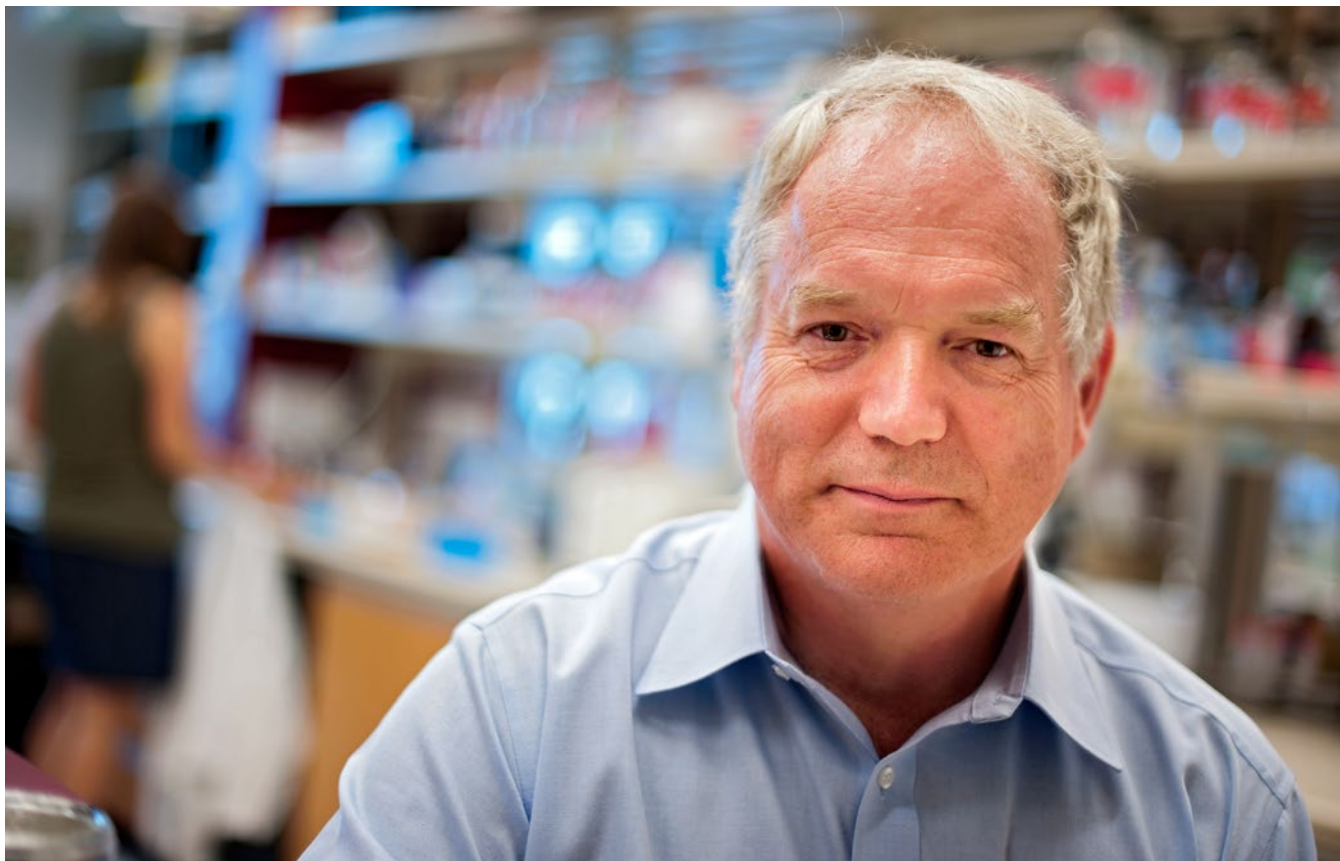


Photo Credit: FOLIO, University of Alberta, Photographer Richard Siemens

SUCCESS STORY

Helping the Applied Virology Institute translate research into use

Alberta Innovates is a proud supporter of world-renowned virologist **Michael Houghton**, who shared a 2020 Nobel Prize for his co-discovery of the hepatitis C virus.

Dr. Houghton is director of the Applied Virology Institute (AVI) at the University of Alberta. Houghton's team is closing in on a vaccine to beat hep C and he is also developing a vaccine for COVID-19.

The Li Ka Shing Institute of Virology at the U of A was founded in 2010 by its director, Dr. Lorne Tyrrell, also an esteemed virologist with an international reputation. Numerous Alberta Innovates investments have supported work at the institute. Under the leadership of Houghton and Tyrrell, more than 24 professors and their researchers have been able to advance their work through the AVI, established within Li Ka Shing Institute in 2013 to translate research into use.

"The AVI is here to get across what's called the valley of death, which is the gap between research innovation and clinical proof of principle followed by commercialization. The ideal is to do great research, show that it works in the clinic, and then commercialize it here in Alberta and with global partners."

Dr. Michael Houghton, Director of the Applied Virology Institute at the University of Alberta

SUCCESS STORY

How an early research investment led to the world's largest drug database

Metabolomics and bioinformatics – research fields revolutionizing disease diagnosis and treatment

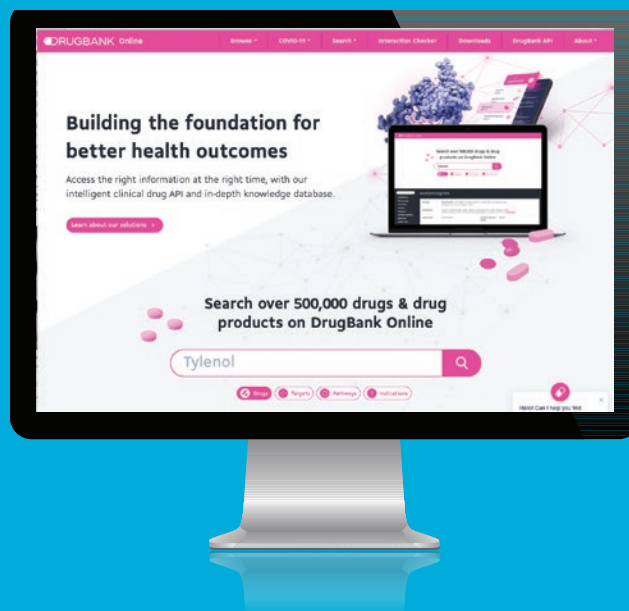
Dr. David Wishart of the University of Alberta is a pioneer and world leader in the field of metabolomics. Analyzing metabolites in urine, blood or tissue samples can provide a more accurate story of our health than DNA, and can be used to diagnose or predict disease and target treatments. This proactive approach is also referred to as personalized or precision medicine.

Alberta Innovates and its legacy organization have supported the Wishart Research Group since 1991. Our investments have totalled **\$5.8 million** while federal investments have totalled nearly **\$117 million** over a similar period.

Six spinoff companies have come out of Wishart's lab, including **DrugBank** which began as an undergraduate bioinformatics research project under Wishart's guidance² then became a company in 2016.

DrugBank, which is supported by Alberta Innovates through our Technology Development Advisors Program and a Commercialization Associates Grant, currently has the world's largest online database of drug and drug target information.

DrugBank is reducing the development costs of new pharmaceuticals, and is being used in clinical software to reduce medication error and to improve health outcomes for patients. It has also been an important tool in the battle against COVID-19, with its data being leveraged in many projects including drug repurposing and clinical trial research. Since the start of the pandemic, DrugBank has been cited more than 1,200 times in COVID-related scientific publications.



DrugBank is the winner of the 2019 Startup Canada's Prairie High-Growth Entrepreneurship Award – the “Oscar” of the Canadian entrepreneurial community – and was the winner of the Best Startup Workplace in Edmonton in 2021.

The company has increased its revenue 200 per cent year-over-year in the first four years and nearly tripled its headcount since February 2020 to 43 employees currently. It has hundreds of paying customers from 26 country markets and has also been cited in nearly 16,100 publications and 2,400 patents, and in policy documents, clinical trials and grants.

In addition, more than 100 million users have accessed [DrugBank's free public site](#) over the past six years (about 1.3 million users each month) from every country in the world.

“Our mission is to augment human intelligence so that all medical information – from bedside to bedside – is used to its full potential. Since Day 1 in Dr. Wishart's lab, DrugBank has been making an impact on medical research and every year we see that impact grow.”

DrugBank CEO Michael Wilson, who established DrugBank in 2016 with his partner and fellow U of A graduate Craig Knox

² [Fast-growing Edmonton startup helps get new drugs to market sooner](#) | Folio (ualberta.ca), April 21, 2021.

Goal 3

Drive the generation of discoveries and developments that positively impact Alberta and its industries by leveraging partnerships, collaborations and emerging technologies platforms.



GOAL 3 PERFORMANCE MEASURES

	Actuals 18-19	Actuals 19-20	Target 20-21	Actual 20-21
# of peer-reviewed publications from R&I investments	1,700	1,100	1,700	821
# patents produced from R&I investments	136	55	190	30
% investment in the Discover & Develop stages of the R&I continuum	-	-	-	_*
# partnerships with organizations to generate knowledge, discoveries and developments for specific needs/issues	-	-	-	_*

* 2021-22 will be baseline year for data capture

Beginning in 2019-20, Alberta Innovates changed its data collection methodology from a broader definition of publications to include only peer-reviewed publications, and from all types of patent activity to include only those patents that were issued. A small proportion of patents are issued compared to the number of patent applications submitted. In addition, Alberta Innovates has been working diligently to transfer our programs so they have more depth in areas of greatest opportunity. This is shifting the distribution of programs across the research and innovation continuum, which may correlate to a reduction in both publications and patents.

PROGRAM HIGHLIGHTS

- Early in the pandemic, 120 individuals and teams took part in the online COVID-19 Data Science Hackathon, a joint initiative between Alberta Innovates and Cybera designed to stimulate the best ideas on how to flatten the COVID-19 curve or promote economic recovery. Participants used data to create new insights and understandings of the health crisis, and how businesses were responding. Five winners were announced.

"We were happy to partner with the Alberta Data Institute (at Alberta Innovates) to co-ordinate the COVID-19 data science hackathon. The quality of the proposals from both individuals and teams was astounding, which made judging a very difficult task. We appreciate the time and effort that all candidates put into making the hackathon such a success, and congratulate the winners!"

*Barb Carra, President & CEO of Cybera
Alberta's not-for-profit technology accelerator*

- We played a key role as a connector and catalyst in the creation of the not-for-profit Canadian Agri-Food Automation and Intelligence Network (CAAIN). The network, which connects and invests in Canada's agri-food and technology sectors to drive innovation and productivity, became fully operational in July 2020 and had two funding calls in its inaugural year.
- We developed a program to support the Government of Alberta's Natural Gas Vision and Strategy, and we committed more than \$10 million in 2020-21 for innovations in hydrogen production and use; methane utilization; plastics circularity; and carbon capture, utilization, and storage. We are also supporting the Ministry of Environment and Parks in the Industrial Energy Efficiency and Carbon Capture Utilization and Storage Program.
- A significant expansion of the Campus Alberta Small Business Engagement Program is creating more opportunities for SMEs to access Alberta's world-class research institutions to develop and commercialize their new technology innovations. This was made possible through our partnership with the Natural Sciences and Engineering Research Council of Canada (NSERC). Each partner is contributing \$2.3 million per year to the program for up to two years, to help SMEs grow in Alberta. Twenty-six projects were supported in 2020-21.

- Researchers and trainees supported by Alberta Innovates in 251 projects were successful in obtaining \$141 million in additional support from other funders in 2020–21.
- We continued to affirm our support for Amii (Alberta Machine Intelligence Institute) by providing an additional \$4 million from Alberta Innovates and \$5 million from the Government of Alberta through the TIER program.

“Amii exists in large part thanks to crucial investments made by the Government of Alberta, CIFAR and Alberta Innovates – and our partnership with the University of Alberta. With renewed funding, we’re able to continue our trajectory of long-established excellence in artificial intelligence and machine learning and leverage scientific advancement to speed industry adoption, job creation and innovation for Alberta’s most forward-thinking organizations.”

Cam Linke, CEO, Amii

- We forged partnerships with national and provincial organizations to foster cross-jurisdictional partnerships and collaborations that will advance digital health in Alberta. These groups include: CIHR; Innovation, Science and Economic Development Canada; Canadian Institute for Health Information; Research Data Canada; Canadian Data Platform, TELUS; Alberta Blue Cross; Health Quality Council of Alberta; Imagine Citizens; Canada Health Infoway; Cybera.
- We launched the Canadian Emission Reduction Innovation Network (CERIN) with Natural Resources Canada. CERIN is a \$27-million partnership (\$12 million public contribution, \$15 million from industry) to accelerate the development, validation and deployment of technologies that reduce methane emissions in the oil and gas sector.
- We signed collaboration agreements with Results Driven Agricultural Research (RDAR) and CAAIN to pursue opportunities to advance agricultural innovation. Together we will: explore collaborative strategic and business activities; pursue opportunities to advance agri-food research and innovation; pursue investment attraction; and support training the future workforce.
- We entered into a two-year agreement with Livestock Gentec and provided \$400,000 in funding support. This continuation marked a new partnership with RDAR, which contributed \$500,000 in support. The funding will develop Livestock Gentec’s platform

to establish Alberta as a world leader in precision livestock breeding and management, and will facilitate the commercialization and adoption of smart-ag technologies to improve the profitability, sustainability and competitiveness of the livestock sector.

- Alberta Innovates has been a member of the Agriculture Funding Consortium since its inception in 2001. In 2020–2021, we supported seven new smart agriculture projects in funding partnerships with RDAR; the Alberta Wheat Commission; Western Grains Research Foundation; Saskatchewan Wheat Development Commission; and the Alberta Canola Producers Commission.
- We successfully led a multi-stakeholder partnership that attracted \$12.9 million in federal investment from CIHR to Alberta to continue building the AbSPORU (Alberta Strategy for Patient Oriented Research SUPPORT Unit) in Alberta.

Alberta is now home to a unified source of data that enables diabetes to be monitored and researched in unprecedented ways. The Diabetes Infrastructure for Surveillance, Evaluation and Research (DISER) was launched through a collaboration between the AHS Diabetes; Obesity and Nutrition Strategic Clinical Network; AHS Clinical Analytics; and researchers at the University of Alberta – with funding support from Alberta Innovates, Alberta Health and NovoNordisk. This initiative connects six key databases in the province.

Diabetes is a chronic illness affecting 305,000 Albertans and impacting hundreds of thousands more. It can lead to many complications requiring diligent self-care and support from multiple health-care providers. Diabetes is on the rise in Alberta, increasing 60 per cent since the year 2000. The chronic condition costs Albertans \$1.5 billion per year.

“With DISER, health-care providers and researchers in Alberta will have better access to diabetes data than ever before. This access will accelerate our understanding of diabetes, supporting the ... mission to prevent diabetes, to empower those with diabetes, and to transform the care of diabetes in Alberta.”

Petra O’Connell, Senior Provincial Director, Diabetes, Obesity and Nutrition Strategic Clinical Network

SUCCESS STORY

The “Google” of conservation created through collaboration

The Canadian Conservation and Land Management (CCLM) Knowledge Network is a multi-stakeholder group that formed in 2019 to address the lack of a centralized place to share and exchange information and learnings about wetland and boreal caribou conservation and land management.

Partners include InnoTech Alberta, Ducks Unlimited, NAIT, Environment Canada (National Boreal Caribou Knowledge Consortium), and Natural Resources Canada (Canadian Forest Service).

They collectively developed the [CCLM Knowledge Portal](http://www.cclmportal.ca) (www.cclmportal.ca), an accessible online platform for sharing resources and connecting practitioners across Canada to address challenges in boreal caribou conservation, wetland practices, land restoration and land reclamation. Development was supported by each organization with contributions from COSIA (Canada's Oil Sands Innovation Alliance) and Alberta Innovates.

After it was officially launched for public use in April 2020, the portal grew an enthusiastic user base in a very short time. Users highly value the CCLM Knowledge Portal for its powerful search engine, growing pool of accessible resources and potential to help decision-makers access valuable information on wetlands, boreal caribou conservation and land management, says a progress report commissioned by the partners.

PROJECT HIGHLIGHTS

(Stats as of June 2021)

Program launched in April 20, 2020

First-time visitors – 8,700

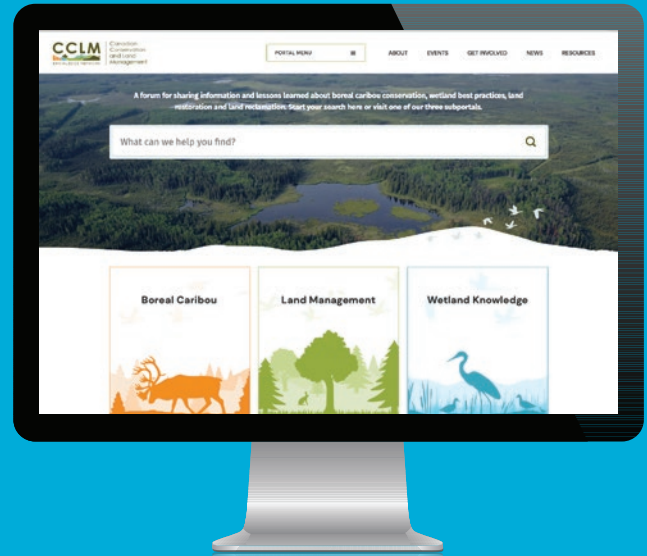
Return visitors since launch – 5,700

Resources added since pre-launch – 700+
(currently a total of 1,135 resources)

132 projects added to the Boreal Caribou Interactive Map



Canadian
Conservation
and Land
Management



“The CCLM portal looks really cool, and I’m excited to explore all this information in one place from all my favourite organizations. I’m really enjoying the interactive map for what projects are going on in Canada regarding caribou... I like to think of the portal as “The Google of Conservation.”

New CCLM user

Goal 4

Accelerate and broaden the use of innovative products, technologies and processes.



GOAL 4 PERFORMANCE MEASURES

	Actuals 18-19	Actuals 19-20	Target 20-21	Actual 20-21
\$ invested in the support of entrepreneurs and SMEs	\$35.6 million	\$23.9 million	\$38 million	\$33.4 million
Average advancement of innovations across the Technology Readiness Levels	2.1	3.3	2.1	3.8
# of innovations created with Alberta Innovates support	760	1,137	820	865

While our investment in support of entrepreneurs and SMEs was below target, it was nearly 1.4 times that of the actual spend in 2019-20. This reflects Alberta Innovates' work in transforming our programs to areas of greatest opportunity and the subsequent shift in the distribution of programs across the research and innovation continuum. This shift also supports the increases noted in the advancements of technology readiness levels. Our assessment is that the reduction in innovations reported in 2020-21 compared to the previous year reflects market conditions during the pandemic, as our clients focused on maintaining staff and existing product lines rather than making new, higher-risk investments in product development.

PROGRAM HIGHLIGHTS

- Late in 2020-21, we launched a request for proposals for the development of three or more technology/business accelerators to vault Alberta's promising startups and SMEs through scaleup and growth faster. With up to \$25 million available over three years for selected accelerators, this major initiative will help to diversify Alberta's economy by supporting entrepreneurship and innovation in new technology areas that will create high-quality jobs throughout the province. The accelerators are expected to contribute to 900 new junior technology firms, 20,000 jobs and \$5 billion in technology firm revenue in the province by 2030.
- Funding support from Western Economic Diversification Canada allowed Alberta Innovates to provide support and resources for SMEs affected by COVID-19. In partnership with the Regional Innovation Networks across Alberta (RINs), we provided training, coaching, and in-depth support to help mitigate the impacts of the pandemic. These supports from Western Economic Diversification and Alberta Innovates led to 129 businesses being created, maintained or expanded. More than 2,730 SMEs were supported in total through this partnership, with 76 receiving further in-depth project support through the Innovation Relief and Recovery program.
- We started a new joint program called the NSERC Alliance – Alberta Innovates Advance Program through our partnerships with the Natural Sciences and Engineering Research Council. This program, which supports 33 projects, helps researchers in Alberta's universities to commercialize their innovations in advanced materials and manufacturing, and in information and communications technologies.
- We continue to support SME investment readiness and connect companies with investors through our Capital Access and Scale Up program. Over the last year we provided investment readiness services to 10 scaleup-ready firms and had active involvement in \$21 million in capital raises.
- We revised our Product Demonstration Program to better support companies in commercializing their products and achieving an optimal market position, with the aim of increasing revenue and potentially expanding into global markets. Nine projects are currently being supported through nearly \$1.1 million in investments.
- We partnered with LEANSTACK to offer the LEANSTACK Accelerator program. This program provided 10 Alberta-based digital companies with biweekly coaching sessions, online tools and peer-to-peer support to help them find product/market fit and traction.

- C-FER's PIRAMID software is assisting pipeline operators to develop risk-based integrity management programs. Moving PIRAMID onto a cloud-based platform has significantly shortened analysis times for complex pipeline defects and risk estimations. This allows for timelier risk-based decision making for pipeline maintenance programs. The cloud-based platform also provides new opportunities to integrate PIRAMID's industry-leading calculation modules into third-party pipeline data management systems. Companies in three different countries currently are using these modules to provide their clients with the most advanced calculation methods available.
- InnoTech was successful in securing an Institutional Cannabis Research Licence from Health Canada. This five-year licence will enable new hemp/cannabis projects to be conducted without individual project approval requirements. New opportunities with at least five new companies are already unfolding, with anticipated further demand from prior customers that previously used hemp as a proxy for cannabis.
- InnoTech is accelerating the development of oil sands technologies including the development of two non-aqueous solvent processes for bitumen extraction from mineable oil sands. These latter projects aim to eliminate wet tailings production, reduce mineable oil sands extraction cost and produce higher-value crude with low life-cycle GHG emissions.

SUCCESS STORIES

Innovations developed in Alberta R&I system attract major investors

Two of our clients in different industries had banner years in 2020-21 by raising major private investment.

Alberta Innovates provided \$1 million in funding to renewable energy company **Eavor**, enabling the company to validate its novel, non-conventional geothermal technology at commercial scale. Following our early support, Eavor was successful in attracting CAD\$50.7 million from BP, Chevron and other investors in February 2021.

Eavor's technology, known as the Eavor-Loop™, uses the natural heat of the earth like a giant rechargeable battery. Fluids are heated by the earth and circulated in a closed network of underground wellbores, unlocking a reliable and consistent energy source. Eavor's technology differs from other forms of geothermal in that it is a scalable, the company says.



"The first commercial Eavor-Loop™ builds are critical to both our near-term and long-term goals, and in turn will drive innovation, energy diversity and jobs for those regions where we can first become established. We believe Eavor represents a significant opportunity for Alberta and Canada."

Paul Cairns, Chief Business Development Officer, Eavor

Meanwhile Calgary-based digital tech company **Symend** has raised financing totalling about CAD\$130 million. Prior to this, Alberta Innovates provided coaching and capital supports to Symend through our entrepreneurial programs.

Symend's clients are companies that are owed money. Symend brings together emerging technologies like workflow automation, data analysis, artificial intelligence, machine learning and proprietary algorithms to identify trends and behaviours that help clients recover a higher percentage of outstanding debt more quickly. Businesses can now do so in a respectful manner personalized to each of their customer's individual circumstances.

The company has grown from 58 full-time equivalent employees at the end of 2019, to 219 FTEs by the end 2020.



"Alberta Innovates played a role in all of it, especially in the early days where we needed to stretch every dollar as far as we could. We gained a lot of cushion from Alberta Innovates. I like to think that we are an example of where helping entrepreneurs early in their incubation of their ideas really does pay off. The valuation of this company in three years had grown 2,400 per cent.... Part of what makes this amazing for us is that Alberta is where we staked our claim to the future. Our vision for this company is that it doesn't just create a great business, but it accelerates the maturity rate of our ecosystem and tech in Alberta."

Hanif Joshaghani, CEO, Symend

Ingenious robotic warehouse system devised in Alberta takes off

One of the big Alberta success stories in the startup scene is **Attabotics**, a Calgary company whose growth has skyrocketed after pioneering an innovative robotic warehouse logistics system.

In just six years the founders have taken their concept from initial development in their garages and basements to a thriving tech company with more than 250 employees (many of whom are highly skilled professionals from the oil and gas sector), major backing from big investors, customers that span the retail, B2B, and food and beverage industries, and partners like Microsoft, AltaML and the Alberta Machine Intelligence Institute (Amii).

What has set Attabotics apart is its ingenious system using robots to move products in a warehouse in a 3D matrix accessed through vertical shafts.

Recognizing early on that Attabotics had a great idea, Alberta Innovates has worked with the company since 2016 by providing coaching and funding through our Entrepreneurial and Clean Resources programs.

We played a key role in helping the company validate and commercialize its tech to the point where it could attract major additional investment, and we are supporting Attabotics' growth through introduction of a new technology application.

Attabotics tapped into our Technology Development Advisor program and entrepreneurial grants for business development support and to scale its original technology. Then, in 2020, we invested \$1 million in the form of a Clean Technology Development grant for Attabotics' "FreezerBot" application in cold-storage environments. This project is Attabotics' first commercial robot variant as the company branches into the e-grocer market.



The system will significantly reduce the storage footprint in any temperature-controlled warehouse, potentially by up to 85 per cent. This will reduce the amount of materials required for construction and maintenance, and reduce the amount of energy required and GHG emissions associated with the ongoing operation of warehouse facilities.

Attabotics secured \$50 million USD in Series C funding raised in August 2020 through a round led by the Ontario Teachers' Pension Plan Board (OTPP) along with Honeywell Ventures. Luxury retailer Nordstrom is piloting Attabotics technology in its warehouses, and Microsoft is piloting its new network product, Azure Private Edge Zones, in Attabotics systems.

Goal 5

Be recognized globally as a leading innovation engine.



GOAL 5 PERFORMANCE MEASURES

	Actuals 18-19	Actuals 19-20	Target 20-21	Actual 20-21
\$ invested in strategic areas of importance*	\$138 M	\$126 M	\$117 M	\$152 M
\$ attracted to Alberta Innovates from external sources	\$50M	\$57.4M	\$38.4M	\$43.5M
# of local, national and international participants attending Inventure\$	>3,000	4,000	3,500	10,000

*Metric was updated to reflect dollars invested rather than percentage of overall budget invested.

Due to initiatives approved throughout the year, Research, Innovation and Commercialization expenditures were \$35 million higher than targeted in Alberta Innovates' budget. This included \$25 million for the TIER program. A reduction in revenue attracted to AI from external sources correlates to the moderate reduction in the number of clients accessing InnoTech and C-FER during a challenging economic period in the province and elsewhere. This decrease is primarily due to the COVID-19 pandemic and reduced oil prices which caused delays or cancellations of several external revenue contracts in 2020-21.

A shift in platform for INVENTURE\$ from an in-person event to a series of virtual workshops and webinar opened up exposure and access to a larger number of participants from around the world.

HIGHLIGHTS

- INVENTURE\$ Unbound – our virtual pandemic pivot from the annual INVENTURE\$ live event – was a resounding success. We attracted 10,000 online registrants from 60 countries and offered 105 sessions throughout 2020-21. These themed series and webinars ranged from entrepreneurial topics and “show me the money” funding workshops, to technical panels on small modular nuclear reactors; water innovation; bioenergy/ bioindustrial; to emerging social and technology trends such as women leading innovation; innovation of work; smart cities; and artificial intelligence.
- We elevated public engagement in the transformation of health systems by staging a highly successful Digital Health Summit through INVENTURE\$ Unbound which welcomed more than 2,000 registrants from 60 countries; a webinar for researchers about the potential of network medicine; and two commercialization workshops for entrepreneurs – one on regulatory requirements for digital health and one on reimbursement pathways.
- Alberta Innovates is gaining recognition among Albertans. In brand tracking research done on our behalf by Leger, a Canadian polling firm, public awareness among 1,000 Albertans interviewed online was up from 57 per cent to 65 per cent between October 2020 and February 2021.
- Laura Kilcrease and Mark Little, CEOs of Alberta Innovates and Suncor, were bylined together in a column published by Corporate Knights in June 2020, bringing attention to Canada's oil sands as best positioned to lead the energy transformation – Unlocking the potential of our oil sands – Alberta Innovates.
- Alberta Views magazine published a cover story in March 2020 called “Alberta's Carbon Revolution” which featured our Bitumen Beyond Combustion program.
- An expert panel review of our Water Innovation Program concluded this program is widely seen as leading in Canada, and world-class in terms of its significance and impact.

Outlook for a recovering Alberta

The Alberta government launched a new \$75-million Investment and Growth Strategy in September 2020 as part of its economic recovery plan. The provincial strategy “target(s) critical sectors for investment growth and retention” and “creates the conditions for innovation to transform Alberta’s economy in the future,” among other things.



Alberta Innovates received a budget increase of \$45 million over four years, beginning in 2021-22, with the funding targeted to enhancing entrepreneurial programs.

The 2021-22 fiscal year began with the third wave of the pandemic forcing a new round of restrictions, and Alberta's unemployment hovered at nine per cent, higher than the national unemployment rate.³ Steadily increased vaccine supplies and successful vaccine rollout saw 69.4 per cent of eligible Albertans aged 12+ receiving at least one dose of vaccine, and 22 per cent fully vaccinated with two doses by mid-June 2021.

The vaccine rollout, combined with rebounding energy, housing and retail sectors, led to cautious optimism that life could begin to normalize in the latter half of 2021 and that the economy would strengthen.

The Government of Alberta economic outlook forecasted momentum in the second half of the year with GDP expected to partially rebound by 4.8 per cent this year.⁴

There is also evidence that the tech sector withstood the pressures of the pandemic better than most. The Alberta Enterprise Corporation (AEC) 2021 Technology Deal Flow Study reported record-breaking capital investment and signs of maturity. Alberta is now home to more than 3,000 technology companies, "with almost 40 per cent of local tech companies surveyed exceeding revenues of \$1 million, a 66 per cent increase since 2018."⁵ The number of companies with 25 or more employees increased by 12 per cent in the last two years. In the provincial research and innovation system overall, four Calgary tech firms have achieved unicorn status (valued at more than \$1 billion) in recent years.

CLIMATE CHANGE REMAINS A CHALLENGE

As the world emerges from the pandemic, climate change remains a significant global challenge. Urgency around climate and social justice are expected to shape political and economic agendas as citizens press for action from governments and corporate leaders.

Companies and investors are recognizing this fundamental shift. In Alberta, for example, CNRL, Suncor, and Cenovus have pledged to achieve net zero carbon emissions by 2050. Suncor has also committed to reduce emissions intensity in production by 30 per cent by 2030 and to strengthen relationship with Indigenous Peoples and communities across Canada.⁶

The AEC Technology Deal Flow Study also noted an ESC impact, stating that "startups strived to deliver environmental, social and governance impacts in their product or service offerings: 39 per cent had an environmental benefit, 45 per cent had a social benefit, and 18 per cent had a governance benefit.

THE PATH FORWARD

The COVID-19 pandemic accelerated innovation in search of better solutions in everything from pharmaceutical supply chains, and computer chip production, to construction and digital infrastructure. The pace of technological advances worldwide has skyrocketed and underscored the importance of research and innovation for Alberta to not only keep up but to leap ahead.

Alberta Innovates continues to advance emerging technologies in its business plan in response to global mega-trend challenges.⁷ Artificial intelligence – one of our longstanding priorities and areas of support – is starting to gain a foothold in the real world, and Alberta is now among those jurisdictions leading the way globally in advancing this emerging technology.

Similarly, other investments in the entrepreneurial ecosystem, digital health, clean resource technologies and smart agriculture will be channelled to:

- Accelerating growth of Alberta's tech sector.
- Improving health systems and wellness.
- Advancing environmental sustainability and a lower-carbon economy.
- Improving agricultural production to address global food security issues.

³ Government of Alberta website, *Economic Dashboard*, May 7, 2021.

⁴ Provincial Budget 2021, "Budget Highlights - Economic Outlook," February 25, 2021.

⁵ Alberta Enterprise Corporation, *2021 Technology Deal Flow Study*, April 2021.

⁶ Suncor website, "Sustainability Goals."

⁷ Alberta Innovates, *2020-23 Business Plan*, p. 16.

We will contract three or more technology/business accelerators in the province this year to vault Alberta startups through scaleup and growth faster. Accelerators provide an intensive learning experience for cohorts of selected businesses with mentors, compressing their experiential learning into a shorter time period.

“Our goal is to make Alberta a hub for high-growth entrepreneurial businesses and recognized as an attractive place for technology investment. We want to help companies scale – not just to become \$5-million or \$10-million companies – to get to \$100 million or more,” says CEO Laura Kilcrease.

As Alberta Innovates marks the centennial year of research and innovation in Alberta in 2021, we are firmly focused on the next century of our mandate as the province’s innovation engine. We will continue to serve as a leader, convener, connector and influencer. Looking ahead to the next 100 years, we are confident the ingenuity of our science, research and innovation community will help Alberta grow and Albertans thrive.

Management Discussion & Analysis

The results of the Alberta Innovates consolidated financial statements reflect the objectives of the organization to support R&I activities aligned to meet Government of Alberta priorities for the economic and social well-being of Albertans. This includes, without limitation, activities directed at the discovery, commercialization and application of knowledge in the sectors of agriculture, energy, environment, forestry, health and other sectors determined by the regulations.

Two wholly owned subsidiary corporations, C-FER Technologies (1999) Inc. and InnoTech Alberta Inc., along with the Alberta Foundation for Health Research, are also reporting entities of Alberta Innovates.

FINANCIAL OVERVIEW

The Office of the Auditor General Alberta issued an unqualified audit report on the consolidated financial statements for the year ending March 31, 2021.

Revenue

Overall total revenue came in over budget in 2020-21 by \$14 million. Government transfers of \$177.4 million were \$30.8 million higher than budget due to an unbudgeted \$25 million funding agreement with the Ministry of Jobs, Economy and Innovation, along with a slight increase of \$4.6 million to the base grant to support business plan objectives. A small portion of the base grant was not recognized into revenue, and instead deferred on the balance sheet as it was restricted for a specific purpose. Various unbudgeted additional initiatives were also approved early in the year amounting to \$2 million.

External revenue and industry funding of \$40.8 million was lower than budget by \$14 million. This decrease is primarily due to the COVID-19 pandemic and lower oil prices which caused delays or cancellations of several external revenue contracts in 2020-21.

Expenses

The expenses have been expressed in terms of Alberta Innovates business lines:

Research, Innovation & Commercialization: Includes investments in Health, Clean Resources, Entrepreneurial Investments, and Post-Secondary Investments & Emerging Technologies. Research, Innovation and Commercialization expenses of \$152.4 million were \$35 million higher than budget due to initiatives approved throughout the year.

Applied Research: Includes expenses for InnoTech Alberta Inc. and C-FER Technologies (1999) Inc. Applied Research report expenses of \$47.9 million, which were \$3.8 million lower than budget due to the economic challenges faced in the year.

Administration: Includes all corporate services such as finance, marketing and communications, information services, facilities, legal, human resources, purchasing, corporate planning and portfolio management, and performance management and evaluation. Administration serves a critical function in the Corporation by providing essential supports to the other business lines (Research, Innovation & Commercialization and Applied Research).

These corporate services enable the operational business lines to work productively and efficiently toward achieving Alberta Innovates strategic priorities and goals. Corporate services play a direct role in advancing Alberta Innovates strategic priority.

Administration expenses of \$25.5 million were lower than budget by \$6.1 million due to decreased salaries along with reduced travel and related expenses due to the COVID-19 pandemic.

Amortization: Includes amortization for all business lines.

The gross operating expense target includes amortization and inter-governmental transfers. Inter-governmental transfers are grants or contracts to other government entities that are then eliminated upon consolidation at the GOA. Alberta Innovates' net expense target of \$148 million is spending that the organization can direct to strategic priorities and operations. Alberta Innovates exceeded the expense target by \$22.8 million, however, Alberta Innovates received approval to exceed the expense target by \$27 million for approved initiatives discussed in the revenue section above resulting in a variance of \$4.2 million underspent.

Alberta Innovates receives a budgeted revenue and expense target from the Government of Alberta. Although the organization has an accumulated surplus from prior years of underspending, the organization is limited to the expense target provided.

	2019-20 Actual	2020-21 Budget	2020-21 Actual
Gross Operating Expenses	228,371	208,641	232,844
Amortization	(7,202)	(7,880)	(7,015)
Inter-Governmental Transfers	(60,709)	(52,750)	(54,991)
Net Operating Expenses	160,460	148,011	170,838

Committed Funding

Alberta Innovates has funding commitments for specific purposes that are allocated over time. In addition, Alberta Innovates receives funding from third parties, including partnerships that require Alberta Innovates to match the third-party funding. The funding grant must meet all eligibility criteria, the expenditure must be a contractual obligation and the grant must be approved before the expenditure is recognized as an expense in the financial statements. Other funding sources are allocated to Alberta Innovates by agreement. The agreement must be approved by the Alberta Innovates Board of Directors before the expenditure is incurred and recorded as an expense in the financial statements.

Alberta Innovates has \$100.4 million of contractual obligations that will become liabilities over the next five years.

REPORT ON RISK MANAGEMENT

Alberta Innovates embeds risk management practices into the development of its strategic, business and operational plans to drive consistent, effective and accountable action and decision-making management practice and Board governance oversight. Our enterprise risk management framework is consistent with generally accepted global risk management standard frameworks, aligns with the Government of Alberta's risk management framework, and reflects adoption of best practices.

Our Executive reviewed and updated our corporate-level risks each quarter in 2020-21. Each risk was assigned an overall rating based on the likelihood of the risk occurring and the potential impact of the risk on our goals and operations. Informed decisions or strategies on how best to respond to the individual risks were also developed and implemented as necessary. The corporate risk register – which includes all the information above – was reviewed by our Board of Directors each quarter.

The key risks faced by Alberta Innovates last year were:

Budget reductions and limitations on expenditures adversely affect our ability to fund and transform Alberta's R&I system.

Our capacity to support Alberta's R&I system through funding and services is impacted by reduced budgets as well as expenditure and resource allocation limitations. These factors can inhibit our ability to sufficiently invest in new ideas and sustain funding in high-priority areas.

To mitigate this risk, we have actively engaged our stakeholders and partners to maintain and build relationships resulting in funding, revenue and contracts.

Impacts of multi-layered reporting requirements and a long-term investment model.

Our ability to adequately report on the outcomes of our investments is challenged by multi-layer reporting requirements and our long-term investment model. This could potentially lead to a loss of confidence in Alberta Innovates.

To mitigate this risk, we have continued to consolidate our legislated reporting and client requirements, as well as ad hoc information requests. By directing information and data requests to a single point of contact, we are more efficient and effective in our response. This reduces duplication and improves the consistency of the information provided.

Crisis management and business continuity.

The onset of unforeseen events – whether it be a pandemic, or other health, safety, security, environmental or media events - can place our organization at risk and affect our operations, resources, and reputation.

To mitigate this risk the organization has a corporate crisis management plan in place to deploy as required. Through the leadership of the Crisis Management Team and in response to COVID, the plan was enacted to support the mental and physical health and safety of our employees while also ensuring business continuity. Our strong response to the pandemic has better prepared us to mobilize and respond in the future.

Capital Plan & Leasing Arrangements

Alberta Innovates and its subsidiaries occupy a significant inventory of research and office facilities, most of which are owned and operated by Alberta Infrastructure. In addition to the Government of Alberta facilities, we also occupy space with commercial lease arrangements. We currently operate across 11 locations: Edmonton (5), Calgary (3), Devon, Vegreville and Victoria, B.C., with well over 1.2 million square feet of space and 600 acres of research farmland. In addition to our facilities, we also possess a substantial inventory of research equipment with an estimated replacement asset value well over \$150 million.

Adequate infrastructure is a vital requirement to support our vision, sustain program effectiveness and manage program growth aligned to corporate and provincial priorities.

Working in conjunction with Alberta Infrastructure, Alberta Innovates Facility Services team provides strategic and operational support on capital projects and program accommodation to Alberta Innovates and its subsidiaries. During 2020-21, the team provided management and co-ordination services to 65 capital projects with an estimated total value of \$50 million. The following are highlights of major activities recently completed or underway:

- **Fume Hood Replacement Program (current approved budget: \$30M)** – The goal of this project is to replace failing fume hoods and address base building renewal requirements and deficiencies associated with the fume hood and lab operations. The phased project approach was established collectively with input from the Ministry of JEI, InnoTech Alberta and Alberta Infrastructure. A holistic renewal of the Vegreville site and a partial/initial hood replacement in Edmonton Research and Development Park was determined as the best path forward to utilize the currently approved funding. The initial project phase, estimated at \$14 million in constructions costs, has been initiated with contractors mobilized on sites in March 2021.
- **Edmonton Research and Development Park Fuels and Lubricants (F&L) Group Safety Upgrade (\$4M)** – This project was initiated to address InnoTech base building code compliance and operational issues. A project with multiple implementation phases is in active construction; completion of Phase 1 construction has been extended to June 2021 to address a mechanical issue identified.
- **Edmonton Research and Development Park Fermentation Chillers Replacement (\$3M)** – This project was initiated to replace the critical 30 years old chillers supporting InnoTech fermentation plant operations. The new system was installed, commissioned and tested successfully without any major issues.

In addition to the above activities, we renewed a lease at our downtown Edmonton location in Bell Tower.

Management's Responsibility for Reporting

Alberta Innovates management is responsible for the preparation, accuracy, objectivity and integrity of the information contained in the annual report including the financial statements, performance results, and supporting management information. Systems of internal control are designed and maintained to produce reliable information that meet reporting requirements, and to ensure that transactions are executed in accordance with all relevant legislation, regulations and policies, reliable financial records are maintained, and assets are properly accounted for and safeguarded. The annual report has been approved by the Board of Directors and is prepared in accordance with ministerial guidelines.

The Auditor General of the Province of Alberta, the corporation's external auditor appointed under the *Auditor General Act*, performs an annual independent audit of Alberta Innovates' financial statements in accordance with Canadian generally accepted auditing standards.

Original signed by Laura Kilcrease

Chief Executive Officer

Original signed by Maureen Lomas

Vice President, Finance

Statutory Report

PUBLIC INTEREST DISCLOSURE ACT

Section 32 of the Public Interest Disclosure Act requires the corporation to report annually on the following parts of the Act:

- (a) the number of disclosures received by the designated officer of the Public Interest Disclosure Office, the number of disclosures acted on and the number of disclosures not acted on by the designated officer;
- (b) the number of investigations commenced by the designated officer as a result of the disclosures;
- and (c) in the case of an investigation that results in a finding of wrongdoing, a description of the wrongdoing and any recommendations made or corrective measures taken in relation to the wrongdoing or the reasons why no corrective measure was taken.

In 2020–21, Alberta Innovates had no disclosures of wrongdoing filed with the Public Interest Disclosure Office.

Audited Financial Statements

Independent Auditor's Report **47**

Consolidated Statement of Operations **49**

Consolidated Statement of Financial Position **50**

Consolidated Statement of Change in Net Financial Assets **51**

Consolidated Statement of Cash Flows **52**

Notes to the Consolidated Financial Statements **53**

Schedule 1 Expenses – Detailed by Object **63**

Schedule 2 Salary and Benefits Disclosure **64**

Schedule 3 Related Party Transactions **65**

Schedule 4 Allocated Costs **67**



Independent Auditor's Report

To the Board of Directors of Alberta Innovates

Report on the Consolidated Financial Statements

Opinion

I have audited the consolidated financial statements of Alberta Innovates (the Group), which comprise the consolidated statement of financial position as at March 31, 2021, and the consolidated statements of operations, change in net financial assets, and cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In my opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as at March 31, 2021, and the results of its operations, its changes in net financial assets, and its cash flows for the year then ended in accordance with Canadian public sector accounting standards.

Basis for opinion

I conducted my audit in accordance with Canadian generally accepted auditing standards. My responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Consolidated Financial Statements* section of my report. I am independent of the Group in accordance with the ethical requirements that are relevant to my audit of the consolidated financial statements in Canada, and I have fulfilled my other ethical responsibilities in accordance with these requirements. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

Other information

Management is responsible for the other information. The other information comprises the information included in the Annual Report, but does not include the consolidated financial statements and my auditor's report thereon. The Annual Report is expected to be made available to me after the date of this auditor's report.

My opinion on the consolidated financial statements does not cover the other information and I do not express any form of assurance conclusion thereon.

In connection with my audit of the consolidated financial statements, my responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or my knowledge obtained in the audit, or otherwise appears to be materially misstated.

If, based on the work I will perform on this other information, I conclude that there is a material misstatement of this other information, I am required to communicate the matter to those charged with governance.

Responsibilities of management and those charged with governance for the consolidated financial statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with Canadian public sector accounting standards, and for such internal control as management determines is necessary to enable the preparation of the consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless an intention exists to liquidate or to cease operations, or there is no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's financial reporting process.

Auditor's responsibilities for the audit of the consolidated financial statements

My objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, I exercise professional judgment and maintain professional skepticism throughout the audit. I also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit 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 Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. I am responsible for the direction, supervision and performance of the group audit. I remain solely responsible for my audit opinion.

I communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

[Original signed by W. Doug Wylie FCPA, FCMA, ICD.D]
Auditor General

May 27, 2021
Edmonton, Alberta

ALBERTA INNOVATES
CONSOLIDATED STATEMENT OF OPERATIONS
YEAR ENDED MARCH 31, 2021

	2021		2020
	Budget (Note 4)	Actual	Actual
	<i>(in thousands)</i>		
Revenues			
Government transfers			
Funding from Jobs, Economy and Innovation			
Base grant	\$ 119,944	\$ 122,811	\$ 135,068
Restricted grant from prior years	14,703	17,021	20,641
Other grants	5,000	27,050	6,085
Restricted capital contribution	1,700	2,327	1,691
Funding from other Government of Alberta entities -			
Other grants	4,200	5,881	9,137
Federal government transfers	1,105	2,345	5,906
Donations and other contributions	-	-	489
External revenue and industry funding	54,808	40,804	49,396
Investment income	2,021	359	1,577
Other Government of Alberta revenue	3,023	1,858	1,916
	<u>206,504</u>	<u>220,456</u>	<u>231,906</u>
Expenses (Note 2 (b) and Schedule 1)			
Research, innovation and commercialization	117,395	152,415	125,001
Applied research	51,760	47,911	60,111
Administration	31,606	25,503	36,057
Amortization	7,880	7,015	7,202
	<u>208,641</u>	<u>232,844</u>	<u>228,371</u>
Annual (deficit) surplus	<u>(2,137)</u>	<u>(12,388)</u>	<u>3,535</u>
Accumulated surplus at beginning of year	72,264	72,264	68,729
Accumulated surplus at end of year	<u>\$ 70,127</u>	<u>\$ 59,876</u>	<u>\$ 72,264</u>

The accompanying notes and schedules are part of these consolidated financial statements.

ALBERTA INNOVATES
CONSOLIDATED STATEMENT OF FINANCIAL POSITION
AS AT MARCH 31, 2021

	2021	2020
	<i>(in thousands)</i>	
Financial assets		
Cash (Note 5)	\$ 112,130	\$ 69,990
Accounts receivable (Note 6)	13,513	100,273
	<u>125,643</u>	<u>170,263</u>
Liabilities		
Accounts payable and other accrued liabilities (Note 8)	21,257	38,304
Unspent deferred capital contributions (Note 9)	1,137	301
Deferred revenue (Note 9)	63,490	78,158
Deferred contract revenue (Note 9)	7,788	9,330
	<u>93,672</u>	<u>126,093</u>
Net financial assets	<u>31,971</u>	<u>44,170</u>
Non-financial assets		
Tangible capital assets (Note 11)	46,353	48,015
Prepaid expenses	1,592	1,560
	<u>47,945</u>	<u>49,575</u>
Net assets before spent deferred capital contributions	<u>79,916</u>	<u>93,745</u>
Spent deferred capital contributions (Note 9)	20,040	21,481
Net assets		
Accumulated surplus (Note 12)	<u>\$ 59,876</u>	<u>\$ 72,264</u>

Contractual rights (Note 7)

Contingent liabilities (Note 13)

Contractual obligations (Note 14)

The accompanying notes and schedules are part of these consolidated financial statements.

Approved by the Board of Directors

Original signed by Dr. Brenda Kenny

Dr. Brenda Kenny
Board Chair

Original signed by Dr. H.J (Tom) Thompson

Dr. H.J (Tom) Thompson
Audit Chair

ALBERTA INNOVATES
CONSOLIDATED STATEMENT OF CHANGE IN NET FINANCIAL ASSETS
YEAR ENDED MARCH 31, 2021

	2021		2020
	Budget	Actual	Actual
	<i>(in thousands)</i>		
Annual (deficit) surplus	\$ (2,137)	\$ (12,388)	\$ 3,535
Acquisition of tangible capital assets (Note 11)	(10,750)	(5,353)	(5,925)
Amortization of tangible capital assets (Note 11)	7,880	7,015	7,202
Net (gain)/loss on disposal of tangible capital assets		(5)	149
Proceeds on sale of tangible capital assets		5	22
(Increase)/Decrease in prepaid expenses		(32)	77
Net (decrease)/increase in spent deferred capital contributions (Note 9)		(1,441)	1,158
(Decrease)/Increase in net financial assets	(5,007)	(12,199)	6,218
Net financial assets at beginning of year	44,170	44,170	37,952
Net financial assets at end of year	\$ 39,163	\$ 31,971	\$ 44,170

The accompanying notes and schedules are part of these consolidated financial statements.

ALBERTA INNOVATES
CONSOLIDATED STATEMENT OF CASH FLOWS
YEAR ENDED MARCH 31, 2021

	2021	2020
	<i>(in thousands)</i>	
Operating transactions		
Annual (deficit) surplus	\$ (12,388)	\$ 3,535
Non-cash items included in annual (deficit) surplus:		
Amortization of tangible capital assets (Note 11)	7,015	7,202
Deferred contributions recognized as revenue (Note 9)	(137,330)	(129,588)
Donation of tangible capital assets (Note 11)	-	(489)
Net (gain)/loss on disposal of tangible capital assets	(5)	149
	<u>(142,708)</u>	<u>(119,191)</u>
Decrease/(Increase) in accounts receivable	86,760	(85,156)
(Increase)/Decrease in prepaid expenses	(32)	77
(Decrease)/Increase in accounts payable and other accrued liabilities	(17,047)	20,162
(Decrease)/Increase in deferred contract revenue	(1,542)	675
Contributions restricted for operating (Note 9)	119,708	101,266
Cash provided by (applied to) operating transactions	<u>45,139</u>	<u>(82,167)</u>
Capital transactions		
Acquisition of tangible capital assets (Note 11)	(5,353)	(5,436)
Proceeds on sale of tangible capital assets	5	22
Cash applied to capital transactions	<u>(5,348)</u>	<u>(5,414)</u>
Financing transactions		
Contributions restricted for capital (Note 9)	2,349	2,901
Cash provided by financing transactions	<u>2,349</u>	<u>2,901</u>
Increase/(Decrease) in cash	42,140	(84,680)
Cash at beginning of year	69,990	154,670
Cash at end of year	<u>\$ 112,130</u>	<u>\$ 69,990</u>

The accompanying notes and schedules are part of these consolidated financial statements.

ALBERTA INNOVATES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
MARCH 31, 2021

Note 1 AUTHORITY AND PURPOSE

Alberta Innovates is a Provincial corporation, as defined in the *Financial Administration Act*. It was established effective November 1, 2016 under the *Alberta Research and Innovation Act*. The *Alberta Research and Innovation Act* was amended to dissolve the four corporations: Alberta Innovates - Bio Solutions, Alberta Innovates - Energy and Environment Solutions, Alberta Innovates - Health Solutions, and Alberta Innovates - Technology Futures and create one new research and innovation corporation, "Alberta Innovates." Two wholly owned subsidiary corporations C-FER Technologies (1999) Inc. and InnoTech Alberta Inc. along with the Alberta Foundation for Health Research are also reporting entities of Alberta Innovates ("The Corporation").

The objectives of the Corporation are to support, for the economic and social well-being of Albertans, research and innovation activities aligned to meet Government of Alberta priorities, including, without limitation, activities directed at the discovery, commercialization and application of knowledge in the areas of agriculture, energy, environment, forestry, health and other areas determined by the regulations.

The Corporation is exempt from income taxes under the *Income Tax Act*.

Note 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND REPORTING PRACTICES

These consolidated financial statements are prepared in accordance with Canadian Public Sector Accounting Standards.

(a) Reporting Entity and Method of Consolidation

These consolidated financial statements reflect the assets, liabilities, revenue and expenses of the Corporation and its wholly owned subsidiaries InnoTech Alberta Inc., C-FER Technologies (1999) Inc. and the Alberta Foundation for Health Research (AFHR). The AFHR operates under the *Alberta Companies Act* and is a registered charitable organization for income tax purposes. All inter-entity balances and transactions have been eliminated on consolidation.

The accounts of government sector entities are consolidated using the line-by-line method. Under this method, accounting policies of the consolidated entities are adjusted to conform to the Corporation's accounting policies and the results of each line item in their financial statements (revenue, expense, assets, and liabilities) are included in the Corporation's results. Revenue and expense, capital, investing and financing transactions and related asset and liability balances between the consolidated entities have been eliminated.

(b) Basis of Financial Reporting

Revenues

All revenues are reported on the accrual basis of accounting. Cash received for which goods or services have not been provided by year end is recognized as deferred revenue and recorded in accounts payable and other accrued liabilities. Externally restricted revenue is recognized as revenue in the period in which the resources are used for the purpose specified. Funds received prior to meeting the criteria are recorded as deferred revenue until the resources are used for the purpose specified.

ALBERTA INNOVATES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)
MARCH 31, 2021

Note 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND REPORTING PRACTICES (Continued)

(b) Basis of Financial Reporting (Continued)

Revenues (Continued)

External revenue is contract revenue that is recognized using the percentage of completion method. The Corporation makes full provision for all known or estimated losses on uncompleted contracts as soon as they can reasonably be estimated.

Investment income includes interest income. Investment income earned from restricted sources is deferred and recognized when the terms imposed have been met.

Other revenue is contract and fee for service work billed to Alberta Government ministries and agencies, post secondary institutions and school divisions. Other revenue also includes revenue from the sale of products the Corporation has built.

Government Transfers

Transfers from all governments are referred to as government transfers.

Government transfers and associated externally restricted investment income are recognized as deferred revenue or deferred capital contributions if the eligibility criteria for use of the transfer, or the stipulations together with the Corporation's actions and communications as to the use of the transfer, create a liability. These transfers are recognized as revenue as the stipulations are met and, when applicable, the Corporation complies with its communicated use of the transfer.

All other government transfers, without stipulations for use of the transfer, are recognized as revenue when the transfer is authorized and the Corporation meets the eligibility criteria (if any).

Donations and Non-Government Contributions

Donations and non-government contributions are received from individuals, corporations, and private sector not-for-profit organizations. Donations and non-government contributions may be unrestricted or externally restricted for operating or capital purposes.

Unrestricted donations and non-government contributions are recognized as revenue in the year received or in the year the funds are committed to the Corporation if the amount can be reasonably estimated and collection is reasonably assured.

Externally restricted donations, non-government contributions and realized and unrealized gains and losses for the associated, externally restricted, investment income are recognized as deferred revenue if the terms for their use, or the terms along with the Corporation's actions and communications as to the use, create a liability. These resources are recognized as revenue as the terms are met and, when applicable, the Corporation complies with its communicated use.

In-kind donations of services and materials are recognized at fair value when such value can reasonably be determined.

Expenses

Expenses are reported on an accrual basis. The cost of all goods consumed and services received during the year are expensed.

Transfers include entitlements, grants and transfers under shared cost agreements. Grants and transfers are recognized as expenses when the transfer is authorized and eligibility criteria have been met by the recipient.

ALBERTA INNOVATES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)
MARCH 31, 2021

Note 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND REPORTING PRACTICES (Continued)

(b) Basis of Financial Reporting (Continued)

Valuation of Financial Assets and Liabilities

The Corporation's financial assets and liabilities are generally measured as follows:

<u>Financial Statement Component</u>	<u>Measurement</u>
Cash	Cost
Accounts Receivable	Lower of Cost or Net Recoverable Value
Accounts Payable and Other Accrued Liabilities	Cost

The Corporation has no assets or liabilities in the fair value category, has no significant foreign currency transactions and has no significant remeasurement gains or losses. Consequently, no statement of remeasurement gains and losses has been presented.

Financial Assets

Financial assets are assets that could be used to discharge existing liabilities or finance future operations and are not for consumption in the normal course of operations.

Financial assets are the Corporation's financial claims on external organizations and individuals.

Cash

Cash comprises of cash on hand and demand deposits.

The Consolidated Cash Investment Trust Fund (CCITF) is managed with the objective of providing competitive interest income to depositors while maintaining appropriate security and liquidity of depositors' capital. The portfolio is comprised of high-quality, short-term and mid-term fixed income securities with a maximum maturity of three years.

Accounts Receivable

Accounts receivable are recognized at the lower of cost or net recoverable value. A valuation allowance is recognized when recovery is uncertain.

Liabilities

Liabilities represent present obligations of the Corporation to external organizations and individuals arising from past transactions or events occurring before the year end, the settlement of which is expected to result in the future sacrifice of economic benefits. They are recognized when there is an appropriate basis of measurement and management can reasonably estimate the amounts.

Liabilities also include:

- all financial claims payable by the Corporation at the year end;
- accrued employee vacation entitlements; and
- contingent liabilities where future liabilities are likely.

ALBERTA INNOVATES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)
MARCH 31, 2021

Note 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND REPORTING PRACTICES (Continued)

(b) Basis of Financial Reporting (Continued)

Environmental Liabilities

Contaminated sites are a result of contamination of a chemical, organic or radioactive material or live organism that exceeds an environmental standard, being introduced into soil, water or sediment. A liability for remediation of a contaminated site may arise from an operation that is either in productive use or no longer in productive use and may also arise from an unexpected event resulting in contamination. The resulting liability is recognized net of any expected recoveries, when all of the following criteria are met:

- i. an environmental standard exists;
- ii. contamination exceeds the environmental standard;
- iii. the Corporation is directly responsible or accepts responsibility;
- iv. it is expected that future economic benefits will be given up; and
- v. a reasonable estimate of the amount can be made.

Other environmental liabilities are recognized when all of the following criteria are met:

- i. the Corporation has a duty or responsibility to others, leaving little or no discretion to avoid the obligation;
- ii. the duty or responsibility to others entails settlement by future transfer or use of assets, or a provision of services at a specified or determinable date, or on demand;
- iii. the transaction or events obligating the Corporation have already occurred; and
- iv. a reasonable estimate of the amount can be made.

Asset Retirement Obligations

Liabilities are recognized for statutory, contractual or legal obligations, associated with the retirement of tangible capital assets when those obligations result from the acquisition, construction, development or normal operation of the assets. The obligations are estimated at the future value amount and the capitalized asset retirement cost is amortized on the same basis as the related asset. In subsequent periods, the liability will be adjusted for any changes in the value of the estimate.

Non-Financial Assets

Non-financial assets are acquired, constructed, or developed assets that do not normally provide resources to discharge existing liabilities, but instead:

- (a) are normally employed to deliver government services.
- (b) may be consumed in the normal course of operations; and
- (c) are not for sale in the normal course of operations

Non-financial assets include tangible capital assets and prepaid expenses.

Tangible Capital Assets

Tangible capital assets are recognized at cost less accumulated amortization, which includes amounts that are directly related to the acquisition, design, construction, development, improvement or betterment of the assets. Tangible capital assets are amortized on a straight-line basis over the estimated useful life of the assets. The threshold for capitalizing new systems development is \$250,000 and the threshold for major systems enhancements is \$100,000. The threshold for all other tangible capital assets is \$5,000. All land is capitalized.

Work in progress, which included facilities and improvements projects and development of information systems, is not amortized until after a project is complete (or substantially complete) and the asset is put into service.

Tangible capital assets are written down when conditions indicate that they no longer contribute to the Corporation's ability to provide goods and services, or when the value of future economic benefits associated with the tangible capital assets are less than their net book value. The net write-downs are accounted for as expenses in the Consolidated Statement of Operations.

Contributed tangible capital assets from non-related entities are recognized at their fair value at the time of contribution.

Prepaid Expenses

Prepaid expenses are recognized at cost and amortized based on the terms of the agreement.

ALBERTA INNOVATES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)
MARCH 31, 2021

Note 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND REPORTING PRACTICES (Continued)

(b) Basis of Financial Reporting (Continued)

Financial Risk Management

The Corporation's financial instruments include cash, accounts receivable and accounts payable and other accrued liabilities. The Corporation is not involved in any hedging relationships through its operations and does not hold or use any derivative financial instruments for trading purposes.

The Corporation's financial instruments are exposed to credit risk, market risk, and liquidity risk.

a) Credit Risk

Counterparty credit risk is the risk of loss arising from the failure of a counterparty to fully honour its financial obligations with the Corporation. The Corporation's accounts receivable are exposed to credit risk. Management manages this risk by continually monitoring the creditworthiness of counterparties and by dealing with counterparties that it believes are creditworthy.

b) Market Risk

Market risk is the risk of loss from unfavourable change in fair value or future cash flows of a financial instrument causing financial loss. Market risk is comprised of currency risk, interest rate risk and price risk. The Corporation's cash is exposed to interest rate risk. Management manages this risk by continually monitoring the Corporation's deposits in the Consolidated Cash Investment Trust Fund (CCITF) and their corresponding rate of return.

c) Liquidity Risk

Liquidity risk is the risk that the Corporation will encounter difficulty in meeting obligations associated with its financial liabilities. The Corporation's accounts payable and other accrued liabilities are exposed to liquidity risk. Management manages this risk by continually monitoring cash flows.

Measurement Uncertainty

Measurement uncertainty exists when there is a variance between the recognized or disclosed amount and another reasonably possible amount. Asset retirement obligations recorded in accounts payable and other accrued liabilities are \$2,549 (2020 - \$2,549). This balance is for estimated decommissioning costs for the Alberta Carbon Capture Technology Centre and is subject to measurement uncertainty.

The World Health Organization declared on March 11, 2020 the outbreak of a strain of the novel coronavirus ("COVID-19") as a pandemic which has resulted in a series of public health and emergency measures that have been put in place to combat the spread of the virus and provide financial assistance as necessary. The duration and impact of COVID-19 are unknown at this time and it is not possible to reliably estimate the effect these developments will have on the Corporation.

Note 3 FUTURE CHANGES IN ACCOUNTING STANDARDS

The Public Sector Accounting Board has issued the following accounting standards:

- **PS 3280 Asset Retirement Obligations (effective April 1, 2022)**

This standard provides guidance on how to account for and report liabilities for retirement of tangible capital assets.

- **PS 3400 Revenue (effective April 1, 2023)**

This standard provides guidance on how to account for and report on revenue, and specifically, it differentiates between revenue arising from exchange and non-exchange transactions.

The Corporation has not yet adopted these standards. Management is currently assessing the impact of these standards on the consolidated financial statements.

ALBERTA INNOVATES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)
MARCH 31, 2021

Note 4 BUDGET

(in thousands)

A preliminary business plan with a budgeted deficit of \$2,137 was approved by the Board on March 25, 2020 and the full financial plan was submitted to the Minister of Jobs, Economy and Innovation. The budget reported in the Consolidated Statement of Operations reflects the original \$2,137 deficit. Categories within revenue and expenses were reclassified to move from modified equity basis to line-by-line method.

CONSOLIDATED STATEMENT OF OPERATIONS

	2021 Original Budget	Adjustment	2021 Revised Budget
Revenues			
Government transfers			
Funding from Jobs, Economy and Innovation			
Base grant	\$ 119,944		\$ 119,944
Restricted grant from prior years	14,703		14,703
Other grants	5,000		5,000
Restricted capital contribution	1,700		1,700
Funding from other Government of Alberta entities - Other grants	4,200		4,200
Federal government transfers	1,000	105	1,105
External revenue and industry funding	38,394	16,414	54,808
Investment income	2,000	21	2,021
Other Government of Alberta revenue	3,023		3,023
Net income from government business enterprise	(900)	900	-
	<u>189,064</u>	<u>17,440</u>	<u>206,504</u>
Expenses			
Research, innovation and commercialization	117,395		117,395
Applied research	35,000	16,760	51,760
Administration	31,606		31,606
Amortization	7,200	680	7,880
	<u>191,201</u>	<u>17,440</u>	<u>208,641</u>
Annual deficit	<u>(2,137)</u>	<u>-</u>	<u>(2,137)</u>

Note 5 CASH

(in thousands)

	2021	2020
Cash	<u>\$ 112,130</u>	<u>\$ 69,990</u>

Cash in the amount of \$112,130 (2020 - \$69,990) includes deposits in the Consolidated Cash Investment Trust Fund (CCITF) of the Province of Alberta amounting to \$103,725 (2020 - \$52,990).

As at March 31, 2021, \$72,415 of the cash balance is restricted as it represents grants received that have restrictions on their use (2020 - \$87,789).

As at March 31, 2021, securities held by the Corporation had a time-weighted rate of return of 0.42% per annum (2020 - 1.9% per annum). Due to the short-term nature of the CCITF investments, the carrying value approximates fair value.

ALBERTA INNOVATES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)
MARCH 31, 2021

Note 6 ACCOUNTS RECEIVABLE
(in thousands)

	2021	2020
	Gross amount	Net recoverable value
Accounts receivable	\$ 11,083	\$ 9,538
Alberta government departments and agencies	563	87,699
Accrued income receivable	1,922	3,036
	<u>\$ 13,568</u>	<u>\$ 100,273</u>

Accounts Receivable are unsecured, non-interest bearing and reported at their estimated net recoverable value.

Note 7 CONTRACTUAL RIGHTS
(in thousands)

Contractual rights are rights of the Corporation to economic resources arising from contracts or agreements that will result in both assets and revenues in the future when the terms of those contracts or agreements are met.

	2021	2020
Contractual rights from operating contracts	<u>\$ 61,500</u>	<u>\$ 45,033</u>

Estimated amounts that will be received or receivable for each of the next five years and thereafter are as follows:

	Operating contracts
2021-22	\$ 42,674
2022-23	11,568
2023-24	2,838
2024-25	1,920
2025-26	1,810
Thereafter	690
	<u>\$ 61,500</u>

Note 8 ACCOUNTS PAYABLE AND OTHER ACCRUED LIABILITIES
(in thousands)

	2021	2020
Accounts payable and other accrued liabilities	\$ 15,522	\$ 19,303
Alberta government departments and agencies	3,186	16,452
Asset retirement obligations	2,549	2,549
	<u>\$ 21,257</u>	<u>\$ 38,304</u>

Note 9 DEFERRED CONTRIBUTIONS
(in thousands)

	2021	2020
Unspent deferred capital contributions (a)	\$ 1,137	\$ 301
Spent deferred capital contributions (b)	20,040	21,481
Deferred operating contributions (c)	63,490	78,158
Deferred contract revenue	7,788	9,330
	<u>\$ 92,455</u>	<u>\$ 109,270</u>

(a) Unspent deferred capital contributions

	2021	2020
	Government of Alberta	Total
Balance at beginning of year	\$ 301	\$ 808
Cash contributions received/receivable during year	2,250	2,888
Transfers from deferred revenue	300	470
Interest income	-	13
Transferred to spent deferred capital contributions	(1,752)	(3,878)
Balance at end of year	<u>\$ 1,099</u>	<u>\$ 301</u>

ALBERTA INNOVATES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)
MARCH 31, 2021

Note 9 DEFERRED CONTRIBUTIONS (Continued)
(in thousands)

(b) Spent deferred capital contributions

	2021			2020	
	Government of Alberta	Other	Total	Total	
Balance at beginning of year	\$ 12,356	\$ 9,125	\$ 21,481	\$ 20,323	
Transferred from unspent deferred capital contributions	1,752	61	1,813	3,878	
Less amounts recognized as revenue	(2,345)	(909)	(3,254)	(2,720)	
Balance at end of year	\$ 11,763	\$ 8,277	\$ 20,040	\$ 21,481	

(c) Deferred operating contributions

	2021			2020	
	Government of Alberta	Other	Total	Total	
Balance at beginning of year	\$ 74,399	\$ 3,759	\$ 78,158	\$ 104,230	
Cash contributions received/receivable during the year	118,970	522	119,492	100,319	
Interest income	216	-	216	947	
Transfers to unspent deferred capital contributions	(300)	-	(300)	(470)	
Recognized as revenue:					
Grants	(132,688)	(1,174)	(133,862)	(125,945)	
Interest income	(214)	-	(214)	(923)	
Balance at end of year	\$ 60,383	\$ 3,107	\$ 63,490	\$ 78,158	

Note 10 BENEFIT PLANS
(in thousands)

(a) The Corporation participates in the multi-employer pension plans: Management Employees Pension Plan (MEPP), the Public Service Pension Plan (PSPP), as well as, a Supplementary Pension Plan (SRP) for Public Service Managers. The Corporation does not have sufficient plan information on MEPP, PSPP or the SRP to follow the standards for defined benefit accounting and therefore follows the standard for defined contribution accounting. Accordingly, pension expense recognized for the PSPP/SRP/MEPP is comprised of employer contributions to the plan that are required for its employees during the year, which are calculated based on actuarially pre-determined amounts that are expected to provide the plan's future benefits. The expense for these pension plans is equivalent to the annual contributions of \$5,014 for the year ended March 31, 2021 (2020 - \$6,127 (Restated)).

At December 31, 2020, the Management Employees Pension Plan reported a surplus of \$809,850 (2019 – surplus \$1,008,135), the Public Service Pension Plan reported a surplus of \$2,223,582 (2019 – surplus \$2,759,320) and the Supplementary Retirement Plan for Public Service Managers reported a deficiency of \$59,972 (2019 – deficiency \$44,698). The Corporation is not responsible for future funding of the plan deficit other than through contribution increases.

As a result of the COVID-19 outbreak, declared a global pandemic on March 11, 2020, global financial markets and world economies have experienced significant volatility. Given the extent of the crisis, and varying levels of response and recovery of countries across the globe, additional uncertainty remains and will continue to exist with regards to fair value measurement of the pension plans investments.

(b) The Benefit Plans consists of the unfunded liability for the Corporation's supplemental retirement plan, the benefits under which are paid for entirely by the Corporation when they come due. There are no plan assets. There are no active members remaining in the plan and one retired member eligible for benefits.

Note 11 TANGIBLE CAPITAL ASSETS
(in thousands)

(1) Historical costs includes work-in-progress at March 31, 2021 totaling \$1,177 (2020 - \$6,082) comprised of building and improvements \$nil (2020 - \$314), equipment \$1,177 (2020 - \$5,588), and computer hardware and software \$nil (2020 - \$180).

(2) Buildings and improvements include leasehold improvements (amortized over the life of the lease).

(3) Equipment includes laboratory equipment, heavy equipment, vehicles, office equipment, and other equipment.

	2021		2020
Investments in Tangible Capital Assets	Unrestricted Surplus	Total	Total
\$ 26,534	\$ 45,730	\$ 72,264	\$ 68,729
(7,015)	(5,373)	(12,388)	3,535
5,353	(5,353)	-	-
(1,813)	1,813	-	-
3,254	(3,254)	-	-
\$ 26,313	\$ 33,563	\$ 59,876	\$ 72,264

Alberta Innovates is involved in legal matters where damages are being sought. These matters may give rise to contingent liabilities.

Accruals have been made in specific instances where it is likely that losses will be incurred based on a reasonable estimate. As at March 31, 2021 accruals totaling \$368 (2020 - \$467) have been recognized as a liability.

ALBERTA INNOVATES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)
MARCH 31, 2021

Note 14 CONTRACTUAL OBLIGATIONS

(in thousands)

Contractual obligations are obligations of the Corporation to others that will become liabilities in the future when the terms of those contracts or agreements are met.

	2021	2020
Obligations under operating leases and contracts	<u>\$ 100,382</u>	<u>\$ 102,538</u>

Estimated payment requirements for each of the next five years are as follows:

	Operating leases and contracts
2021-22	\$ 67,529
2022-23	24,912
2023-24	6,146
2024-25	1,775
2025-26	20
Thereafter	-
	<u>\$ 100,382</u>

Note 15 ALBERTA CARBON CONVERSION TECHNOLOGY CENTRE

(in thousands)

The Alberta Carbon Conversion Technology Centre (ACCTC) is a commercialization and testing centre designed to advance CO2 capture and conversion technologies, and conduct related research. InnoTech Alberta Inc, a wholly owned subsidiary of the Corporation, completed the purchase and transfer of the ACCTC on March 15, 2018. \$23,984 (2020 - \$22,391) is recorded in tangible capital assets in Note 11. \$15,131 (2020 - \$16,831) of related spent deferred capital contributions is recorded in Note 9. There were no in-kind contributions received at March 31, 2021 (2020 - \$nil).

From June 2018 until March 2021 the ACCTC was the host site for the NRG COSIA Carbon XPRIZE – a competition to pilot various carbon capture and conversion technologies. InnoTech was not directly involved in supervising or overseeing the XPRIZE Competition, aside from its day to day role as the owner and operator of the ACCTC. Now that the XPRIZE competition is over, InnoTech will own and operate the ACCTC, which will be marketed to industry and government as a carbon capture testing site until December 2027. At that time, exclusive use of the site and ownership of the ACCTC will pass back to the owner of the land, who may elect to wholly or partially de-commission the ACCTC. Accordingly, \$2,549 (2020 - \$2,549) of asset retirement obligations have been recorded in Note 8.

The corporation has entered into various contractual arrangements with respect to ACCTC including a license of occupation, an operating costs recovery agreement, and a repayable contribution agreement. The impact on contractual rights, contractual obligations, contingent assets, and contingent liabilities, when known, has been reflected in these consolidated financial statements in accordance with the accounting policies described in Note 2.

Note 16 COMPARATIVE FIGURES

Certain 2020 figures have been reclassified, where necessary, to conform to the 2021 presentation.

Note 17 APPROVAL OF CONSOLIDATED FINANCIAL STATEMENTS

The Board approved the consolidated financial statements of Alberta Innovates on May 27, 2021.

ALBERTA INNOVATES
CONSOLIDATED EXPENSES - DETAILED BY OBJECT
YEAR ENDED MARCH 31, 2021

SCHEDULE 1

	<u>2021</u>	<u>2021</u>	<u>2020</u>
	<u>Budget</u>	<u>Actual</u>	<u>Actual</u>
		<i>(in thousands)</i>	
Grants	\$ 97,337	\$ 133,820	\$ 106,748
Salaries, wages and employee benefits	64,461	61,395	79,875
Supplies and services	38,963	30,614	34,546
Amortization of tangible capital assets (Note 11)	7,880	7,015	7,202
	<u>\$ 208,641</u>	<u>\$ 232,844</u>	<u>\$ 228,371</u>

**ALBERTA INNOVATES
SALARY AND BENEFITS DISCLOSURE
YEAR ENDED MARCH 31, 2021
(in thousands)**

SCHEDULE 2

	2021			2020	
	Base Salary (1)	Other Cash Benefits (2)	Other Non-Cash Benefits (3)	Total	Total
Chair of the Board	\$ -	\$ 17	\$ 1	\$ 18	\$ 25
Board Members	-	51	1	52	61
Chief Executive Officer	398	111	14	523	671
Chief Operating Officer (4)	301	-	66	367	345
General Counsel & Corporate Secretary (5)	251	11	56	318	319
Vice Presidents:					
Executive Vice President, Impact (6)	256	-	55	311	-
Vice President, Clean Resources (7)	247	10	55	312	297
Vice President, Finance (8)	226	31	13	270	284
Vice President, Health	266	32	14	312	313
Vice President, Investments (9)	-	-	-	-	272
Vice President, Marketing & Communications	219	22	6	247	252
Associate Vice President, Organizational Development (10)	159	16	11	186	-
	\$ 2,323	\$ 301	\$ 292	\$ 2,916	\$ 2,839

(1) Base salary includes regular salary.

(2) Other cash benefits include honoraria for the Chair and Board Members. Other cash benefits for the Chief Executive Officer, General Counsel & Corporate Secretary and Vice Presidents include vacation payouts, car and living allowance, payments in lieu of pension and lump sum amounts.

(3) Other non-cash benefits include employee benefits and contributions or payments made on behalf of employees including pension and supplementary retirement plan, employee health care expense accounts, dental coverage, major medical, group life insurance, short term disability plan, CPP, EI, Workers Compensation Board premiums and professional memberships.

(4) Chief Operating Officer position was effective May 6, 2019.

(5) General Counsel & Corporate Secretary position was effective April 16, 2019.

(6) Executive Vice President, Impact position was effective on April 1, 2020.

(7) Vice President, Clean Energy position was renamed to Vice President, Clean Resources effective June 1, 2020.

(8) Vice President, Finance & Corporate Secretary position was renamed to Vice President, Finance effective April 22, 2019.

(9) Vice President, Investments position was vacated March 31, 2020.

(10) Associate Vice President, Organizational Development position was effective on June 1, 2020.

**ALBERTA INNOVATES
RELATED PARTY TRANSACTIONS
YEAR ENDED MARCH 31, 2021**

SCHEDULE 3

Related parties are those entities consolidated or accounted for on the modified equity basis in the Government of Alberta's Consolidated Financial Statements. Related parties also include key management personnel and close family members of those individuals in the Corporation. The Corporation and its employees paid or collected certain taxes and fees set by regulation for premiums, licences and other charges. These amounts were incurred in the normal course of business, reflect charges applicable to all users, and have been excluded from this schedule.

The Corporation had the following transactions with related parties recognized in the Consolidated Statement of Operations and the Consolidated Statement of Financial Position at the amount of consideration agreed upon between the related parties.

	Entities in the Ministry		Other Entities Outside of the Ministry	
	2021	2020	2021	2020
	<i>(in thousands)</i>			
Revenues				
Grants	\$ 169,209	\$ 163,485	\$ 5,881	\$ 9,137
Other	-	10	1,858	1,918
	<u>\$ 169,209</u>	<u>\$ 163,495</u>	<u>\$ 7,739</u>	<u>\$ 11,055</u>
Expenses - Directly Incurred				
Grants	\$ -	\$ -	\$ 52,087	\$ 59,697
Other services	5	11	2,899	1,001
	<u>\$ 5</u>	<u>\$ 11</u>	<u>\$ 54,986</u>	<u>\$ 60,698</u>
Receivables from	<u>\$ -</u>	<u>\$ 84,530</u>	<u>\$ 563</u>	<u>\$ 3,169</u>
Payable to	<u>\$ -</u>	<u>\$ 552</u>	<u>\$ 3,186</u>	<u>\$ 15,900</u>
Unspent deferred capital contributions	<u>\$ 1,100</u>	<u>\$ 301</u>	<u>\$ -</u>	<u>\$ -</u>
Spent deferred capital contributions	<u>\$ 11,640</u>	<u>\$ 12,216</u>	<u>\$ 123</u>	<u>\$ 140</u>
Deferred revenue	<u>\$ 48,047</u>	<u>\$ 59,235</u>	<u>\$ 12,337</u>	<u>\$ 15,164</u>
Deferred contract revenue	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 39</u>	<u>\$ 42</u>
Contractual obligations	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 24,904</u>	<u>\$ 42,680</u>
Contractual rights	<u>\$ 36,857</u>	<u>\$ 14,420</u>	<u>\$ 2,373</u>	<u>\$ 3,825</u>

Schedule 3 - Related Party Transactions (Continued)

The above transactions do not include support service arrangement transactions disclosed below. The Corporation also had the following transactions with related parties for which no consideration was exchanged. The amounts for these related party transactions are estimated based on the costs incurred by the service provider to provide the service. These amounts are not reported in the consolidated financial statements. Accommodation expenses incurred by others are disclosed in Schedule 4.

	Other Entities Outside of the Ministry	
	2021	2020
	<i>(in thousands)</i>	
Expenses - Incurred by others ⁽¹⁾		
Accommodation ⁽²⁾	\$ 20,883	\$ 20,463
	<u>\$ 20,883</u>	<u>\$ 20,463</u>

⁽¹⁾ During the year, the Corporation received financial processing and reporting services from Service Alberta and the Department of Jobs, Economy and Innovation at no cost. The dollar value of these services cannot be accurately determined.

⁽²⁾ The Corporation's share of accommodation costs is based on the proportion of space occupied compared to the total space occupied by all Ministries.

**ALBERTA INNOVATES
CONSOLIDATED ALLOCATED COSTS
YEAR ENDED MARCH 31, 2021**

SCHEDULE 4

Program	2021			2020
	Expenses - Incurred by Others			
	Expenses ⁽¹⁾	Accommodation Costs	Total Expenses	Total Expenses
<i>(in thousands)</i>				
Research, innovation and commercialization	\$ 152,415	\$ -	\$ 152,415	\$ 125,001
Applied research	47,911	-	47,911	60,111
Administration	25,503	20,883	46,386	56,520
Amortization	7,015		7,015	7,202
	<u>\$ 232,844</u>	<u>\$ 20,883</u>	<u>\$ 253,727</u>	<u>\$ 248,834</u>

⁽¹⁾ Expenses - Directly Incurred as per Consolidated Statement of Operations.

“

Hold the vision.
Trust the process.

Author Unknown

PIVO >

Learn how
albertainnovates.ca

1500 – 10104 103 Avenue Edmonton, AB Canada T5J 0H8

T 780.423.5727 (*Downtown Edmonton*)

T 780.450.5111 (*Edmonton Research Park*)

TF 1.877.423.5727

info@albertainnovates.ca albertainnovates.ca