

# **Dundee Sustainable Technologies Inc.**

Management's Discussion and Analysis

Years ended December 31, 2019 and 2018

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# DUNDEE SUSTAINABLE TECHNOLOGIES INC.

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FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018

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# DUNDEE SUSTAINABLE TECHNOLOGIES INC.

## MANAGEMENT'S DISCUSSION AND ANALYSIS

FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018

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### BACKGROUND

This Management's Discussion and Analysis ("MD&A") of Dundee Sustainable Technologies Inc. ("DST" or the "Corporation") constitutes management's review of the factors that affected the Corporation's financial and operating performance for the years ended December 31, 2019 and 2018. This MD&A should be read in conjunction with the Corporation's audited consolidated financial statements for the years ended December 2019 and 2018, prepared in accordance with the International Financial Reporting Standards ("IFRS").

This MD&A takes into account all material events that took place up until March 24, 2020, the date on which the Corporation's Board of Directors approved this MD&A. Unless otherwise noted, all figures are in Canadian dollars, the presentation and functional currency.

Additional information regarding the Corporation is available on Sedar at [www.sedar.com](http://www.sedar.com) and on the Corporation's website at [www.dundeetechnologies.com](http://www.dundeetechnologies.com).

### INCORPORATION AND NATURE OF OPERATIONS

#### *Incorporation*

The Corporation was incorporated under the Canada Business Corporations Act on July 22, 1997. The Corporation's head office is located at 2000 Peel, Suite 860, Montréal, Quebec, Canada, H3A 2W5.

The authorized capital of the Corporation consists of an unlimited number of subordinate voting shares and multiple voting shares, each multiple voting share having 10 votes. On January 22, 2020, the Corporation consolidated its share capital on a twenty for one basis. (Refer to Note 20 to the financial statements for the years ended December 31, 2019)

Dundee Corporation ("Dundee") retains multiple voting shares of the Corporation, which are convertible, at the option of Dundee, into subordinate voting shares of the Corporation for no additional consideration. The multiple voting shares of the Corporation are not listed on a stock exchange.

At December 31, 2019, Dundee owned 178.1 million subordinate voting shares and all of the 50.0 million multiple voting shares (8.9 million and 2.5 million respectively after share consolidation) of the Corporation giving Dundee a 63% equity interest and an 83% voting interest in the Corporation. In addition, Dundee is owed \$19.6 million in short term debt, including accrued interest.

#### *Overview*

The Corporation is a leader in the development and commercialization of innovative environmentally responsible technologies for the treatment of complex materials in the mining industry. Through the development of patented, proprietary processes, DST extracts precious and base metals from ores, concentrates and tailings, while permanently stabilizing contaminants such as arsenic, antimony and cadmium. These minerals resources could not otherwise be extracted or stabilized with conventional processes because of metallurgical issues, cost or environmental considerations. The Corporation's main focus is on the commercialization of its two innovative and patented processes (the "Technologies"). As part of the commercialization process, the Corporation has branded these technologies as the CLEVR Process™ (Chlorine Leach Vat Reactor) and the GlassLock Process™ (permanent arsenic sequestration in glass).

#### *GlassLock Process™*

DST has designed, built and patented a method for the permanent stabilization of arsenic from numerous sources, including, but not limited to, arsenopyrite, enargite, cobaltite, flue dusts and environmental remediation. This process is an attractive technique to permanently stabilize arsenic and does so at a significantly lower cost than current alternatives, such as ferric arsenate or scorodite. This presents the Corporation with numerous opportunities to process materials considered too toxic or uneconomic to be exploited or stabilized using conventional mining and processing methods.

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### **CLEVR Process™**

DST has also developed an advanced proprietary process associated with the extraction of precious and base metals using sodium hypochlorite to provide a cyanide-free alternative for the exploitation of gold deposits. The primary benefit of this innovative technology is a significantly shorter processing time (1-2 hours) as compared to the cyanide approach using carbon in leach ("CIL") process (24-48 hours) and operates in a closed-loop operation. A key benefit of the closed loop operation is the elimination of the need for a costly and environmentally risky tailing ponds. It also provides a reduction of the environmental footprint and produces a dry stacked, inert and stable cyanide-free tailings.

The CLEVR Process™ developed by DST is a recognized "green technology" for which it was awarded a \$5 million grant by the Government of Canada, through its Sustainable Development Technology Fund ("SDTC"), for the construction and operation of a demonstration plant. The plant serves as a demonstration platform for the CLEVR Process on an industrial scale and under continuous operating conditions.

The environmentally responsible nature of the gold extraction technology has been confirmed by Environment Canada through the Canadian Environmental Technology Verification Program ("ETV"). The ETV is an independent certification of the performance of its cyanide-free gold extraction process, now called the CLEVR Process™.

The Corporation has protected its intellectual property by filing patents during the development of its technologies. To date, the Corporation has applied or has been granted patents on 11 different processes, and it has 49 patents granted, published, pending or filed in 20 different countries. These patents expire between 2022 and 2036. The Corporation is in the process of expanding its patent portfolio for both processes and additional jurisdictions as warranted.

The Corporation recently applied for patents for its CLEVR Process™ in Kazakhstan and China, which are jurisdictions that management sees as key to the future. The Corporation continues to develop its CLEVR Process™ and recently added key enhancements with the filing in China. This will allow the Corporation to update the patent filing in other countries and extend the life of the current patent portfolio.

Inherent in the commercialization of these processes is significant technology development risk. Each of these processes may require significant additional development, testing and investment prior to final commercialization. There can be no assurance that such technologies will be successfully commercialized, or that output from any use of the Corporation's processes could be produced at a commercial scale at reasonable costs or successfully marketed.

### **Technical Services**

The Corporation also uses its state-of-the-art laboratory and processing facility in Thetford Mines, Quebec to assist other companies with services designed to help them with mineralogy for their deposits or complete small scale testing and processing.

## **OPERATIONS DURING 2019**

### **GlassLock Process™**

The industrial scale GlassLock plant (the "Plant") was delivered to our development partner. In conjunction with the mineral processing facility's personnel, DST personnel have completed the demonstration phase of the project and submitted the final report in the fourth quarter of 2019. The Corporation is in the final stages of negotiations with the customer to complete a trade off study and basic engineering study in 2020. The Plant was financed through a collaboration arrangement with a related party and will provide proof of the GlassLock Process™ in an industrial environment. The Corporation also announced that SDTC awarded a grant of \$1.25 million to partially offset costs associated with this plant.

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### **CLEVR Process™**

In 2017, the Corporation completed the second of two demonstration programs to prove the efficacy of the CLEVR Process™ with the assistance of SDTC. The current intention of the Corporation is to initiate an independent technical-economic study, designed with the objective of building the first commercial plant in partnership with a strategic partner. DST is experiencing an increased interest in using this technology and has recently been engaged to do some high-level testing and flow sheet development for several gold customers for the application of the CLEVR Process™ on deposits under development. Testing of these samples is on-going.

### **Technical Services**

DST continues to build its technical services business and under the terms of these contracts, the Corporation will provide technical services in markets such as lithium, cobalt, nickel, magnesium, graphite, gold and fertilizer. Proceeds from these contracts will help to offset developmental and operating costs related to its primary technologies.

## **BUSINESS STRATEGY**

The growing pressure from communities and government authorities over the use of cyanide in various jurisdictions around the world is forcing developing gold projects to seek alternative processes that can extract the gold without the environmental liabilities associated with cyanide, while maintaining control over the deleterious elements such as arsenic, mercury and antimony.

DST offers a competitive alternative to the cyanidation process. The technology is at the forefront of the mining industry's innovative extraction processes and caters to the worldwide growing need for extractive technologies capable of processing refractory and arsenic bearing material. This alternative provides DST leverage to access quality material including material from metallurgical or environmentally constrained deposits.

DST's business plan is focused on controlling both of its technologies and leveraging them to become a major player in the industry. The Corporation has a unique opportunity to emerge as a major stakeholder in multiple mining projects. In the immediate term, DST is focused on advancing its discussions with major gold and copper producing companies on building alternative processing and stabilization processes. The Corporation is currently processing test material for a number of customers. Assuming successful results, the next step is to negotiate the business terms with those customers for commercializing its Technologies.

The technology that the Corporation has developed with respect to complex deposits will allow for the development and or advancement of mining projects that would not be viable without its patented technology. DST has identified over 100 gold projects that could face significant concerns due to cyanide use, environmental and/or metallurgical constraints. These include some of the largest gold projects on the planet. The commercialization of the Corporation's Processes would enable mining companies to advance those projects which are currently constrained because of the refractory or toxic nature of their deposits. Discussions are ongoing with a number of mining companies to help advance these otherwise stranded deposits.

## **INFORMATION ON EQUITY**

The authorized capital of the Corporation consists of an unlimited number of subordinate voting shares and multiple voting shares, without nominal or par value. The holders of subordinate voting shares are entitled to one vote for each subordinate voting share and the holders of multiple voting shares are entitled to ten votes for each multiple voting share. The holders of subordinate voting shares and multiple voting shares shall be entitled to receive and to participate equally as to dividends, share for share, in an equal amount on all the subordinate voting shares and multiple voting shares at the time outstanding. The holder of multiple voting shares shall be entitled at any time and from time-to-time to have any or all of the multiple voting shares converted into subordinate voting shares based on one subordinate voting share for each multiple voting share. In all other respects, the holders of subordinate voting shares and multiple voting shares shall rank equally and the same rights and restrictions.

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## MANAGEMENT'S DISCUSSION AND ANALYSIS

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On January 22, 2020, the Corporation consolidated its share capital on a twenty for one basis. (Refer to Note 20 to the financial statements for the years ended December 31, 2019)

	<b>March 24, 2020</b>
Subordinate voting shares issued	15,747,121
Options	973,750
Warrants	714,285
<b>Total – fully diluted subordinate voting shares</b>	<b>17,435,156</b>

<b>Multiple voting shares issued</b> (each multiple voting share has 10 votes)	<b>2,500,000</b>
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(1) At March 24, 2020, Dundee owned 8.9 million subordinate voting shares of the Corporation (63%) and all of the outstanding multiple voting shares.

### STOCK OPTION PLAN

The Board of Directors of the Corporation has full and final discretion to designate the persons who are to be granted options and to determine such number of options as well as their exercise price and vesting period. The exercise price shall not be less than that permitted under the rules of any stock exchange on which the subordinate voting shares are listed. The purpose of the stock option plan is to serve as an incentive for the directors, officers, employees and service providers who will be motivated by the Corporation's success as well as to promote ownership of common shares of the Corporation by these people. There is no performance indicator relating to profitability or risk attached to the plan.

### FINANCING ACTIVITIES

#### Year ended December 31, 2019

##### *Promissory note from a Related Party*

During 2019, the Corporation signed four promissory notes in the total principal amount of \$2,064,000 payable on demand to a wholly owned subsidiary of Dundee along with interest at a rate of 18% per annum.

As at December 31, 2019, the aggregate principal amount of the promissory notes outstanding totaled \$4,739,000 and the finance cost accrued during 2019 amounted to \$716,194.

#### Year ended December 31, 2018

##### *Issuance of shares*

In December 2018, the Corporation issued 2,015,991 shares at \$0.032 per share for total consideration of \$64,512 pursuant to a non-brokered private placement.

##### *Options Exercise*

During the year ended December 31, 2018, 1,550,000 options were exercised for an equal number of subordinate voting shares at an average price of \$0.05 per option, for aggregate proceeds to the Corporation of \$77,500.

##### *Promissory note from a Related Party*

During 2018, the Corporation signed four promissory notes in the total principal amount of \$2,175,000 payable on demand to a wholly owned subsidiary of Dundee along with interest at a rate of 18% per annum.

As at December 31, 2018, the aggregate principal amount of the promissory notes totalled \$2,675,000 and the finance cost accrued during the year amounted to \$262,097.

### INVESTING ACTIVITIES

No investing activities were performed during 2019 or 2018.

# DUNDEE SUSTAINABLE TECHNOLOGIES INC.

## MANAGEMENT'S DISCUSSION AND ANALYSIS

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### LIQUIDITY AND WORKING CAPITAL

On December 31, 2019, the working capital position of the Corporation was negative \$25,822,614 (negative \$16,100,133 as at December 31, 2018). This working capital deficiency includes \$19,545,673 (\$15,711,770 as at December 31, 2018) of short-term loans (principal and accrued interest) from Dundee. Management estimates that the Corporation will not have sufficient funds to meet its obligations and budgeted expenditures through the twelve months ended December 31, 2020. The Corporation will periodically have to raise additional funds to continue operations. The Corporation is pursuing financing alternatives to fund its operations and working towards developing its activities to operate as a going concern. The Corporation is currently under discussions to proceed with the conversion of the convertible debenture that matures in May 2020. Although there is no assurance that the Corporation will be successful in these actions, management believes, based on previous fund-raising experience and commercial activities, that it will be able to secure the necessary financing. Financings could be completed through the issuance of debt or new equity in public or privately negotiated equity offering. While it has been successful in doing so in the past, there can be no assurance that it will be able to do so in the future. (Refer to Note 20 to the financial statements for the years ended December 31, 2019 for additional funding secured in 2020.)

### DISCUSSION AND ANALYSIS OF OPERATIONS

#### *Revenues*

During the year ended December 31, 2019, the Corporation processed material for a number of customers, including major gold producers, for testing of ores and concentrates using the Corporation's Technologies. As well, exploration and development companies in other commodities such as aluminium, nickel, graphite and lithium utilized the Corporation's facilities and highly skilled personnel for the advancement of their projects.

DST provided its technical expertise and its facilities to these companies to evaluate the development of their projects using the Corporation's Thetford Mines facility including its CLEVR Process™ for precious metal extraction and/or its GlassLock Process™. The technical services may serve to demonstrate the efficiency of the Corporation's facilities and technical staff at the laboratory and/or pilot scales on specific projects in need of viable processing alternative and initiate engineering studies required for an industrial implementation.

Revenues totalled \$1,372,025 during the year ended December 31, 2019 with related cost of \$1,350,412 recorded under operating expenses related to services. The Corporation reported revenues of \$1,881,442, with related cost of \$1,507,674 in the same period of the prior year. The Corporation experienced delays in some projects that started at end of the second quarter of 2019. Revenues by line of business were as below:

	2019	2018
	\$	\$
Arsenic stabilization process	140,165	693,255
Chlorination process	242,720	130,986
Other service revenues	989,140	1,057,201
	<b>1,372,025</b>	<b>1,881,442</b>

#### *Operating expenses*

The major components of the operating expenses are as follows:

	2019	2018
	\$	\$
Labour	593,401	695,037
Consultants	199,033	296,954
Consumables	14,038	35,969
Plant overhead	543,940	479,714
	<b>1,350,412</b>	<b>1,507,674</b>

Lower service revenues in 2019, compared to the same period in 2018, prompted a reduction of the plant overhead allocated to this type of projects.

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## MANAGEMENT'S DISCUSSION AND ANALYSIS

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### *Technology development*

During 2019, the Corporation incurred technology development costs of \$2,580,471 (\$4,694,716 in 2018) primarily on its GlassLock Process™. These costs relate to the construction of the arsenic demonstration plant, research activities conducted in the arsenic technology pilot plant and the laboratory. The remaining expenses relate to the operation of the demonstration plant, other technology development, patent maintenance and plant overhead.

The Corporation periodically receives reimbursement of project expenses generated under a collaboration agreement with a related party and financial assistance under government incentive programs. These compensate DST for expenses incurred and are normally recognized as a reduction to research and development expense on a systematic basis in the same periods in which the expenses are incurred. On a net-of-assistance and contribution from a related party basis, research and development costs amounted to \$1,280,410 (\$1,292,324 in 2018).

	2019	2018
	\$	\$
Arsenic plant	1,146,070	3,186,284
Plant expenses	1,328,667	1,387,355
Patent maintenance	105,734	121,077
Technology development	2,580,471	4,694,716
Net contribution from a related party	(896,330)	(2,668,237)
Government grants	(403,731)	(734,155)
<b>Technology development expenses, net</b>	<b>1,280,410</b>	<b>1,292,324</b>

### *Professional and consulting fees*

	2019	2018
	\$	\$
Legal	23,288	31,510
Audit, audit related work and tax compliance	73,588	108,540
Accounting	2,393	17,583
	<b>99,269</b>	<b>157,633</b>

### *Administrative expenses*

	2019	2018
	\$	\$
Insurance	124,526	175,646
Rent	110,196	132,642
Website and technical support	49,566	28,944
Travel and accommodations	56,038	66,282
Telecommunications and others	59,216	57,836
	<b>399,542</b>	<b>461,350</b>

The decrease in insurance expense was due to a review of our policy limits to match the current level of risk during the period.

# DUNDEE SUSTAINABLE TECHNOLOGIES INC.

## MANAGEMENT'S DISCUSSION AND ANALYSIS

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### Wages and compensation

	2019	2018
	\$	\$
Employees	482,627	444,888
Officer compensation	186,038	186,038
Director fees	34,000	31,000
	<b>702,665</b>	<b>661,926</b>

Officer compensation relates to the President and Chief Executive Officer's (CEO) compensation. The remuneration of the President and CEO is based on a monthly rate of \$15,833.

### Other Gains and Losses

	2019	2018
	\$	\$
Interest expenses on:		
Dundee short-term loans and Dundee promissory notes	1,769,902	1,315,805
IQ loan	394,111	364,097
IQ loan accretion expense	180,397	165,984
CED Contribution accretion expense	28,411	25,316
Interest expense on leases	161,283	-
Other interest expense	3,214	9,993
Gain on disposal of assets	-	(8,000)
Other gain	-	(51,350)
	<b>2,537,318</b>	<b>1,821,845</b>

### SELECTED QUARTERLY INFORMATION

The following table sets forth selected historical financial information for the Corporation from the last eight quarters. Such information is derived from the Corporation's interim unaudited consolidated financial statements prepared in accordance with IFRS. The Corporation adopted IFRS 16 Leases on a modified retrospective basis. The information from 2018 does not reflect the impact of applying the standard:

	Q4-19	Q3-19	Q2-19	Q1-19
	\$	\$	\$	\$
Total revenue	332,563	455,334	411,292	172,836
Operating loss	694,363	622,653	629,059	1,042,598
Net loss and comprehensive loss	1,381,393	1,300,521	1,251,192	1,620,128
Basic and diluted net loss per share	0.004	0.004	0.003	0.004
	Q4-18	Q3-18	Q2-18	Q1-18
	\$	\$	\$	\$
Total revenue	484,906	297,631	579,980	518,925
Operating loss	685,791	641,940	963,635	697,594
Net loss and comprehensive loss	1,203,538	1,086,284	1,389,127	1,125,218
Basic and diluted net loss per share	0.003	0.003	0.004	0.003

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### FOURTH QUARTER

#### *Operating Activities*

The Corporation reported a loss of \$1,381,393 for the fourth quarter of 2019 ("Q4-2019") compared to a loss of \$1,203,538 for the same period last year ("Q4-2018"). The main reasons for the variance are:

- a) Revenues of \$332,563 during Q4-2019 from service contracts compared to \$484,906 in Q4-2018. The decrease was due to a non-recurrent tolling contract performed during Q4-2018;
- b) During Q4-2019, research and development expenses totaled \$132,679 (\$348,042 in Q4-2018) mainly for the maintenance and operation of the technical facilities.

#### *Investing Activities*

No investing activities were performed during Q4-2019.

#### *Financing Activities*

The financing activities of the Corporation during Q4-2018 were as follow:

- a) Promissory note from a Related Party – During Q4-2018, an amount of \$625,000 was advanced to the Corporation payable on demand to a wholly-owned subsidiary of Dundee along with interest at a rate of 18% per annum.
- b) In December 2018, the Corporation issued 2,015,991 shares at \$0.032 per share for total consideration of \$64,512 pursuant to a non-brokered private placement.;

### OUTLOOK FOR 2020

The Corporation continues to move towards the commercialization of its Technologies and seeking to maximize the value of all of its assets to accelerate this growth. The Corporation has numerous initiatives that it will execute to ensure success.

**Glasslock Process™** The Corporation completed the delivery to the mineral processing facility of our development partner in early 2019. During the balance of the year, the Corporation finished the demonstration campaign and presented the technical report to the customer. The Corporation is in discussions to begin a trade off study and basic engineering for delivery of a full-scale plant to the customer. The customer also maintains an option to exercise a moratorium on the promotion of the technology for other copper smelter for a period of one year, in return for a payment of US\$1,000,000. The Corporation will use data from this program to position the technology for adoption by customers around the world.

#### **CLEVR Process™**

The Corporation completed the second of two CLEVR Process™ campaigns through the processing of a complex concentrate from Chile in December 2016 and the Corporation finalized the Demonstration Campaign Report during the first quarter of 2017. The processing of these materials continued to establish the proof of concept of the Corporation's chlorination process for different ore and concentrate streams. The intention is to initiate an independent technical-economic study, designed with the objective of building DST's first commercial plant in partnership with a strategic partner. The Corporation is working with several properties in Asia, Africa and Canada to test their ores and concentrates using the CLEVR Process™.

#### **Technical Services:**

With the completion of the two gold chlorination demonstration campaigns, the Corporation owns a state-of-the-art crushing, grinding, mineral processing (hydrometallurgy and pyrometallurgy) facility which is being made available for test programs from the lab scale up to the thousands of tonnes scale. The Corporation is working on two significant technical services projects that could result in revenues of \$3.0 million over the next two years. Management is constantly in discussions with numerous parties with respect to projects that will maximize the value of our Thetford facility.

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Management estimates that the Corporation will have to raise funds for its operations and to continue its activities. Although there is no assurance that the Corporation will be successful in these actions, management believes, based on previous fund-raising experience, that it will be able to secure the necessary financing through the issuance of debt or new equity in public or privately negotiated equity offering. While it has been successful in doing so in the past, there can be no assurance that it will be able to do so in the future.

### OFF BALANCE SHEET ARRANGEMENTS

The Corporation did not enter into any off-balance sheet arrangements in 2019 and 2018.

### CONTRACTUAL OBLIGATIONS AND COMMITMENTS

The contractual obligations of the Corporation include lease payments for the Thetford Mines facilities and the head office in Montreal (Refer to Note 17 to the financial statements for the years ended December 31, 2019).

### RELATED PARTY TRANSACTIONS

In addition to the transactions discussed in the financing and investing sections, details of related party transactions with the officers and directors of the Corporation and companies they control are as follows:

	2019	2018
	\$	\$
Professional and consulting fees		
Administration <sup>(1)</sup>	186,996	186,038
Legal <sup>(2)</sup>	16,576	14,578
Directors' fees <sup>(3)</sup>	34,000	31,000
	<b>237,572</b>	<b>231,616</b>

(1) Fees paid to a private company controlled by Brian Howlett, President and CEO.

(2) Fees paid to a private company controlled by Luce Saint-Pierre, Corporate Secretary.

(3) Directors' fees.

### SUBSEQUENT EVENTS

#### *Promissory note*

On January 13 and February 24, 2020, the Corporation signed two promissory notes in the principal amount of \$500,000 and \$550,000, respectively. The promissory notes are payable on demand to a wholly owned subsidiary of Dundee along with interest at a rate of 18% per annum.

#### *Share consolidation*

On January 22, 2020, the Corporation consolidated its share capital on a twenty for one basis. A total of 314,942,521 Subordinate Voting Shares and 50,000,000 Multi-Voting Shares were issued and outstanding in the capital of the Corporation. Accordingly, after giving effect to the Consolidation on the basis of twenty existing Shares for one new Share, a total of approximately 15,747,121 Subordinate Voting Shares and 2,500,000 Multi Voting Shares would be issued and outstanding in the capital of the Corporation, assuming no other change in the issued capital.

#### *COVID-19 situation*

The first quarter of 2020 was marked by the severity of the Coronavirus global outbreak. The extent and duration of impacts that the Coronavirus may have on the Corporation's operations including suppliers, service providers, employees and on global financial markets is not known at this time but could be material. The Corporation is monitoring developments in order to be in a position to take appropriate action. The Thetford site has been temporarily closed as a result of the measures taken by the Quebec provincial government on March 23, 2020.

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### ACCOUNTING POLICY CHANGES, CRITICAL ESTIMATES, JUDGMENTS AND ASSUMPTIONS

The preparation of financial statements in conformity with IFRS requires management to make estimates and assumptions that affect amounts reported in the financial statements and accompanying notes. There is a full disclosure and description of the Corporation's critical accounting policies, estimates, judgments, assumptions in the financial statements as at December 31, 2019 in notes 1, 2 and 3.

#### *Changes in accounting policies*

Effective January 1, 2019, the following new standard has been applied when preparing the consolidated financial statements. The Corporation adopted IFRS 16, Leases using the retrospective modified approach. The impact of applying the standard is described below.

#### **IFRS 16, Leases**

On January 1, 2019, the Corporation adopted IFRS 16 which replaces IAS 17 Leases. IFRS 16 results in most leases being reported on the balance sheet for lessees, eliminating the distinction between a finance lease and an operating lease. IFRS 16 requires lessees to recognize a Right Of Use asset ("ROU") asset and a lease liability calculated using a prescribed methodology, except for short-term leases and leases with low-value underlying assets. In addition, the nature, timing and presentation of expenses related to leases has changed, as IFRS 16 replaces the straight-line operating leases expense with the depreciation expense for the ROU assets and interest expense on the lease liabilities. The Corporation adopted IFRS 16 on a modified retrospective basis and as such the comparative period was not adjusted. The impact of the transition is shown below.

#### Transition

At the transition date, the Corporation only had one long-term lease classified as operating leases under IAS 17. A lease liability was measured at the present value of the remaining lease payments discounted at the incremental borrowing rate as at January 1, 2019. ROU assets were measured at their carrying amount, discounted using the incremental borrowing rate as at January 1, 2019. The Corporation's incremental borrowing rate applied is 11.7%. On transition to IFRS 16, the Corporation recognized \$1.4 million of ROU assets and its related lease liabilities.

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	\$
Lease commitment disclosed as at December 31, 2018	1,020,488
Additional 5 years renewal option	1,344,792
Effect on discounting	(994,363)
IFRS 16 lease liability on January 1, 2019	1,370,917

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### FINANCIAL INSTRUMENTS AND OTHER INSTRUMENTS

The Corporation is exposed to various financial risks resulting from both its operations and its investments activities. The Corporation does not enter into financial instrument agreements including derivative financial instruments for speculative purposes. The Corporation's main financial risk exposure and its financial risk management policies are disclosed in Note 20 to the annual consolidated financial statements for the years ended December 31, 2019 and 2018.

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### RISKS AND UNCERTAINTIES

The Technologies are relatively new, and the Corporation has limited history of operations that, to date has consisted primarily of research and development. The Corporation has generated limited revenue from its core technologies and has limited experience in selling or marketing these technologies. The technology has not gained significant market exposure but is beginning to demonstrate market acceptance. Whether the Corporation can successfully manage the transition to a commercial enterprise will depend upon a number of factors, including expanding the sales and marketing capabilities, as well as establishing relationships with strategic partners. Given the limited market acceptance with respect to the Corporation's technologies, there can be no assurance as to the achievability of projected market penetration rates and associated sales revenues.

#### *No Independent Evaluation of the Process.*

While the Corporation's research with respect to the technology has, in the opinion of management, been validated in various applications and while various third parties (without limitation, Dundee Precious Metals Inc. and eCobalt Solutions Inc.) have carried out due diligence procedures to their satisfaction, there has been no independent evaluation of the Technologies. There can be no assurance that we will be able to achieve our growth strategy and bring the Technologies to commercialization. The inability to bring the Technologies to commercialization could have a material adverse effect on operations.

#### *Intellectual Property*

The Corporation relies on patents, trade secrets, trademarks and copyright laws to protect its intellectual property. The patents to which the Corporation currently has rights expire between 2022 and 2036. The Corporation's present or future-issued patents may not protect the Corporation's technological leadership, and the Corporation's patent portfolio may not continue to grow at the same rate as it has in the past. Moreover, the Corporation's patent position is subject to complex factual and legal issues that may give rise to uncertainty as to the validity, scope and enforceability of a particular patent. Accordingly, there is no assurance that: (a) any of the patents owned by the Corporation will not be invalidated, circumvented, challenged, rendered unenforceable; or (b) any of the Corporation's pending or future patent applications will be issued with the breadth of claim coverage sought by the Corporation, if issued at all. In addition, effective patent, trade secret, trademark and copyright protection may be unavailable, limited or not applied for in certain countries.

The Corporation also seeks to protect its proprietary intellectual property, including intellectual property that may not be patented or patentable, in part by confidentiality agreements and, if applicable, inventors' rights agreements with strategic partners and employees. The Corporation can provide no assurance that these agreements will not be breached, that the Corporation will have adequate remedies for any breach, or that such persons or institutions will not assert rights to intellectual property arising out of these relationships.

Management believes that the Technologies do not infringe on the proprietary rights of third parties. There can be no assurance, however, that third parties will not claim such infringement by the Corporation with respect to current or future products or processes. Dealing with any such claims, with or without merit, could be time consuming, result in costly litigation, or require the Corporation to enter into further royalty or licensing agreements, which may or may not be available on terms acceptable to the Corporation. The failure to do any of the foregoing may have a material adverse effect on the Corporation.

#### *Competition*

The Corporation competes with other companies to develop products and services designed to extract precious and base metals. Many of these other companies have substantially greater technical and financial resources than the Corporation. There can be no assurance that developments by others will not materially adversely affect the competitiveness of the Corporation.

# DUNDEE SUSTAINABLE TECHNOLOGIES INC.

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The mining industry is characterized by extensive research and development efforts and is going through a period of rapid technological change. Competition can be expected to increase as technological advances are made and commercial applications for extraction of products and services increase. Competitors of the Corporation may use different technologies or approaches to develop products and services similar to products and services which the Corporation is seeking to develop or may develop new or enhanced products and services that may be more effective, less expensive, safer or more readily available before the Companies obtain approval of their products and services. There can be no assurance that the Corporation's products and services will compete successfully or that research and development will not render the Companies' products and services obsolete or uneconomical.

### *Impact of Unfavourable Economic and Political Conditions and Other Developments and Risks.*

Unfavourable global, domestic or regional economic or political conditions and other developments and risks could negatively affect the Corporation's business. For example, unfavourable changes related to interest rates, rates of economic growth, fiscal and monetary policies of governments, inflation, deflation, consumer credit availability, consumer debt levels, tax rates and policy, unemployment trends, commodity prices, oil prices, and other matters that influence, confidence and spending could adversely impact our business and results of operations. In addition, unstable political conditions or civil unrest, including terrorist activities and worldwide military and domestic disturbances and conflicts, may disrupt commerce and could have a material adverse effect on our business and results of operations.

### *Key Personnel*

The Corporation's management team of seasoned and committed industry veterans has achieved success in developing the Corporation's business. The Corporation's continued success and the execution of its growth strategy will depend, in part, on the continued services of this management team.

The Corporation's management team is composed of a relatively small group of senior executive officers. The loss of the technical knowledge, management expertise and knowledge of the Corporation's operations of one or more members of the team could result in a diversion of management resources, as the remaining members of management would need to cover the duties of any senior executive who leaves the Corporation and would need to spend time usually reserved for managing the Corporation's business to search for, hire and train new members of management. The loss of some or all of the Corporation's management team could negatively affect the Corporation's ability to develop and pursue its growth strategy, which could adversely affect its business and financial condition.

In addition, the market for key personnel in the industry in which the Corporation competes is highly competitive, and the Corporation may not be able to attract and retain key personnel with the skills and expertise necessary to manage its business.

### *Ability to Attract and Retain Quality Employees*

The Corporation's business is dependent upon attracting and retaining quality employees. If the Corporation were unable to hire, train and retain employees capable of developing the technology, the Corporation may not be able to maintain its competitive strength and realize on its growth strategy. The Corporation may be unable to commercialize its technology.

The Corporation's ability to meet its labour needs while controlling the costs associated with hiring and training new employees is subject to external factors such as unemployment levels, prevailing wage rates, minimum wage legislation and changing demographics. Changes that adversely impact the Corporation's ability to attract and retain quality employees could adversely affect its business.

## **DUNDEE SUSTAINABLE TECHNOLOGIES INC.**

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#### *Material Disruption in Computer Systems*

The Corporation relies extensively on its computer systems to process transactions, collect and summarize data and manage its business. Computer systems are subject to damage or interruption from power outages, computer and telecommunications failures, computer viruses, security breaches, catastrophic events such as fires, floods, earthquakes, tornadoes, hurricanes, acts of war or terrorism, and usage errors by our employees. If the Corporation's computer systems are damaged or cease to function properly, the Corporation may have to make a significant investment to fix or replace these systems and may suffer loss of critical data and interruptions or delays in operations in the interim. Any material interruption in the computer systems could adversely affect the Corporation's business or results of operations and reputation.

#### *Regulations*

The Corporation is subject to customs, environmental and other laws. Although the Corporation undertakes to monitor changes in these laws, if these laws change without the Corporation's knowledge, it could be subject to fines or other penalties under the controlling regulations, any of which could adversely affect its business.

#### *Insurance Related Risks*

The Corporation maintains Directors and Officers Insurance, Liability Insurance, Pollution and Property and Liability Insurance. However, there is no guarantee that the insurance coverage will be sufficient, or that insurance proceeds will be paid to the Corporation in a timely manner. In addition, there are types of losses we may incur but against which the Corporation cannot be insured, or which management believes are not economically reasonable to insure, such as losses due to acts of war and certain natural disasters. If the Corporation incurs these losses and they are material, the Corporation's business, operating results and financial condition may be adversely affected. In addition, certain material events may result in sizable losses for the insurance industry and materially adversely affect the availability of adequate insurance coverage or result in significant premium increases. Accordingly, the Corporation may elect to self-insure, accept higher deductibles or reduce the coverage.

#### *Environment*

The Corporation could be liable for environmental damages resulting from its research, development operations.

The Corporation's business is exposed to the risk of harmful substances escaping into the environment, resulting in personal injury or loss of life, damage to or destruction of property, and natural resource damage. Depending on the nature of the claim, the Corporation's current insurance policies may not adequately reimburse us for costs incurred in settling environmental damage claims, and in some instances, we may not be reimbursed at all.

#### *Commodity Risk*

Commodity price risk is the potential adverse impact on earnings and economic value due to commodity price movements and volatilities. The price of gold and precious metals may affect the profitability of the Corporation. Historically, such prices have fluctuated and are affected by numerous factors outside of the Corporation's control, including, but not limited to: industrial and retail demand, central bank lending, forward sales by producers and speculators, levels of worldwide production, short-term changes in supply and demand because of speculative hedging activities and other factors such as significant mine closures.

# DUNDEE SUSTAINABLE TECHNOLOGIES INC.

## MANAGEMENT'S DISCUSSION AND ANALYSIS

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### *Going Concern*

Management estimates that the Corporation will not have sufficient funds to meet its obligations and budgeted expenditures through to December 31, 2020. The Corporation will therefore periodically have to raise additional funds to continue operations. The Corporation is pursuing financing alternatives to fund its operations and to continue its activities as a going concern. Although there is no assurance that the Corporation will be successful in these actions, management believes that it will be able to secure the necessary financing through the issuance of debt or new equity in a public or private equity offering. While it has been successful in doing so in the past, there can be no assurance that it will be able to do so in the future.

Although the referenced consolidated financial statements have been prepared using IFRS applicable to a going concern, the above-noted facts and circumstances cast significant doubt on the Corporation's ability to continue as a going concern.

The referenced consolidated financial statements do not reflect the adjustments to the carrying values of assets and liabilities, to the reported expenses and to the financial position classifications that would be necessary if the going concern assumption was inappropriate. These adjustments could be material.

### *COVID-19*

The current outbreak of novel Coronavirus (COVID-19) and any future emergence and spread of similar pathogens could have an adverse impact on global economic conditions which may adversely impact the Corporation's operations, and the operations of its suppliers, contractors and service providers, the ability to obtain financing and maintain necessary liquidity. The outbreak of COVID-19 and political upheavals in various countries have caused significant volatility in commodity prices. The outbreak is causing companies and various international jurisdictions to impose restrictions such as quarantines, business closures and travel restrictions. While these effects are expected to be temporary, the duration of the business disruptions internationally and related financial impact cannot be reasonably estimated at this time.

### **FORWARD LOOKING STATEMENTS**

DST's public communications may include written or oral forward-looking statements. Statements of this type are included in this MD&A and may be included in other filings with the Canadian regulators, stock exchanges or in other communications. All such statements constitute forward looking information within the meaning of securities law and are made pursuant to the "safe harbour" provisions of applicable securities laws. Forward looking statements may include, but are not limited to, statements about anticipated future events or results including comments with respect to the Corporation's objectives and priorities for 2020 and beyond, and strategies or further actions with respect to the Corporation, its products and services, business operations, financial performance and condition. Forward looking statements are statements that are predictive in nature, depend upon or refer to future events or conditions or include words such as "expects", "anticipates", "intends", "plans", "believes", "estimates" or similar expressions concerning matters that are not historical facts. Such statements are based on current expectations of the Corporation's management and inherently involve numerous risks and uncertainties, known and unknown, including economic factors and those affecting the technology and resources industries generally. The forward-looking information contained in this MD&A is presented for the purpose of assisting shareholders in understanding business and strategic priorities and objectives as at the periods indicated and may not be appropriate for other purposes.

A number of risks, uncertainties and other factors may cause actual results to differ materially from the forward-looking statements contained in this MD&A, including, among other factors and without limitation, those referenced in the section above entitled "Risks and Uncertainties". The preceding list is not exhaustive of all possible risk factors that may influence actual results and is compiled based upon information available as of the issuance date of this MDA.

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Forward looking statements contained in this MD&A are not guarantees of future performance and, while forward looking statements are based on certain assumptions that the Corporation considers reasonable, actual events and results could differ materially from those expressed or implied by forward looking statements made by the Corporation. Prospective investors are cautioned to consider these and other factors carefully when making decisions with respect to the Corporation and not place undue reliance on forward looking statements. Circumstances affecting the Corporation may change rapidly. Except as may be required by applicable law, the Corporation does not undertake any obligation to update publicly or revise any such forward looking statements, whether as a result of new information, future events or otherwise.

### ADDITIONAL INFORMATION CONCERNING DST

Additional information relating to Dundee Sustainable Technologies may be found on SEDAR at [www.sedar.com](http://www.sedar.com) and the Corporation's website at [www.dundeetechnologies.com](http://www.dundeetechnologies.com).

March 26, 2020

*(s) David Lemieux*

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David Lemieux  
President and CEO

*(s) Arved Marin*

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Arved Marin  
CFO