MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following management's discussion and analysis ("**MD&A**") dated February 24, 2022 is intended to assist the readers in the understanding of EcoSynthetix Inc. and its wholly owned subsidiaries ("**EcoSynthetix**" or the "**Company**"), its business environment, strategies and performance and risk factors. It should be read in conjunction with the audited annual consolidated financial statements for the year ended December 31, 2021. Financial data has been prepared in conformity with International Financial Reporting Standards ("**IFRS**") as issued by the International Accounting Standards Board ("IASB") and using the same accounting policies and methods as those used in the Company's audited consolidated financial statements for the year ended December 31, 2021.

The Company, together with its consolidated subsidiaries, is referred to as the "Company", "we", "us", or "our". Our functional currency and reporting currency is the U.S. dollar. Unless otherwise indicated, all references to "$" and "dollars" in this discussion and analysis mean U.S. dollars.

Certain measures used in this MD&A do not have any standardized meaning under IFRS. When used, these measures are defined in such terms as to allow the reconciliation to the closest IFRS measure. It is unlikely that these measures could be compared to similar measures presented by other companies. See "IFRS and non-IFRS Measures".

Forward-looking statements are included in this MD&A. See "Forward-Looking Statements" below for a discussion of risks, uncertainties and assumptions relating to these statements. For a description of the risks relating to the Company, refer to the "Risk Factors" section of this MD&A and the "Risk Factors" section of the Company's Annual Information Form dated February 24, 2022.

Forward-looking Statements

Certain statements contained in this MD&A constitute forward-looking statements. All statements other than statements of historical fact may be forward-looking statements. These statements relate to, but are not limited to, future events or future performance, our expectations regarding the Company's growth, results of operations, estimated future revenues, and requirements for additional capital, production costs, future demand for latex-based products, business prospects and opportunities, our ability to successfully commercialize our products, expectations as to the amount of reduction that the Company's products may have on a manufacturer's carbon footprint. Forward-looking statements are often, but not always, identified by use of words such as ''may'', ''will'', ''should'', ''could'', ''seek'', ''anticipate'', ''contemplate'', ''continue'', ''expect'', ''intend'', ''plan'', ''potential'', ''budget'', ''target'', ''believe'', ''estimate'' and similar expressions. The forward-looking statements in this document include, but are not limited to, statements regarding the Company's expected product pipeline, plans to expand the Company's business into new markets, the Company's ability to achieve organizational efficiencies, and other statements regarding the Company's plans and expectations in 2022. Such statements reflect our current views and beliefs with respect to future events, are subject to risks and uncertainties, and are based upon a number of estimates and assumptions that, while considered reasonable by us, are inherently subject to significant business, economic, competitive, political and social uncertainties and contingencies. Those assumptions and risks include, but are not limited to, the Company's ability to successfully allocate capital as needed and to develop new products, as well as the fact that our results of operations and business outlook are subject to significant risk, volatility and uncertainty. Many factors could cause actual results, performance or achievements to be materially different from any future results, performance, or achievements that may be expressed or implied by such forward-looking statements.

We have made material assumptions regarding, among other things: that our intellectual property rights are adequately protected; our ability to obtain the materials necessary for the production of our products; our ability to convert prospects from the industrial trial phase into full commercial customers; our ability to market products successfully to our customers; that we will continue to possess unique intellectual property rights; changes in demand for and prices of our products or the materials required to produce those products; labour and material costs remaining consistent with our current expectations; the price and availability of substitute or competitive products; and that we do not and will not infringe third party intellectual property rights. Some of our assumptions are based upon internal estimates and analysis of current market conditions and trends, management plans and strategies, economic conditions and other factors and are necessarily subject to risks and uncertainties inherent in projecting future conditions and results.

Some of the risks that could affect our future results and could cause those results to differ materially from those expressed in the forward-looking information include, among other things: the impact of the novel coronavirus (COVID-19 and its variants) pandemic on our business; an inability to protect, defend, enforce or use our intellectual property and/or infringement of third-party intellectual property; dependence on certain customers and changes in customer demand; the availability and price of natural feedstock's used in the production of our products; the inability to effectively expand our production facilities; variations in our financial results; increase in industry competition; the risk of volatility in global financial conditions, as well as significant decline in general economic conditions; our ability to effectively commercially market and sell our products; our ability to protect our know-how and trade secrets; Company growth and the impact of significant operating and capital cost increases; changes in the current political and regulatory environment in which we operate; the inability to retain key personnel; changes to regulatory requirements, both regionally and internationally, governing development, production, exports, taxes, labour standards, waste disposal, and use, environmental protection, project safety and other matters; enforcement of intellectual property rights; a significant decrease in the market price of petroleum related feedstocks; a shortage of supplies, equipment and parts; the inability to secure additional government grants; a deterioration in our cash balances or liquidity; the inability to obtain equity or debt financing; the ability to acquire intellectual property; the risk of litigation; changes in government regulations and policies relating to our business; losses from hedging activities and changes in hedging strategy; insufficient insurance coverage; the impact of issuance of additional equity securities on the trading price of the common shares; the impact of ethical, legal and social concerns relating to genetically modified organisms and the food versus fuel debate; the risk of business interruptions; the impact of changes in interest rates; the impact of changes in foreign currency exchange; and credit risk, as well as the factors identified in the "Risk Factors" section of the Company's Annual Information Form dated February 24, 2022. Such factors are not intended to represent a complete list of the factors that could affect us. These factors should be considered carefully, and prospective investors should not place undue reliance on forward-looking information.

Impact of COVID – 19

The outbreak of COVID-19 and its variants, which was first declared by the World Health Organization to be a "pandemic" in March 2020, continues to impact worldwide economic activity. The governments of many countries, states, cities and other geographic regions have taken preventative or protective actions, such as imposing restrictions on travel and business operations and temporary closures of businesses. In addition, numerous other businesses have temporarily closed voluntarily. Such actions have created and continue to create disruption in global supply chains, increasing rates of unemployment and adversely impacting many industries.

During the year ended December 31, 2020, the impact of COVID-19 caused both the global demand for paper products to decrease and a decrease in the pricing of petroleum-related products with which the Company's products compete. This resulted in reduced sales volume, lower pricing and reduced gross profit for the Company. During the year ended December 31, 2021, the impacts of COVID-19 on sales volume and pricing partially diminished when compared to 2020 however the impact of COVID-19 on the global supply chain has resulted in increased raw material and freight costs for the Company. The impact of COVID-19 on the economy continues to keep interest rates low, reducing interest income earned on cash deposits and short-term investments. During the years ended December 31, 2021 and December 31, 2020, the Company applied for and received government assistance under the Canada Emergency Wage Subsidy (CEWS) program and the Canada Emergency Rent Subsidy (CERS) program. No other COVID-19 related risks identified below have materialized during the period and there has been no other material direct impact on operating results.

The global impact of COVID-19 continues to evolve rapidly, and in 2022, COVID-19 will likely continue to have negative material impacts on the global economy and our relevant markets. For the Company, COVID-19 may materially impact our ability to manufacture, source (including the delivery of raw materials to its facilities) or distribute our products both domestically and internationally; reduce our ability to effectively market and sell our products; reduce demand for the Company's products; result in labour shortages or social unrest; cause a significant decrease in the market price for petroleum related feedstocks which our products compete with, and cause increased credit risk. Any of these additional risks factors could have a significant negative impact on the Company's financial results. Given the dynamic nature of this outbreak, the extent to which the COVID-19 virus impacts the Company's operational results and financial performance will depend on future developments, which remain highly uncertain and cannot be accurately predicted at this time, including the duration, scope and severity of the pandemic, the actions taken to contain or mitigate its impact, and the direct and indirect economic effects of the pandemic and related containment measures, among others.

Even after the COVID-19 pandemic subsides, our business could also be negatively impacted. Future events could cause global financial conditions to suddenly and rapidly destabilize, and governmental authorities may have limited resources to respond to such future crises. Future crises may be precipitated by any number of causes, including other emerging infectious diseases, natural disasters, geopolitical instability, changes to energy prices or sovereign defaults. Any sudden or rapid destabilization of global economic conditions could negatively impact our ability to obtain equity or debt financing and may negatively impact our business and results of operations. If increased levels of volatility continue, there is a rapid destabilization of global economic conditions or a prolonged recession resulting from a pandemic, it may result in a material adverse effect on raw material prices and availability, petroleum pricing, availability of credit, investor confidence, and general financial market liquidity, all of which would likely materially affect our business.

IFRS and Non-IFRS Measures

This MD&A makes reference to certain non-IFRS measures. These non-IFRS measures are not recognized measures under IFRS, do not have a standardized meaning prescribed by IFRS and are therefore unlikely to be comparable to similar measures presented by other companies. Rather, these measures are provided as additional information to complement those IFRS measures by providing a further understanding of results of operations of the Company from management's perspective. Accordingly, they should not be considered in isolation or as a substitute for analysis of the financial information of the Company reported under IFRS. We use non-IFRS measures such as Adjusted EBITDA to provide investors with a supplemental measure of operating performance and thus highlight trends in our core business that may not otherwise be apparent when relying solely on IFRS financial measures. We also believe that securities analysts, investors and other interested parties frequently use non-IFRS measures in the evaluation of issuers. Our management also uses non-IFRS measures in order to facilitate operating performance comparisons from period to period, prepare annual operating budgets and assess its ability to meet its capital expenditure and working capital requirements.

Adjusted EBITDA as presented herein is not a recognized measure under IFRS and should not be considered as an alternative to operating income or net income as measures of operating results or an alternative to cash flows as measures of liquidity. Adjusted EBITDA is defined as consolidated net income (loss) before interest, income taxes, depreciation, amortization, impairment loss on property, plant and equipment (PP&E), accretion, and other non-cash expenses deducted in determining consolidated net income (loss).

Overview

We are a renewable chemicals company specializing in bio-based materials that are used as inputs in a wide range of products that allow customers to reduce their use of harmful materials, such as formaldehyde and styrene-based chemicals and enable carbon footprint reductions. Our flagship products, DuraBind™, Bioform™, and EcoSphere®, are used to manufacture wood composites, personal care products, and paper and paperboard, and enable performance improvements, economic benefits and sustainability. Our strategy is to commercialize a broad range of bio-based polymer and monomer products within specific market segments. We have developed processes that leverage "green" technology to produce bio-based materials from natural polysaccharide feedstocks, such as corn starch, as an alternative to petroleum-derived feedstocks.

To date, we have developed the following two bio-based technology platforms that support broad application across a wide range of industries: (i) a biopolymer nanosphere technology that has been fully scaled and validated; and (ii) a bio-based sugar macromer technology. Our biopolymer nanosphere technology has generated three product families, EcoSphere, Bioform, and DuraBind biopolymers. Our bio-based sugar macromer technology has generated two product families, EcoMer® biomonomers and EcoStix® bio-based pressure sensitive adhesives. Substantially all of our revenue has been generated from the sale of our biopolymer nanosphere technology into the paper & paperboard and wood composite markets.

Factors Affecting the Results of Operation

Commercialization

Our customers typically go through the following evaluation stages prior to commercial adoption of our products:

(i) laboratory evaluation;
(ii) pilot scale production testing; and
(iii) industrial trials representing full scale production.

Our performance is influenced by our ability to convert prospects from the industrial trial phase into full commercial customers. The industrial trial stage is an important part of the sales cycle; it requires potential customers to invest significant resources, including labour and operating expenditures, and the product must meet or surpass rigorous qualification procedures. Successfully reaching the mill trial stage with a potential customer reflects substantial interest and commitment from them.

Our financial condition and results of operations are influenced by a variety of other factors, including:

- Optimizing the formulation of existing products to allow higher substitution rates by current and new customers and the ability to effectively develop products for new markets which could be a significant source of revenue growth in the future

- Pricing of incumbent technologies and other substitutes for our products

- Feedstock, other input and production costs

Net Sales

Revenue is recognized when the Company has satisfied its performance obligations as set out in the contract with the customer, the contract has commercial substance, and it is probable that the Company will collect the consideration it is entitled to on performance of its obligations in the contract. These criteria are generally met when the transfer of control of goods has occurred which typically occurs at the time of shipment or delivery, depending on the terms of the agreement. Net sales are measured based on the price specified in the sales contract net of any discounts and estimated returns at the time of sale.

Cost of sales and gross profit

Our gross profit is derived from our net sales less our cost of sales. Cost of sales includes raw material costs, contract manufacturing costs, freight costs and depreciation related to manufacturing equipment. Direct materials consist of the costs of natural feedstock and process chemicals. Cost of sales is mainly affected by the cost of natural feedstock costs and contract manufacturing costs.

Selling, general and administrative

Selling, general and administrative expense (SG&A) primarily relates to salaries & benefits and other employee related costs which collectively represent approximately 60% of total SG&A. In addition to this, SG&A includes travel expenses, professional fees, facility costs, foreign exchange gains and losses, insurance, marketing costs and share-based compensation.

Foreign exchange represents the revaluation of monetary assets and liabilities denominated in foreign currencies. The change in foreign exchange gains and losses are primarily due to foreign exchange rate fluctuations between the U.S. dollar (our functional currency) and foreign currencies on our net monetary position in those respective currencies.

Research and development

Expenditures during the research phase are expensed as incurred. Expenditures during the development phase are expensed as incurred, unless they meet certain capitalization criteria. No development costs have been capitalized to date.

Our research and development expenses (R&D) consist of costs incurred to develop and test our products. Salaries & benefits related to employees directly involved in research and development activities represent approximately 60% of total R&D. In addition, R&D includes costs related to consultants, facility costs including depreciation on property, plant and equipment not utilized in our production process, supplies and other costs directly associated with product development. These costs are partially offset by government grants related to such expenditures.

Results of operations

The following is a summary of our results of operations for the three and twelve months ended December 31, 2021 and 2020:

	Three months ended		Change	
	December 31, 2021	**December 31, 2020**	**$**	**%**
Net sales	4,885,420	3,343,823	1,541,597	46%
Gross profit	1,013,419	679,331	334,088	49%
Loss from operations	(947,366)	(792,126)	(155,240)	20%
Net loss	(936,867)	(705,904)	(230,963)	33%
Weighted average number of shares outstanding	57,871,822	56,823,364	1,048,458	2%
Basic and diluted loss per share	(0.02)	(0.01)	(0.00)	30%
Adjusted EBITDA[1] loss	(332,981)	(123,634)	(209,347)	169%

	Twelve months ended		Change	
	December 31, 2021	**December 31, 2020**	**$**	**%**
Net sales	18,161,891	13,662,711	4,499,180	33%
Gross profit	3,971,670	2,738,373	1,233,297	45%
Loss from operations	(3,242,166)	(3,007,591)	(234,575)	8%
Net loss	(3,179,740)	(2,402,094)	(777,646)	32%
Weighted average number of shares outstanding	57,410,885	57,196,584	214,301	0%
Basic and diluted loss per share	(0.06)	(0.04)	(0.01)	32%
Adjusted EBITDA[1] loss	(924,074)	(784,265)	(139,809)	18%

[1] *Refer to "IFRS and Non-IFRS Measures" and "Adjusted EBITDA" sections in this MD&A*

Net Sales – Net sales for the three months ended December 31, 2021 were $4.9 million compared to $3.3 million in the same period last year, an increase of $1.5 million or 46%. The increase was due to higher sales volumes which increased sales $0.6 million, or 20% as well as a higher average selling price which increased sales by $0.9 million, or 26%. Net sales for the twelve months ended December 31, 2021 were $18.2 million compared to $13.7 million in the same period last year, an increase of $4.5 million or 33%. The increase was due to higher sales volumes which increased sales $2.5 million, or 18%, and a higher average selling price which increased sales by $2.0 million, or 15%. The increase in volume and average selling price in both periods was enabled by improved market conditions and the continued diversification of the Company's revenue mix with increased sales of DuraBind.

Gross profit – Gross profit for the three and twelve months ended December 31, 2021 was $1.0 million and $4.0 million compared to $0.7 million and $2.7 million in the same periods last year, an increase of $0.3 million and $1.2 million, or 49% and 45% respectively. The increase in both periods was due to higher sales volumes and a higher average selling price offset by higher manufacturing costs.

Gross profit as a percentage of sales for the three and twelve months ended December 31, 2021 was 20.7% and 21.9% compared to 20.3% and 20.0% in the same periods last year. The increase in gross profit percentage during both periods is primarily due to a higher average selling price offset by higher costs of manufacturing. Gross profit as a percentage of sales adjusted for manufacturing depreciation for the three and twelve months ended December 31, 2021 was 24.8% and 26.2% compared to 27.2% and 26.0% in the same periods last year. The decrease in gross profit as a percentage of sales adjusted for manufacturing depreciation during the three months ended December 31, 2021 was primarily due to higher manufacturing costs offset by a higher average selling price. Gross profit as a percentage of sales adjusted for manufacturing depreciation for the twelve months ended December 31, 2021 is comparable to the same period last year.

Operating Expenses

The following table sets forth the breakdown of our operating expenses by category during the three and twelve months ended December 31, 2021 and 2020:

	Three months ended		**Change**	
	December 31, 2021	**December 31, 2020**	**$**	**%**
Selling, general and administrative	1,494,155	1,204,655	289,500	24%
Research and development	466,630	266,802	199,828	75%
Total operating expenses	1,960,785	1,471,457	489,328	33%

	Twelve months ended		**Change**	
	December 31, 2021	**December 31, 2020**	**$**	**%**
Selling, general and administrative	5,382,396	4,333,649	1,048,747	24%
Research and development	1,831,440	1,412,315	419,125	30%
Total operating expenses	7,213,836	5,745,964	1,467,872	26%

Selling, general and administrative (SG&A) – SG&A expenses for the three and twelve months ended December 31, 2021 were $1.5 million and $5.4 million compared to $1.2 million and $4.3 million in the same periods last year, an increase of $0.3 million and $1.0 million, or a 24% increase in both periods. The increase in SG&A comparing the three months ended December 31, 2021 to the same period last year was primarily due to lower payments received under the Canadian Emergency Wage Subsidy program (CEWS) of $0.1 million, and a $0.1 million increase in salaries and benefits. The increase in SG&A comparing the twelve months ended December 31, 2021 to the same period last year was primarily due to lower payments received under CEWS of $0.2 million, an increase in share-based compensation of $0.2 million, an increase in salaries and benefits of $0.2 million, and an increase in the provision for variable based compensation of $0.4 million.

Research and development (R&D) – R&D expenses for the three and twelve months ended December 31, 2021 were $0.5 million and $1.8 million compared to $0.3 million and $1.4 million, an increase of $0.2 million and $0.4 million in both periods or 75% and 30% respectively. The increase in R&D expenses comparing the three months ended December 31, 2021 to the same period last year was primarily due to lower government grants of $0.1 million. The increase in R&D expenses comparing the twelve months ended December 31, 2021 to the same period last year was primarily due to lower government grants of $0.1 million, an increase in salaries and benefits of $0.1 million and an increase in the provision for variable based compensation of $0.2 million. R&D expense as a percentage of sales for the three and twelve months ended December 31, 2021 was 10% in both periods compared to 8% during the three months ended December 31, 2020 and 10% during the twelve months ended December 31, 2020. The Company's R&D efforts continue to focus on further enhancing value for our existing products and expanding addressable opportunities.

Loss from operations – Loss from operations for the three and twelve months ended December 31, 2021 was $0.9 million and $3.2 million compared to $0.8 million and $3.0 million in the same periods last year, an increase of $0.2 million and $0.2 million, or 20% and 8% respectively. The increase in loss in both periods is due to higher SG&A and R&D expenses partly offset by higher gross profit.

Net Loss – Net loss for the three months ended December 31, 2021 was $0.9 million, or $0.02 net loss per common share, compared to $0.7 million, or $0.01 net loss per common share in the same period last year. The increase in net loss is primarily due to a $0.2 million increase in loss from operations and lower interest income of $0.1 million. Net loss for the twelve months ended December 31, 2021 was $3.2 million, or $0.06 net loss per common share, compared to $2.4 million, or $0.04 net loss per common share. The increase in net loss is primarily due to a higher loss from operations of $0.2 million and lower interest income of $0.5 million. The lower interest income in both periods is primarily due to lower interest rates on cash and short-term investments.

Financial Condition

	December 31 2021	December 31 2020	Change $	%
Total current assets	46,311,612	46,102,570	209,042	0%
Total assets	50,981,701	51,723,375	(741,674)	-1%
Total current liabilities	2,363,630	1,179,097	1,184,533	100%
Total liabilities	3,183,675	2,251,384	932,291	41%

Total current assets – Total current assets at December 31, 2021 were $46.3 million compared to $46.1 million at December 31, 2020, an increase of $0.2 million. The increase is primarily due to higher cash and short-term investments of $0.2 million.

Total assets – Total assets at December 31, 2021 were $51.0 million compared to $51.7 million at December 31, 2020, a decrease of $0.7 million. The change was due to an increase in current assets of $0.2 million and PP&E additions of $0.3 million offset by depreciation on PP&E of $1.3 million. The $0.3 million of PP&E additions relate to manufacturing equipment and equipment for research and development.

Total current liabilities – Total current liabilities at December 31, 2021 were $2.4 million compared to $1.2 million at December 31, 2020, an increase of $1.2 million or 100%. The increase was primarily due to the timing of settlement of trade accounts payable and accrued liabilities including the recognition of accrued variable compensation of $0.7 million at December 31, 2021 compared to $0.2 million at December 31, 2020.

Total liabilities – Total liabilities at December 31, 2021 were $3.2 million compared to $2.3 million at December 31, 2020, an increase of $0.9 million or 41%. The increase was primarily due to higher current liabilities of $1.2 million offset by a $0.3 million reduction in the non-current portion of the lease liability. The reduction of the non-current portion of the lease liability was due to payments made during the period.

Liquidity and Capital Resources

We currently fund our business operations through cash flow generated from our operations and from existing cash. We believe that ongoing operations, working capital and associated cash flow in addition to our cash resources provide sufficient liquidity to support our ongoing business operations for the foreseeable future.

Below is a summary of our cash flows provided by / (used in) operating activities, financing activities and investing activities for the three and twelve months ended December 31, 2021 and 2020:

	Three months ended		Change	
	December 31, 2021	December 31, 2020	$	%
Cash provided by (used in) operating activities	288,916	(462,062)	750,978	-163%
Cash (used in) provided by investing activities	(34,474)	9,958,179	(9,992,653)	-100%
Cash provided by financing activities	1,197,561	267,930	929,631	347%
Effect of exchange rate changes on cash	23,551	39,546	(15,995)	-40%
Change in cash	1,475,554	9,803,593	(8,328,039)	-85%
Beginning cash	40,751,262	6,833,568	33,917,694	496%
Ending cash	**42,226,816**	**16,637,161**	**25,589,655**	**154%**

	Twelve months ended		Change	
	December 31, 2021	December 31, 2020	$	%
Cash provided by operating activities	474,067	226,776	247,291	109%
Cash provided by investing activities	24,687,442	9,751,854	14,935,588	153%
Cash provided by (used in) financing activities	474,280	(1,430,629)	1,904,909	-133%
Effect of exchange rate changes on cash	(46,134)	113,447	(159,581)	-141%
Change in cash	25,589,655	8,661,448	16,928,207	195%
Beginning cash	16,637,161	7,975,713	8,661,448	109%
Ending cash	**42,226,816**	**16,637,161**	**25,589,655**	**154%**

Cash provided by (used in) operating activities – Cash provided by operating activities for the three months ended December 31, 2021 was $0.3 million compared to cash used in operating activities of $0.5 million in the same period last year, an increase of $0.8 million. The increase was primarily due to changes in working capital during the period offset by a higher net loss adjusted for non-cash items. Cash provided by operating activities for the twelve months ended December 31, 2021 was $0.5 million compared to $0.2 million in the same period last year, an increase of $0.2 million. The increase was primarily due to changes in working capital during the period offset by a higher net loss adjusted for non-cash items.

Cash (used in) provided by investing activities – Cash used in investing activities for the three months ended December 31, 2021 was a nominal amount compared to cash provided by investing activities of $10.0 million in the same period last year. During the three months ended December 31, 2020, cash provided investing activities related to a $10.0 million short-term investment that matured during the period which was slightly offset by a nominal purchase of PP&E. Cash provided by investing activities for the twelve months ended December 31, 2021 was $24.7 million compared to cash provided by investing activities of $9.8 million in the same period last year. During the twelve months ended December 31, 2021, $25.0 million of short-term investments matured which was partly offset by $0.3 million of purchases of PP&E. During the twelve months ended December 31, 2020, cash provided by investing activities were $9.8 million which related $10.0 million short-term investment that matured during the period offset by $0.2 million purchases of PP&E.

Cash provided by (used in) financing activities – Cash provided by financing activities during the three months ended December 31, 2021 was $1.2 million compared to $0.3 million in the same period last year, an increase of $0.9 million. During the three months ended December 31, 2021, $1.7 million in cash was received from the exercise of common share options and $0.4 million was used to purchase common shares through the NCIB. During the three months ended December 31, 2020, $0.6 million in cash was received from the exercise of common share options and $0.3 million was used to purchase common shares through the NCIB. Cash provided by financing activities during the twelve months ended December 31, 2021 was $0.5 million compared to cash used in financing activities of $1.4 million in the same period last year, an increase in cash provided by financing activities of $1.9 million. During the twelve months ended December 31, 2021, $1.9 million in cash was received from the exercise of common share options and $1.2 million of common shares were purchased through the NCIB. During the twelve months ended December 31, 2020, $0.7 million in cash was received from the exercise of common share options and $2.0 million of common shares were purchased through the NCIB.

Effect of exchange rate changes on cash – The effect of exchange rate changes on cash is primarily due to the revaluation of cash denominated in Canadian dollars and the impact of currency fluctuations between the Canadian dollar and U.S. dollar.

Capital Management

The Company's objective in managing capital is to ensure sufficient liquidity to pursue its growth strategy and fund research and product development, while at the same time taking a conservative approach towards managing financial risk. The Company's capital is composed of the net cash received related to common shares and shareholder option exercises. Our primary uses of capital are financing operations, increasing non-cash working capital and capital expenditures. We currently fund these requirements from existing cash resources and cash raised through share issuances. Our objectives when managing capital are to ensure that we will continue to have enough liquidity to provide our products and services to our customers and a return to our shareholders. We monitor our capital on the basis of the adequacy of our cash resources to fund our business plan. In order to maximize the capacity to finance our ongoing growth, we do not currently pay a dividend to holders of our common shares.

Commitments

The Company entered the following contractual obligations in the normal course of operations that were not recognized as liabilities as at December 31, 2021:

I. The Company is committed to purchases of feedstock of approximately $4.2 million over the next twelve months. The Company may enter into feedstock contracts to secure raw material availability over a twelve to twenty-four-month period based on market pricing at the time of purchase.

II. The Company is committed to purchasing $1.2 million of other production raw materials over the next twelve months.

Summary of Quarterly Results

The following table sets out selected financial information for each of the eight most recent quarters, the latest of which ended December 31, 2021. This information has been prepared on the same basis as the annual financial statements and all necessary adjustments have been included in the amounts stated below to present fairly the unaudited quarterly results when read in conjunction with the quarterly financial statements of the Company and the related notes to those statements.

	Three months ended							
	December 31, 2021	September 30, 2021	June 30, 2021	March 31, 2021	December 31, 2020	September 30, 2020	June 30, 2020	March 31, 2020
Net sales	4,885,420	4,705,917	4,897,107	3,673,447	3,343,823	2,991,591	3,102,881	4,224,416
Gross profit	1,013,419	1,103,676	1,102,486	752,089	679,331	443,286	515,542	1,100,214
Loss from operations	(947,366)	(774,209)	(744,766)	(775,825)	(792,126)	(786,501)	(780,596)	(648,368)
Net loss	(936,867)	(763,892)	(729,097)	(749,884)	(705,904)	(640,690)	(608,245)	(447,255)
Weighted average number of	57,871,822	57,277,143	57,241,838	57,247,344	56,823,364	56,924,245	57,119,605	57,926,217
Basic and diluted loss per sha	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Adjusted EBITDA [(1)] (loss)	(332,981)	(116,007)	(178,864)	(296,222)	(123,634)	(227,925)	(242,467)	(190,239)

The following table reconciles net loss to Adjusted EBITDA for the three months ended:

	Three months ended							
	December 31, 2021	September 30, 2021	June 30, 2021	March 31, 2021	December 31, 2020	September 30, 2020	June 30, 2020	March 31, 2020
Net loss	(936,867)	(763,892)	(729,097)	(749,884)	(705,904)	(640,690)	(608,245)	(447,255)
Depreciation	324,387	357,902	338,417	360,126	391,098	365,426	369,103	313,877
Share-based compensation	289,998	300,300	227,485	119,477	277,394	193,150	169,026	144,252
Net interest income	(10,499)	(10,317)	(15,669)	(25,941)	(86,222)	(145,811)	(172,351)	(201,113)
Adjusted EBITDA [(1)] (loss)	(332,981)	(116,007)	(178,864)	(296,222)	(123,634)	(227,925)	(242,467)	(190,239)

Notes:

(1) *Refer to "IFRS and Non-IFRS Measures" section in this MD&A*

Adjusted EBITDA

The following table reconciles net loss to Adjusted EBITDA for the three and twelve months ended December 31, 2021 and 2020.

	Three months ended		Change	
	December 31, 2021	December 31, 2020	$	%
Net loss	(936,867)	(705,904)	(230,963)	33%
Depreciation	324,387	391,098	(66,711)	-17%
Share-based compensation	289,998	277,394	12,604	5%
Net interest income	(10,499)	(86,222)	75,723	-88%
Adjusted EBITDA[(1)] loss	(332,981)	(123,634)	(209,347)	169%

	Twelve months ended		Change	
	December 31, 2021	December 31, 2020	$	%
Net loss	(3,179,740)	(2,402,094)	(777,646)	32%
Depreciation	1,380,832	1,439,504	(58,672)	-4%
Share-based compensation	937,260	783,822	153,438	20%
Net interest income	(62,426)	(605,497)	543,071	-90%
Adjusted EBITDA[(1)] loss	(924,074)	(784,265)	(139,809)	18%

Notes:
(1) *Refer to "IFRS and Non-IFRS Measures" section in this MD&A*

Adjusted EBITDA loss for the three months and twelve months ended December 31, 2021 was $0.3 million and $0.9 million compared to $0.1 million and $0.8 million in the same periods last year. Adjusted EBITDA loss during both periods increased by $0.2 million and $0.1 million respectively as higher gross profit was offset by higher operating costs.

Internal control over financial reporting

There were no changes in the Company's internal control over financial reporting during the three months ended December 31, 2021 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

Additional Information

Additional information relating to EcoSynthetix Inc., including continuous disclosure documents, are available on SEDAR at www.sedar.com.

Common Share Trading Information

The Company's common shares trade on the Toronto Stock Exchange under the symbol "ECO". As at February 24, 2022, the Company had **58,957,605** common shares issued and outstanding. If all outstanding share options were exercised and assuming the settlement of outstanding RSU's and DSU's through common shares, there would be the equivalent of **62,934,597** common shares issued and outstanding on a fully diluted basis.

Outlook

Despite the ongoing challenges from the COVID-19 pandemic, significant progress has been made towards achieving sustainable growth and profitability over the past three years. EcoSynthetix has lowered its cost footprint, invested in leadership and talent, focused its research and development efforts and pursued a growth strategy which leverages its foundation in paper and paperboard and the commercialization of DuraBind within the building materials space and our all-natural ingredients within the personal care space. The progress achieved with its renewable, bio-based materials positions the Company strongly to help global leaders in these markets achieve their increasingly aggressive sustainability and environmental, social and governance goals.

EcoSynthetix will continue to execute on the following priorities to drive profitable growth

1. **Execute our “multiple shots on goal” commercial strategy –** The majority of the Company’s sales will continue to be driven by the paper and paperboard market in 2022. However, with the Company’s commercial progress within the wood composites and personal care markets, it continues to transition over time to a more diversified approach with contributions growing from the Company’s DuraBind and Bioform biopolymers.

2. **Support our paper and paperboard accounts –** The Company’s relationships with key customers in the paper & paperboard packaging market continue to provide a strong foundation for its business and EcoSynthetix will continue to pursue growth opportunities in this market, specifically in the more focused specialty paper and packaging categories.

3. **Drive growth in wood composites markets** – The Swiss Krono Group is the Company’s first commercial account in the building materials market, including the use of EcoSynthetix’ DuraBind binder in its BE.YOND particleboard, a non-added formaldehyde (NAF) product. The Swiss Krono Group is one of the world’s leading wood-based panel manufacturers. The Company continues its efforts in expanding its presence in the building materials space. Consumer and regulatory factors are creating demand for NAF products, and the Company believes it is well-positioned to capitalize on these trends to rapidly grow its share of the $15 billion annual wood composite binder market. Manufacturers are actively pursuing new technologies as alternatives to conventional formaldehyde binders and seeking solutions which lower the carbon footprint of their operations and products. EcoSynthetix has expanded its relationship with its first key customer, winning new lines and expanding the number of SKUs that use DuraBind. In addition to the positive activity with the Swiss Krono Group, the Company also announced on November 12, 2021, an annual contract renewal and purchase orders for continuous monthly volumes of DuraBind into 2022 with a top 15 global manufacturer of wood composite products and a leading international retailer. The Company’s key targets within the wood composites market are highly engaged and the Company continues to make progress with its commercialization activities. The conversion of its robust pipeline of industrial trial opportunities into commercial accounts remains its highest priority.

4. **Drive growth in personal care markets –** The Company introduced its third product category in 2019, personal care. The Company announced on July 31, 2019, it had signed an exclusive development, marketing and distribution agreement for its biopolymer with a leading global chemical company in the personal care space. Consumer demand for all natural ingredients is driving rapid change in the personal care market today and the Company’s biopolymer plays directly into that shift. Its biopolymer is an all-natural film former and the first application in this new market is hair fixatives. Formulations using its Bioform biopolymer are designed to replace existing chemistries at a competitive price with the same or better performance.

5. **Product Development** - The Company’s product development efforts focus on applications for its existing EcoSphere, DuraBind and Bioform biopolymer products in market segments where their value proposition is strong, and on further improvements to both product lines to further enhance value and expand addressable opportunities. The Company is also pursuing new product categories in specific markets where strong commercial interest from recognized leaders exists.

   On April 26, 2019, the Company announced government funding of up to C$2 million over five years from the Federal Government’s Canadian Agricultural Partnership to develop new green resins for adhesive binders in wood products. This investment will be used to develop next generation DuraBind binder adhesives.

6. **Top line growth with a sustainable bottom line -** The Company expects to continue making investments in areas of the business that allow it to accelerate growth while retaining a disciplined approach toward its cost structure. The Company remains confident in its ability to execute on the opportunities it has identified in the wood composites, personal care and the paper and paperboard packaging markets. The Company generated positive cash flow from operations in 2021, 2020 and 2019 and management believes it can leverage its next steps in growth and continued cost discipline to deliver long-term value to its shareholders.