



Management's Discussion and Analysis
For the years ended July 31, 2021 and 2020

Basis of Presentation

The following Management's Discussion and Analysis ("MD&A") is prepared as of October 21, 2021 and is intended to assist in understanding the results of operations and the financial condition of Patriot One Technologies Inc. (the "Company"). Throughout the MD&A, reference to the Company is on a consolidated basis. This MD&A should be read in conjunction with the audited consolidated financial statements for the year ended July 31, 2021 which are prepared in accordance with International Financial Reporting Standards ("IFRS"). The policies applied in the audited consolidated financial statements are based on IFRS policies effective as of October 21, 2021, the date the Board of Directors approved the consolidated financial statements. All amounts in this MD&A are expressed in Canadian Dollars unless otherwise indicated. The business of the Company is subject to a number of risks and uncertainties. Please refer to the Company's annual information form (the "AIF") for the year ended July 31, 2021, available under the Company's profile at www.sedar.com, for more information about these risks and uncertainties.

Forward Looking Information

This MD&A contains forward-looking information that involves material assumptions and known and unknown risks and uncertainties, of which are beyond the Company's control. Such assumptions, risks and uncertainties include, without limitation, those associated with loss of markets, expected sales, future revenue recognition, currency fluctuations, the effect of global and regional economic conditions, industry conditions, changes in laws and regulations and how they are interpreted and enforced, the lack of qualified personnel or management, fluctuations in foreign exchange or interest rates, demand for the Company's products, and availability of funding. The Company's performance could differ materially from that expressed in, or implied by, this forward-looking information and, accordingly, no assurances can be given that any of the events anticipated by the forward-looking information will transpire or occur, or if they do so, what benefits, if any, the Company will derive therefrom. The forward-looking information is made as of the date of this MD&A, and the Company does not undertake any obligation to update publicly or to revise any of the included forward-looking information, whether as a result of new information, future events or otherwise, except as may be required by applicable securities laws. Actual events or results could differ materially from the Company's expectations and projections.

Corporate Structure and Profile

The Company's common shares are listed for trading on the TSX under the trading symbol "PAT", "PTOTF" on the OTCQX in the United States, and "OPL" on the Frankfurt Stock Exchange in Germany. The Company is a reporting issuer in British Columbia, Alberta, Saskatchewan, Manitoba, and Ontario. The principal regulator of the Company is the Ontario Securities Commission.

As at July 31, 2021, the Company had five wholly-owned subsidiaries, Patriot One Detection Ltd., a limited company incorporated under the laws of British Columbia, Canada, Patriot One (UK) Limited, a limited company incorporated under the laws of England and Wales, United Kingdom, Patriot One Detection Technologies Inc., a limited company incorporated under the laws of the state of Colorado, United States of America, EhEye Inc. ("Eh-Eye"), a limited company incorporated under the laws of the province of New Brunswick, Canada and Xtract Technologies Inc. ("Xtract"), a limited company incorporated under the laws of British Columbia, Canada.

The Company, through Patriot One Detection Technologies Inc., has a 49% interest in Sotech Secure, LLC ("Sotech"), an incorporated entity formed under the laws of the State of Delaware, United States of America.

Business Highlights for the fiscal year ended July 31, 2021

The following is a summary of the key business highlights for the Company for the year ended July 31, 2021:

- Welcomed Peter Evans, as Chief Executive Officer and Director, and Karen Hersh, CPA, CA as Chief Financial Officer and Corporate Secretary;
- Commercially released the Company's Multi Sensor Gateway ("MSG") in Q1, which identifies on-body concealed weapons in uncluttered environments, followed on an enhanced release subsequent to the fiscal year end;
- Secured up to \$4.5 million of co-investment funding from the Canadian Digital Technology Supercluster for the advanced development and deployment of the health and safety detection modules of the Company's Video Recognition Software, of which approximately \$2.9 million has been claimed as of July 31, 2021;
- Revamped its marketing strategy to be highly focused on campaigns aimed at our key target markets resulting in multiple successful customer deployments;
- Hired new US-based professional and seasoned sales representatives who have begun closing long-term contracts and built a solid pipeline of business for both our threat detection and advanced video artificial intelligence ("AI") solutions;
- Closed multiple long-term MSG subscription arrangements during the year bringing our total PATSCAN backlog to over \$1 million. Further prospective customers are in final negotiations or undergoing trials which should lead to additional commitments in the coming months;
- Completed work on existing Xtract contracts worth \$1.0 million during the fiscal year and was awarded multiple government projects during and subsequent to the fiscal year, totaling \$2.6 million including a 12-month contract worth approximately \$1.0 million to adapt its AI innovation platform to provide misinformation and disinformation detection for Canada's Department of National Defence; and
- Implemented restructuring and cost cutting efforts to improve operating efficiencies and to better align the Company with its strategic direction and business development plans.

Business of the Company

The principal business of the Company is to commercialize an integrated, layered, multi-sensor platform of technologies, referred to as the "PATSCAN platform", with the aim of enhancing public health and safety. The Company's mission is to be one of the foremost global proponents and providers of commercial threat countermeasures for community safety. The Company has two distinct operating segments being its Patriot Threat Detection and Xtract business units. Patriot Threat Detection develops and commercializes a platform of multi-sensor threat detection technologies, while Xtract develops and commercializes advanced AI solutions for customers.

COVID-19 Impact to Operations

The COVID-19 global pandemic, with its discrete economic, political and social challenges, necessitated the Company to take a comprehensive and holistic assessment of the impact such a profoundly impactful development has made on its planned strategic initiatives. The Company, not alone in its challenge, experienced delays in its ability to fully satiate reseller, customer, and other end-user performance obligations according to original planned timeframes. In the past few months, Canada and the United States has begun lifting its lockdown restrictions and returning to a degree of normalcy. This has helped generate strong interest for our PATSCAN solutions and allowed us to commence many delayed pilots and deployments. The Company is hopeful that the conditions related to the pandemic will continue to improve in the coming months which will continue to drive sales momentum.

In parallel and in concert with the challenges referenced above, the Company seized on the pronounced opportunities the COVID-19 pandemic provided in relation to technology-based solutions that empower private organizations, public entities, and society at large in returning to a routine that permits and encourages free movement and social gathering in a safe manner. This opportunity is reflected in a series of initiatives, which notably included:

- Securing of up to \$4.5 million of co-investment funding from the Canadian Digital Technology Supercluster (“DTS”), of which approximately \$2.9 million has been claimed as of July 31, 2021, for the advanced development and deployment of the health and safety detection modules of the Company’s Video Recognition Software;
- Advancing AI solutions to help radiologists identify the risk of the COVID-19 virus, in partnership with Amazon Web Services, Vancouver General Hospital and the University of British Columbia, and SapienML, among others; and
- Partnering with EcoMine Technologies Inc. in advancing an innovative, low-cost, on-the-spot pathogen screening technology, and advancing the partnership into an investment in Gemina Labs.

Although the recent steps towards reopening are encouraging, the Company continues to experience uncertainty in near-term planning as it relates to sales, supply chain management and implementation activities as a result of the ongoing pandemic.

Outlook and Overall Performance

Patriot Threat Detection Operating Segment

During the year, the Company continued to invest in the research and development of its suite of technologies that form the PATSCAN platform and advance the functionality of its product offerings in response to the growing market opportunities and feedback from early-adopter customers, resellers and partnership organizations. The Company continues to accelerate its product development roadmaps in response to market opportunities and customer needs, focusing on the industry-specific utility of the various solutions and capabilities under development.

The Company has now commercially released its Video Recognition Software and its Multi Sensor Gateway and continues to enhance the features and capabilities of each. Accordingly, the Company's sales, marketing and business development activities have evolved in conjunction with the rest of the business with a focus on commercial sales and customer engagement.

The Company is encouraged by the ongoing level of interest in its threat detection solutions and sees the recent customer commitments and growth in the opportunity pipeline as indicative of the hearty market opportunity as businesses, facilities and public spaces return to activities, events, and gatherings that had temporarily ceased, or at least dramatically reduced as a result of the COVID-19 pandemic. The Company has refined the focus of its sales, marketing and business development activities to address businesses, facilities and other venues that are focused on welcoming guests, patrons, the public and employees in a safe manner, in accordance with necessary security, social distancing, capacity limits and other such screening guidelines as appropriate. Such interest is increasing in the United States from casinos, sporting and entertainment venues, and certain manufacturing and logistics organizations. During the past few months, many mandated lockdown measures were lifted, allowing the Company to commence in-person activities, including site surveys, trials and certain installation and deployment activities. In anticipation of increased sales volume, the Company has hired additional installation staff and upgraded its internal operations and financial infrastructure by implementing a new robust ERP system.

Xtract Operating Segment

In September 2019, the Company acquired AI company Xtract, a highly talented and award-winning team of AI experts, as part of an ongoing strategic initiative to bring together leading-edge technologies and services to enhance our PATSCAN platform. Xtract's development and deployment of AI solutions are built upon an understanding of deep neural networks. Xtract has developed novel neural network architecture and fusion techniques that are more robust, efficient, and require lower memory than comparable standards. Xtract's video solutions use proprietary algorithms to apply human understanding to video and its analysis and have been successfully deployed for military, health and emergency services and environmental applications. Xtract's text solutions automate the digitization, parsing and understanding of large collections of text data, allowing users to address complex real-world challenges.

The Xtract team continues to dually focus on supporting the internal PATSCAN platform development efforts and the associated machine learning complexities of the various solutions under development in close coordination with the product development and data science teams, while also developing the AI based solutions contracted through public sector agencies and entities along with a growing number of private sector parties.

During and subsequent to the quarter, Xtract was awarded multiple government projects totaling \$2.6 million. This innovative AI team continues to build a robust pipeline of opportunities and an ever-expanding set of capabilities, which continue to inform and evolve the strategic aims of the Company. Critical strategic decisions for Xtract are made in close consultation and coordination with the Company's leadership to ensure maximum synergies are achieved.

Technology Update

Over the past year, the Company has made great strides with its AI-powered security offering and recently announced the launch of several new and innovative products. The Company has also built its own physical and health security platform that enables customers to enhance their security infrastructure. The platform is now able to take in information from multiple sources including camera sensors, environmental sensors and its own proprietary sensors to detect and provide important insights about potential threats. The PATSCAN platform's AI algorithms have the ability to recognize certain threats and provide actionable intelligence to users that enhances the secure operation of the event or the property.

During the first quarter of the 2021 fiscal year, we launched our core threat-detection and patron screening solution in the form of our MSG product release within our PATSCAN platform. The MSG solution works in environments that require threat detection and have a high flow of people. This solution is delivering on the original vision for the Company, the ability to passively detect guns and other threats with minimal interruption to the flow of business. The Company continues to enhance the MSG product with new releases that will provide increased functionality and increasing levels of accuracy, as we move into more complex environments. This will allow us to pursue additional market applications and new vertical markets. The Company extended the reach of the product by introducing Alert Center, a mobile app that allows security personnel to receive and manage alerts from any location.

The AI innovations that were acquired from Xtract and EhEye are critical components to the delivery of the total solution. By integrating advanced analytics, the Company will continue to refine the efficacy of the solution, while also building out an AI platform for a broader set of market applications. The development of the Company's multi-input, machine-learning ("ML") platform correlates smart AI insights and provides the end user with actionable intelligence. The Company owns a robust AI platform solution that has proven itself in multiple test applications in various vertical markets. During the fourth quarter, the Company entered into trials using its advanced analytics to do mask detection, thermal screening and crowd disturbances. The Company is currently analyzing the outputs of these projects to determine new capabilities and market opportunities.

This leading-edge AI powered security platform is unique in the marketplace and has the flexibility to address varying market needs, while also supporting the creation of customizable solutions. All of this provides interesting considerations for both the near-term and long-term strategic opportunities for the Company. The Company continually assesses ways to expand its capabilities and addressable market and has a high-powered engineering team who can quickly deliver on these opportunities.

Market Opportunity

The Company has revamped its sales and marketing strategy to focus on near-term customers. Previously, the Company focused on all market verticals in need of enhanced security solutions where the Company's products could add value. In the short term, the Company is now focusing on markets where its solution operates effectively in the customer's physical environment, where the customer has a specific stated need that fits the Company's solution, and where sales cycles are reasonable. This change was made with the aim of delivering near-term revenue. The Company has identified the following key market segments that are well suited for the Company's suite of threat detection technologies:

- Stadiums, arenas, theatres and outdoor event spaces
- Casinos
- Commercial and retail buildings

The Company has been using marketing campaigns targeted at these industry groups which have led to promising opportunities and helped us secure early commitments. During the last few months of the fiscal year, the Company made meaningful progress with many customers and was able to build up its backlog. Some of the Company's initial sales are smaller commitments from large enterprise customers which will potentially lead to much larger installations. These customers prefer to roll out the MSG solution to a few entrances to ensure they are comfortable with the solution and their related security protocols before using it throughout their venues. The Company is focused on these initial deployments' success which we believe will lead to much larger commitments. The Company is also working through the sales cycle with other prospects as quickly as possible.

Although the Company is focusing on these target markets in the short term, it will expand into additional markets with future releases of the product. The Company continues to make significant enhancements to its products and improve their capabilities and address customer needs. As our products continue to develop, we will expand our focus to other market verticals.

The global physical security market is expected to reach USD \$292 billion by 2025. Governments across different countries and regions are taking up smart city initiatives to enhance their infrastructure and are deploying improved security systems. Additionally, modernizing the existing infrastructure with robust security measures and strengthening the security of government agencies have been some of the top priorities for governments across developed countries. Organizations are increasingly concerned about employee safety and are hence setting up systems to prevent unauthorized access, further driving the demand for physical security solutions.

The video analytics market size was valued at \$4.1 billion in 2019 and is projected to reach \$20.8 billion by 2027, growing at a CAGR of 22.7% from 2020 to 2027. Used to help make surveillance operations more efficient, video analytics software comes in a variety of different formats and can be used to detect motion, read license plates, count people, and assist with other real-world challenges. In the case of physical security and video monitoring, video analytics software is primarily used to detect crime, weapons detection, and crowd disturbances. The adoption of cloud-based video analytics software will rise, allowing security companies to capitalize on all the benefits of video analytics completely remotely. Companies that adopt this form of software are opening their doors to a cost-effective solution that will benefit from constant updates and improvements via the cloud.

The safety and security market remains a robust market with growing threats from both man-made tragedies along with natural, biological threats underpinning higher rates of growth in this market worldwide. The public health safety market is currently undergoing monumental changes on account of the COVID-19 pandemic, presenting immense opportunities to the Company and many others to support businesses, governments, and private citizens in resuming less restrictive routines. The Company will continue to focus on opportunities where it can provide technology-based solutions to assist in the resumption of less restrictive routines.

The Company is currently expanding its reseller base, with a specific focus on US-based partners who are aligned to our target markets, covering larger geographical territories and their respective end-user clientele. In furtherance of these initiatives, the Company is also commencing, in parallel, a direct to end-user sales model which will more precisely address our target industry groups. This will give more visibility into opportunities allowing us to forecast more accurately, control the sales process, remain competitive, increase sales margins, maintain the relationship with the end user and learn directly from these early customers for further enhancements to the platform. The effect of this approach has already been seen with an increase in the sales pipeline and well qualified opportunities where we have intimate knowledge of the customer and their processes. In parallel, we are building a program to support the recruitment of strategic alliance partners that offer complementary technologies where we can develop integrations and connect our products to offer more complete solutions together. This will provide us with access to a larger install base and promote direct sales.

Throughout the fiscal year, the Company was engaged in selected opportunities for collaboration, innovation, and business development relationships to accelerate the growth and expand the presence globally. We are actively pursuing opportunities to leverage new technologies, execute on new business opportunities and grow our client base while providing business value to our clients.

The Company has recently instituted competitive sales programs and pricing schemes in close coordination with early-adopter reseller and end-user customers to ensure that our solutions directly address customer needs.

Financial Performance

Selected Financial Data - Summary of Results

	For the year ended July 31,		
	2021	2020	% Change
Revenue	\$ 1,081,975	\$ 2,071,244	(48%)
Expenses			
Sales and marketing	1,472,209	3,814,947	(61%)
Research and development	2,757,491	5,477,218	(50%)
General and administration	1,387,245	2,190,577	(37%)
Personnel costs	4,362,471	5,393,093	(19%)
Professional fees	861,239	3,435,032	(75%)
Hardware	28,054	194,097	(86%)
Amortization	832,817	1,097,733	(24%)
Depreciation	979,922	1,256,736	(22%)
Share-based compensation	1,180,231	2,186,546	(46%)
Loss on inventory write-down	-	245,531	(100%)
Loss on retirement of assets	-	171,199	(100%)
	13,861,679	25,462,709	(46%)
Loss from operations	12,779,704	23,391,465	(45%)
Proportionate share of loss on investment	-	1,531,817	(100%)
Unrealized loss on investments	3,977,450	1,017,627	291%
Interest income	(24,934)	(481,702)	(95%)
Loss before income taxes	\$ 16,732,220	\$ 25,459,207	(34%)
Current tax recovery	(169,886)	(332,812)	(49%)
Loss and comprehensive loss	\$ 16,562,334	\$ 25,126,395	(34%)
Weighted average number of shares	150,728,622	148,674,284	
Basic and diluted loss per share	\$ 0.11	\$ 0.17	(35%)

Overall Annual Results

Overall loss and comprehensive loss for the year ended July 31, 2021 was \$16.6 million compared with \$25.1 million for the same period ended July 31, 2020, representing a decrease of \$8.5 million or 34%. The decrease in loss for the year ended July 31, 2021 was mainly attributable to management's effort to reduce its cash burn through streamlining the Company's business operations and significantly reducing non-strategic expenses. The COVID-19 relief funding received from the Canadian government of approximately \$3.6 million during the current fiscal year also reduced the Company's loss and comprehensive loss. In addition, there was a one-time transaction cost of \$1.5 million incurred for the acquisition of Xtract in the comparative year which contributed to the reduction in net loss compared to the prior year.

Revenue and deferred revenue

The Company earned revenue of \$1,081,975 during the year ended July 31, 2021, compared with \$2,071,244 for the prior year ended July 31, 2020, representing a decrease of \$989,269 or 48%.

The Company recognized \$113,342 in revenue related to the sale of the PATSCAN platform during the year ended July 31, 2021 as compared to \$725,525 during the same period in 2020. The decrease was mainly attributable to the timing of the sale of PATSCAN platforms to Innovative Solutions Canada during the year ended July 30, 2020. The Company believe that revenue from this division will start to grow in the upcoming quarters due to the increase in customer site surveys, trials, market activity and certain installation and deployment activities.

The Company recognized revenue of \$968,633 in revenue related to work completed on contracts from the Xtract operating segment for the year ended July 31, 2021, as compared to \$1,345,719 for the same period ended July 31, 2020. The decrease was mainly attributable to the timing of large prospective contracts being awarded. With the recent contracts Xtract has been awarded, we expect Xtract revenue to increase in the next few quarters.

As of July 31, 2021, the Company had \$308,547 of deferred revenue recorded exclusively relating to the sales of the PATSCAN offerings, as compared with \$428,289 of deferred revenue in the prior year relating to both PATSCAN and Xtract. As of July 31, 2021, the Company has a backlog of \$2,448,463 (2020 – \$1,243,642) in contracted commitments not yet recognized revenue. Subsequent to year end, the Company was awarded an additional \$1,348,254 in commitments bringing its total backlog to \$3,796,717.

Sales and marketing

Sales and marketing costs were \$1,472,209 for the year ended July 31, 2021, as compared with \$3,814,947 for the same period ended July 31, 2020, representing a decrease of 61% or \$2,342,738. The reduction in these costs during the year was primarily attributable to the Company refocusing and refining its marketing strategy and the cancellation or postponement of conference and trade show events due to the COVID-19 pandemic, leading to a corresponding reduction in complementary marketing costs. We expect sales and marketing will remain steady or increase slightly as sales activity continues to grow in the upcoming year.

Research and development

Research and development (“R&D”) costs were \$ 2,757,491 for the year ended July 31, 2021 as compared with \$5,477,218 for the same period ended July 31, 2020, representing a decrease of 50% or \$2,719,727. The decrease in R&D expenses was primarily attributable to grants received from the Canadian government or government programs during the year ended July 31, 2021.

R&D costs are presented net of related non-dilutive funding provided to reimburse research and development costs. This includes COVID-19 relief funding from the Canadian government and non-dilutive funding from Raytheon Canada Ltd. as well as DTS funding for the development of COVID-19 response solutions.

The following table details our gross R&D costs and offsetting funding:

	Years ended July 31,		
	2021	2020	% Change
R&D costs before grants	\$ 8,024,686	\$ 6,858,518	17%
Raytheon ITB program funding	(478,700)	(1,021,000)	(53%)
Supercluster funding	(2,796,094)	-	-
R&D allocation of Covid-19 relief funding	(1,992,401)	(360,300)	100%
	(5,267,195)	(1,381,300)	281%
R&D costs net of grants	\$ 2,757,491	\$ 5,477,218	(50%)

R&D expenses before grants increased by 17% during the year ending July 31, 2021 compared with the year ended July 31, 2020. The increase in R&D costs before grants during the year were attributable to the widening the scope of development streams to focus on a larger number of sensor technology solutions within the technology portfolio.

COVID-19 relief, DTS and Industrial and Technological Benefits funding of \$5,627,195 was recorded as an offset to R&D costs during the year ended July 31, 2021 as compared with \$1,381,300 for the year ended July 31, 2020. The Company has found these funding sources to be highly beneficial and will continue to pursue these opportunities in the future.

General and administration

General and administrative costs were \$1,387,245 for the year ended July 31, 2021, as compared with \$2,190,577 for the year ended July 31, 2020, representing a decrease of 37% or \$803,332. These reductions were due to the closure of certain non-strategic offices, COVID-19 related rent subsidies provided by the federal government and the cessation of other discretionary expenditures. The Company is continually looking for opportunities to reduce non-strategic expenses.

Personnel costs

Personnel costs, excluding those costs associated with research and development activities, were \$4,362,471 for the year ended July 31, 2021 as compared with \$5,393,093 for the year ended July 31, 2020, representing the decrease of 19% or \$1,030,622.

Personnel costs are presented net of COVID-19 relief funding from the Canadian government. When personnel costs are normalized by removing this offsetting funding, they increased by 5% or \$296,022 for the year ended July 31, 2021 as compared with the previous year. This slight increase is related to the hiring of new sales and marketing staff with the goal of driving sales.

COVID-19 relief funding of \$1,326,644 was recorded as an offset to personnel costs during year ended July 31, 2021 as compared with \$nil for the previous year. The Company will continue to pursue these COVID-19 relief opportunities.

Professional fees

Professional fees were \$861,239 for the year ended July 31, 2021 as compared with \$3,435,032 for the same period ended July 31, 2020, representing a decrease of 75% or \$2,573,793. The decrease was primarily due to non-recurring transaction costs associated with the acquisition of Xtract of approximately \$1,500,000 in the year ended July 31, 2020.

Hardware

Hardware expenses were \$28,054 for the year ended July 31, 2021 as compared with \$194,097 for the year ended July 31, 2020, a decrease of 86% or \$166,043. The decrease was mainly attributable to the timing of the sale of PATSCAN platforms to Innovative Solutions Canada during the year ended July 31, 2020.

Amortization

Amortization costs were \$832,817 for the year ended July 31, 2021 as compared with \$1,097,733 for the year ended July 31, 2020, representing a decrease of 24% or \$264,916. The decrease in amortization expense relates primarily to the amortization of specific government contracts obtained in the Xtract acquisition in fiscal 2020 that were amortized over the expected life of the contracts.

Depreciation

Depreciation expense was \$979,922 for the year ended July 31, 2021, as compared with \$1,256,736 for the year ended July 31, 2020, representing a decrease of 22% or \$276,814. The decrease is attributable to certain research and development assets and office leases recorded under IFRS 16 no longer in use during the current year.

Share-based compensation

Share-based compensation was \$1,180,231 for the year ended July 31, 2021, as compared with \$2,186,546 for the year ended July 31, 2020, representing a decrease of 46% or \$1,006,315. This decrease was due to a larger number of option issuances and a higher value attributed to the stock options using the Black-Scholes option pricing model during the year ended July 31, 2020.

Unrealized loss on investments

As at July 31, 2021, the Company owned a 49% interest in Sotech Secure, LLC ("Sotech"), a Delaware Limited Liability Company with NanoBio Detection Systems LLC owning the remaining 51% interest.

During the previous fiscal year, management determined that the Company no longer held significant influence or joint control over Sotech and since, the Company discontinued the use of the equity method for the Sotech Investment. The Company's interest in Sotech was recorded in the consolidated financial statements at its expected fair value of \$4,021,200 (\$USD 3 million) as at July 31, 2020.

During the year ended July 31, 2021, management considered several factors including recent developments and concluded that the Company is unlikely to recoup its investment in Sotech. Accordingly, the Company has written the investment balance in Sotech down to \$nil as at July 31, 2021. Despite the write-down, management will continue to take every financially prudent measure to recover the Company's investment in Sotech.

Interest income

Interest income was \$24,934 for the year ended July 31, 2021 as compared with \$481,702 for the same period ended July 31, 2020, representing a decrease of 95% or \$456,768. These decreases were due to a reduction in the Company's cash balance and a decrease in market interest rates.

Financial Data - Summary of Quarterly Results (in \$000s)

	Quarter Ended							
	Jul 31, 2021	Apr 30, 2021	Jan 31, 2021	Oct 31, 2020	Jul 31, 2020	Apr 30, 2020	Jan 31, 2020	Oct 31, 2019
Revenue	\$ 266	\$ 153	\$ 287	\$ 376	\$ 385	\$ 1,168	\$ 402	\$ 117
Expenses								
Sales and marketing	336	284	399	452	571	671	1,168	1,405
Research and development	964	985	589	219	802	1,918	1,595	1,162
General and administration	357	24	374	633	733	389	376	693
Personnel costs	851	1,248	1,100	1,163	2,005	1,162	1,285	941
Professional fees	186	87	211	377	558	585	398	1,894
Hardware	-	28	-	-	-	194	-	-
Amortization	202	201	202	228	283	282	282	251
Depreciation	244	251	241	245	359	342	293	263
Share-based compensation	208	266	311	394	268	789	670	459
Loss on inventory write-down	-	-	-	-	246	-	-	-
Loss on retirement of assets	-	-	-	-	171	-	-	-
Loss from operations	3,082	3,221	3,140	3,335	5,611	5,164	5,665	6,951
Proportionate share of loss on investment	-	-	-	-	151	191	629	561
Unrealized loss on fair value investment	3,686	149	118	26	1,018	-	-	-
Other income - Interest	124	(56)	(57)	(36)	(35)	(136)	(107)	(204)
Loss before income taxes	6,892	3,314	3,201	3,325	6,745	5,219	6,187	7,308
Current tax recovery	-	(110)	(60)	-	(333)	-	-	-
Deferred tax recovery	-	-	-	-	-	-	-	-
Loss and comprehensive loss	\$ 6,892	\$ 3,204	\$ 3,141	\$ 3,325	\$ 6,412	\$ 5,219	\$ 6,187	\$ 7,308
Basic and diluted loss per share	\$ (0.05)	\$ (0.02)	\$ (0.02)	\$ (0.02)	\$ (0.05)	\$ (0.03)	\$ (0.04)	\$ (0.05)
Working capital	\$ 12,841	\$ 19,175	\$ 21,745	\$ 24,523	\$ 27,335	\$ 27,182	\$ 31,908	\$ 37,170
Total assets	\$ 49,398	\$ 56,234	\$ 59,708	\$ 63,188	\$ 66,010	\$ 70,734	\$ 75,141	\$ 83,088
Non-current liabilities	\$ 677	\$ 740	\$ 855	\$ 947	\$ 595	\$ 683	\$ 635	\$ 703

Quarterly Results Trend Analysis

The quarterly expenditure trend across the previous eight fiscal quarters above reflects the evolution from a single product focused strategy in 2018 to the current multi-sensor platform solution strategy, along with the acquisition of Eh-Eye in late Q2 fiscal 2019, and the acquisition of Xtract in Q1 fiscal 2020. The Company's primary objective remains the development and commercialization of an integrated platform-based technology solution, using various sensor technologies. The general trend of increased expenditures across the various cost categories up until July 31, 2020 reflects the investments being made throughout the organization to achieve this goal, as well as the organizational capacity to support commercialization at scale. Beginning in fiscal Q1 2021, the Company began cutting non-strategic expenses and focus its spending on activities leading to near-term revenue or setting the foundation for mid to long-term revenue growth.

The Company has no discontinued operations.

Fourth Quarter Results

Revenue

During the three months ended July 31, 2021, the Company recognized total revenue of \$266,435, as compared to \$384,985 for the same period in fiscal 2020 representing a decrease of \$118,550 or 13%. Revenue of \$45,813 was attributable to the PATSCAN threat detection operating segment for the three months ended July 31, 2021, in comparison with \$Nil in the same period ended July 31, 2020. The increase is mainly attributable to the commencement of new PATSCAN subscription sales contracts during the last quarter of the fiscal year.

Revenue recognized relating to the Xtract operating segment during the three months ended July 31, 2021, was \$220,622, as compared with the \$384,985 for the same period ended July 31, 2020, representing a decrease of 43% or \$164,364. The decrease was mainly attributable to the timing of large prospective contracts being awarded.

Loss and Comprehensive Loss

During the three months ended July 31, 2021, the Company recognized total loss and comprehensive loss of \$6,892,229, as compared to \$6,412,448 for the same period in fiscal 2020 representing a increase of \$479,781 or 7%. During the three months ended July 31, 2021, the Company was able to pause and rationalize some near term spending and planned investments in response to the delays, deferrals and general restrictions caused by the COVID-19 pandemic, and focus on recalibrating near-term spending and strategic priorities in response to the profound effect the pandemic has had on the economic environment in general, and specifically on investments and procurement decisions by interested resellers and end-users. The expense reduction was offset by the material write-down of Sotech during the three months ended July 31, 2021. The Company will be continuing to assess its cost profile and strategic priorities on a continuous basis.

Liquidity and Capital Resources

As at July 31, 2021, the Company had working capital of \$12,840,798 which included cash of \$9,652,493 available to meet current liabilities of \$1,882,803. The Company's accounts payable and accrued liabilities have contractual maturities of less than 30 days and are subject to normal trade terms. The Company has non-current liabilities of \$677,275 related to the long-term portion of the capitalized lease liability in accordance with IFRS 16.

Selected Financial Data – Summary of Results for the year ended July 31,

	2021	2020	% Change
Cash beginning of period	\$ 22,407,251	\$ 50,637,942	(56%)
Cash used in operating activities	(11,694,837)	(17,567,734)	(33%)
Cash used in investing activities	(544,957)	(10,964,359)	(95%)
Cash received from (used in) financing activities	(514,964)	301,402	(271%)
Change in cash for the period	(12,754,758)	(28,230,691)	(55%)
Cash end of period	\$ 9,652,493	\$ 22,407,251	(57%)

During the year ended July 31, 2021, the Company had negative cash flow from operations, investing and financing activities of \$12.8 million, compared with \$28.2 million for the same period ended July 31, 2020.

The cash flow used in operating activities was \$11.7 million for the year ended July 31, 2021 as compared with \$17.6 million for the same period ended July 31 2020, representing a change of \$5.9 million or 33%. The decrease in negative cash flow from operating activities can be attributed primarily to a reduction in the loss for the year of \$8.6 million. This was partially offset by an increase in the investment of working capital of \$2.1 million and \$0.5 million in non-cash operating expenses.

Included in net cash flows used in operating activities were approximately \$1.5 million of non-recurring acquisition-related professional fees and associated transaction costs, which were expended and included with general and administrative expenses for the year ended July 31, 2020.

Cash flow used in investing activities was \$0.5 million for the year ended July 31, 2021 as compared with \$11.0 million for the same period in 2020 representing a decrease of \$10.5 million or 95%. The significant reduction in cash used in investing activities is primarily related to \$3.5 million in cash payments and funding of the Sotech investment and \$6.8 million in cash consideration to acquire Xtract, net of cash received in the year ended July 31, 2020.

Cash flow used in financing activities was \$0.5 million for the year ended July 31, 2021 as compared to cash received from financing activities of \$0.3 million for the same period ended July 31, 2020. Cash used in financing activities for the current year relates to commercial office lease payments. The prior period's cash received from financing activities was comprised of proceeds on the issue of share capital, net of share issue costs in connection with the exercise of warrants and options.

Liquidity risk is the risk that the Company will encounter difficulty in satisfying financial obligations as they become due. The Company manages its liquidity risk by forecasting cash flows from operations and anticipated investing and financing activities. The Company's objective in managing liquidity risk is to

safeguard its ability to continue as a going concern and to sustain future development of the business. Our objective is met by retaining adequate cash reserves to provide for the possibility that cash flows from operations will not be sufficient to meet future cash flow requirements. To maintain or adjust our capital structure, we may issue shares or other securities, such as through private placements, public offerings or other possible arrangements. The Board of Directors does not establish a quantitative return on capital criteria for management. The Company is not subject to any externally imposed capital requirements.

Use of Proceeds from Bought Deal Financings

Use of Proceeds Category	Net Proceeds from October 2017, February 2018 and November 2018 Bought Deal Financings	Approximate spending allocation for the period October 25, 2017- July 31, 2021	Proceeds unspent as at July 31, 2021
Product Development	\$29,108,000	\$17,072,000	\$12,036,000
Reserved for Potential Acquisitions of Complementary Technology	\$6,900,000	\$14,000,000	(\$7,100,000)
Sales and Marketing	\$8,786,000	\$8,941,000	(\$155,000)
Production and Operations	\$8,795,000	\$14,224,000	(\$5,429,000)
General and Administration	\$9,770,000	\$11,547,000	(\$1,777,000)
International Business Development	\$6,344,000	\$3,445,000	\$2,899,000
Working Capital	\$7,322,000	N/A	\$7,322,000
Total	\$77,025,000	\$69,229,000	\$7,796,000

In addition to the above noted expenditures, certain expenditures have been capitalized in accordance with the Company's stated accounting policies. This would include items such as the purchase of property and equipment and changes in working capital, such as capitalized prepaid expenses and the procurement of inventory.

The Company's intention to spend the net proceeds of the offering as set forth above was based on the expectations of management at the time of the financing raises. However, there may be circumstances where, for sound business reasons, a reallocation of funds may be necessary. At the current time, there are no significant changes to the business objectives and milestones and the Company believes the current objectives and milestones are achievable with the current spending trajectory.

Financial Instruments and Other Instruments

The Company's only material financial instruments are cash and its investments in Gemina Labs and Sotech.

The Company's risk exposures and the impact on our financial instruments are summarized below:

Liquidity risk

Liquidity risk is the risk that the Company will not be able to meet its financial obligations as they fall due. The Company ensures there is sufficient capital to meet short-term business requirements, after taking into account cash flows from operations and the Company's holdings of cash. The Company believes that these sources are sufficient to cover the likely short-term cash requirements over the next 12 months, but that further funding or net income from operating activities will be required to meet long-term requirements. As at July 31, 2021, the Company had cash of \$9,652,493 (2020 - \$22,407,251) to settle current liabilities of \$1,882,803 (2020 - \$3,195,201). Most of the Company's financial liabilities have contractual maturities of 30 days or less and are subject to normal trade terms.

Credit risk

Credit risk is the risk of an unexpected loss if a customer or third party to a financial instrument fails to meet its contractual obligations. The Company's credit risk is primarily attributable to its cash and amounts receivable. The Company limits exposure to credit risk by maintaining its cash with large financial institutions. The Company does not have cash that is invested in asset-backed commercial paper. The Company's accounts receivable consists of sales tax refundable from the Canada Revenue Agency, accounts receivable from the federal government and accounts receivable under the Canadian Industrial and Technical Benefits program and is not subject to significant credit risk.

Market risk

Market risk is the risk of loss that may arise from changes in market factors such as interest rates, foreign exchange rates, and equity prices.

Interest rate risk

Interest rate risk arises from changes in market rates of interest that could adversely affect the Company. The Company currently has no interest-bearing financial instruments other than cash, and accordingly, its exposure to interest rate risk is insignificant.

Foreign currency risk

Foreign currency risk is the risk that is related to the fluctuation of foreign exchange rates. Most of the Company's assets, liabilities and operations are denominated in Canadian dollars. As at July 31, 2021, the Company did not have any material monetary assets or liabilities denominated in a foreign currency and consequently is not exposed to significant foreign currency risk.

Price risk

The Company is exposed to price risk with respect to equity prices. Equity price risk is defined as the potential adverse impact on the Company's earnings due to movements in individual equity prices or general movements in the level of the stock market. The Company closely monitors individual equity movements, and the stock market to determine the appropriate course of action to be taken by the Company.

Critical Accounting Policies and Estimates

For a complete description of the Company's significant accounting policies, please see the accompanying notes to the audited consolidated financial statements for the years ended July 31, 2021 and 2020.

The preparation of financial statements in conformity with IFRS requires management to make estimates and assumptions that affect the reported amount of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amount of revenues and expenses during the year. Actual results may differ from these estimates.

Recent Accounting Pronouncements

The International Accounting Standards Board (IASB) has published new standards and amendments or interpretations to existing standards which are mandatory for periods beginning on or after January 1, 2020, as outlined below.

New accounting standard adopted:

Definition of a business (Amendments to IFRS 3)

The Company has adopted new amendments to IFRS 3 for the year ended July 31, 2021. The amendments:

- (i) Clarify the minimum attributes that the acquired assets and activities must have to be considered a business;
- (ii) Remove the assessment of whether market participants can acquire the business and replace missing inputs or processes to enable them to continue to produce outputs;
- (iii) Narrow the definition of a business and the definition of outputs; and
- (iv) Add an optional concentration test that allows a simplified assessment of whether an acquired set of activities and assets is not a business.

The adoption of the new amendments did not have a significant impact on the consolidated interim financial statements.

New accounting standards issued but not yet in effect

Classification of liabilities as current or non-current (Amendments to IAS 1)

The IASB has published Classification of Liabilities as Current or Non-Current (Amendments to IAS 1) which clarified the guidance on whether a liability should be classified as either current or non-current. The amendments:

- (i) Clarify that the classification of liabilities as current or non-current should only be based on rights that are in place "at the end of the reporting period";
- (ii) Clarify that classification is unaffected by expectations about whether an entity will exercise its right to defer settlement of a liability; and
- (iii) Make clear that settlement includes transfers to the counterparty of cash, equity instruments, other assets or services that result in extinguishment of the liability.

This amendment is effective for annual periods beginning on or after January 1, 2023. Earlier application is permitted. The extent of the impact of adoption of this amendment on the consolidated financial statements has not yet been determined.

Provisions, Contingent Liabilities and Contingent Assets (Amendments to IAS 37)

The IASB has published Onerous Contracts – Cost of Fulfilling a Contract (Amendments to IAS 37) to clarify the definition of the ‘cost of fulfilling’ a contract. The amendments:

- (i) Clarify that the ‘cost of fulfilling’ a contract comprises the ‘costs that relate directly to the contract’; and
- (ii) Clarify that the costs that relate directly to a contract can either be incremental costs of fulfilling that contract or an allocation of other costs that relate directly to fulfilling contracts.

This amendment is effective for annual periods beginning on or after January 1, 2022. Earlier application is permitted. The Company does not expect the adoption of this new amendment to have a significant impact on the consolidated financial statements.

Related Party Balances and Transactions

Key management personnel include persons having the authority and responsibility for planning, directing, and controlling the activities of the Company as a whole. The Company has determined that key management personnel consist of executive and non-executive members of the Board of Directors and corporate officers. Key management compensation paid to officers and directors of the Company during the year ended July 31, 2021 was \$1,761,642 (2020 – \$1,390,028). In addition, share-based compensation expense relating to key management for the year ended July 31, 2021 was \$575,984 (2020 - \$622,322).

There were no other related party transactions during the fiscal years ended July 31, 2021 and 2020.

Controls and Procedures

Evaluation of disclosure controls and procedures:

Management is responsible for establishing and maintaining disclosure controls and procedures as defined under National Instrument 52-109 109 - *Certification of Disclosure in Issuers’ Annual and Interim Filings*. As at July 31, 2021, the Chief Executive Officer and Chief Financial Officer concluded that the design and operation of these disclosure controls and procedures were effective and that material information relating to the Company, including its subsidiaries, was made known to them and was recorded, processed, summarized and reported within the time periods specified under applicable securities legislation.

Internal controls over financial reporting:

The Chief Executive Officer and Chief Financial Officer have designed, or caused to be designed under their supervision, disclosure controls and procedures which provide reasonable assurance that material information regarding the Company is accumulated and communicated to the Company’s management, including its Chief Executive Officer and Chief Financial Officer in a timely manner.

In addition, the Chief Executive Officer and Chief Financial Officer have designed, or caused it to be designed under their supervision internal controls over financial reporting (“ICFR”) to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements.

The Chief Executive Officer and Chief Financial Officer have been advised that the control framework used to design the Company’s ICFR is recognized by the Committee of Sponsoring Organizations of the Treadway Commission.

The Chief Executive Officer and the Chief Financial Officer have evaluated, or caused to be evaluated under their supervision, whether there were changes to its ICFR during the year ended July 31, 2021 that have materially affected or are reasonably likely to materially affect the Company’s ICFR. No such changes were identified through their evaluation.

A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that its objectives are met. Due to inherent limitations in all such systems, no evaluations of controls can provide absolute assurance that all control issues, if any, within a company have been detected. Accordingly, our disclosure controls and procedures and our internal controls over financial reporting are effective in providing reasonable, not absolute, assurance that the objectives of our control systems have been met.

Risk and Uncertainties

The Company’s business is subject to a number of risk factors which are described in our most recently filed AIF. Additional risks and uncertainties not presently known to us or that we currently consider immaterial also may impair our business and operations and cause the price of the common shares to decline. If any of the noted risks occur, business plans may be impacted and the financial condition and results of operation may suffer, potentially significantly. In that event, the trading price of the common shares could decline, and shareholders may lose all or part of their investment.

Additional information and other publicly filed documents relating to the Company are available through the internet on the Canadian Securities Administrators’ System for Electronic Document Analysis and Retrieval (“SEDAR”), which can be accessed at www.sedar.com.

Off-Balance Sheet Arrangements

The Company does not utilize off-balance sheet arrangements.

Disclosure of Outstanding Share Data

The Company is authorized to issue an unlimited number of common shares without par value. As of the date of this MD&A, the Company has 151,128,622 common shares issued and outstanding. The Company also has stock options outstanding to purchase an additional 7,976,487 common shares with exercise prices ranging from \$0.19 to \$2.48 per share.