
NOTICE OF ANNUAL GENERAL MEETING OF SHAREHOLDERS OF 5N PLUS INC.

You are invited to the Annual General Meeting of Shareholders (the “**Meeting**”) of 5N Plus Inc. (the “**Corporation**”). The meeting will be held on May 1, 2019 at 10:00 a.m. (Montreal time) at:

Stikeman Elliott LLP, Room Mont-Royal
1155 René-Lévesque West Blvd, 41st floor
Montreal, Québec

The purposes of the Meeting are to:

1. Receive and consider the consolidated financial statements of the Corporation for the fiscal year ended December 31, 2018 and the auditors’ report thereon;
2. Elect directors;
3. Appoint auditors and authorize the directors to fix their remuneration; and
4. Transact such other business as may properly be brought before the Meeting.

If you are unable to attend the Meeting in person, please date, sign and return the enclosed form of proxy. Proxies to be used at the Meeting must be deposited with Computershare Investor Services Inc. (Attention: Proxy Department), 100 University Avenue, 9th Floor, Toronto, Ontario M5J 2Y1 prior to 5:00 p.m. on April 29, 2019 or with the Secretary of the Corporation before the commencement of the Meeting or at any adjournment thereof.

DATED at Montreal, Québec
April 2, 2019

By order of the Board of Directors

(s) Arjang J. (AJ) Roshan

Arjang J. (AJ) Roshan
President and Chief Executive Officer

General Information

Solicitation of Proxies by Management

This Management Proxy Circular is provided in connection with the solicitation by the management of 5N Plus Inc. (“5N Plus” or the “Corporation”) of proxies to be used at the Annual General Meeting of Shareholders (the “Meeting”) of the Corporation to be held at the time and place and for the purposes set forth in the Notice of Meeting and all adjournments thereof. Except as otherwise stated, the information contained herein is given as of April 2, 2019. The solicitation will be made primarily by mail. However, officers and employees of the Corporation may also solicit proxies by telephone, telecopier, e-mail or in person. The total cost of solicitation of proxies will be borne by the Corporation. Unless otherwise indicated, all references to “dollars” and the symbol “\$” in this Management Proxy Circular are to Canadian dollars.

Appointment and Revocation of Proxies

The persons named in the enclosed form of proxy are directors and officers of the Corporation. **Each shareholder is entitled to appoint a person, who need not be a shareholder, to represent him or her at the Meeting other than those whose names are printed on the accompanying form of proxy by inserting such other person’s name in the blank space provided in the form of proxy and signing the form of proxy or by completing and signing another proper form of proxy.** To be valid, the duly-completed form of proxy must be deposited at the offices of Computershare Investor Services Inc. (Attention: Proxy Department), 100 University Avenue, 9th Floor, Toronto, Ontario M5J 2Y1 prior to 5:00 p.m. on April 29, 2019 or with the Secretary of the Corporation before the commencement of the Meeting or at any adjournment thereof. The instrument appointing a proxyholder must be executed by the shareholder or by his attorney authorized in writing or, if the shareholder is a corporate body, by its authorized officer or officers.

A shareholder who has given a proxy may revoke it, as to any motion on which a vote has not already been cast pursuant to the authority conferred by it, by an instrument in writing executed by the shareholder or by the shareholder’s attorney authorized in writing or, if the shareholder is a corporation, under its corporate seal or by an officer or attorney thereof duly authorized. The revocation of a proxy, in order to be acted upon, must be deposited with Computershare Investor Services Inc. (Attention: Proxy Department), 100 University Avenue, 9th Floor, Toronto, Ontario M5J 2Y1 prior to 5:00 p.m. on April 29, 2019 or with the Secretary of the Corporation before the commencement of the Meeting or at any adjournment thereof.

Exercise of Discretion by Proxies

In the absence of any direction to the contrary, shares represented by properly-executed proxies in favour of the persons designated in the enclosed form of proxy will be voted FOR the: (i) election of directors; and (ii) appointment of auditors, as stated under such headings in this Management Proxy Circular. Instructions with respect to voting will be respected by the persons designated in the enclosed form of proxy. With respect to amendments or variations to matters identified in the Notice of Meeting and with respect to other matters that may properly come before the Meeting, such shares will be voted by the persons so designated in their discretion. At the time of printing this Management Proxy Circular, management of the Corporation knows of no such amendments, variations or other matters.

Non-Registered Shareholders

Only registered shareholders or the persons they appoint as their proxies are permitted to vote at the Meeting. However, in many cases, shares beneficially owned by a non-registered shareholder (a “**Non-Registered Holder**”) are registered either: (i) in the name of an intermediary (an “**Intermediary**”) that the Non-Registered Holder deals with in respect of the common shares (such as securities dealers or brokers, banks, trust companies, and trustees or administrators of self-administered RRSPs, RRIFs, RESPs, TFSA and similar plans), or (ii) in the name of a clearing agency of which the Intermediary is a participant. In accordance with National Instrument 54-101 of the Canadian Securities Administrators, entitled “Communication with Beneficial Owners of Securities of a Reporting Issuer”, the Corporation has distributed copies of the Notice of Meeting and this Management Proxy Circular (collectively, the “**Meeting Materials**”) to the clearing agencies and Intermediaries for distribution to Non-Registered Holders. Intermediaries are required to forward the Meeting Materials to Non-Registered Holders unless a Non-Registered Holder has waived the right to receive it. Intermediaries often use service companies to forward Meeting Materials to Non-Registered Holders. Generally, Non-Registered Holders who have not waived the right to receive this Management Proxy Circular will either:

- (a) typically, be provided with a computerized form (often called a “**voting instruction form**”) which is not signed by the Intermediary and which, when properly completed and signed by the Non-Registered Holder and returned to the Intermediary or its service company, will constitute voting instructions which the Intermediary must follow. In order for the applicable computerized form to validly constitute a voting instruction form, the Non-Registered Holder must properly complete and sign the form and submit it to the Intermediary or its service company in accordance with the instructions of the Intermediary or service company. In certain cases, the Non-Registered Holder may provide such voting instructions to the Intermediary or its service company through the Internet or through a toll-free telephone number; or
- (b) less commonly, be given a proxy form which has already been signed by the Intermediary (typically by a facsimile, stamped signature), which is restricted to the number of shares beneficially owned by the Non-Registered Holder but which is otherwise not completed. In this case, the Non-Registered Holder who wishes to submit a proxy should properly complete the proxy form and submit it to Computershare Investor Services Inc. (Attention: Proxy Department), 100 University Avenue, 9th Floor, Toronto, Ontario M5J 2Y1.

In either case, the purpose of these procedures is to permit Non-Registered Holders to direct the voting of the common shares which they beneficially own.

Should a Non-Registered Holder who receives a voting instruction form wishes to vote at the Meeting in person (or have another person attend and vote on behalf of the Non-Registered Holder), the Non-Registered Holder should print his or her own name, or that of such other person, on the voting instruction form and return it to the Intermediary or its service company. Should a Non-Registered Holder who receives a proxy form wishes to vote at the Meeting in person (or have another person attend and vote on behalf of the Non-Registered Holder), the Non-Registered Holder should strike out the names of the persons set out in the proxy form and insert the name of the Non-Registered Holder or such other person in the blank space provided and submit it to Computershare Investor Services Inc. at the address above mentioned.

In all cases, Non-Registered Holders should carefully follow the instructions of their Intermediary, including those regarding when, where and by what means the voting instruction form or proxy form must be delivered.

A Non-Registered Holder may revoke voting instructions which have been given to an Intermediary at any time by written notice to the Intermediary.

Voting Shares

As at April 2, 2019 there were 84,540,412 common shares of the Corporation issued and outstanding. Each common share entitles the holder thereof to one vote. The Corporation has fixed March 27, 2019 as the record date (the “**Record Date**”) for the purpose of determining shareholders entitled to receive notice of the Meeting. Pursuant to the *Canada Business Corporations Act*, the Corporation is required to prepare, no later than ten days after the Record Date, an alphabetical list of shareholders entitled to vote as of the Record Date that shows the number of shares held by each shareholder. A shareholder whose name appears on the list referred to above is entitled to vote the shares shown opposite his or her name at the Meeting. The list of shareholders is available for inspection during normal business hours at the head office of the Corporation, 4385 Garand, Montreal, Québec H4R 2B4 and at the Meeting.

Principal Shareholders

As at April 2, 2019, to the best knowledge of the directors and executive officers of the Corporation, the following are the only persons who beneficially owned, directly or indirectly, or exercised control or direction over, more than 10% of the common shares of the Corporation:

Name and place of residence	Number of shares held	Percentage
Caisse de dépôt et placement du Québec ⁽¹⁾ Montreal, Québec, Canada	15,857,050	18.76%
Letko, Brosseau & Associates ⁽²⁾ Montreal, Québec, Canada	15,246,514	18.03%

(1) The information was provided by Caisse de dépôt et placement du Québec and is current as at April 2, 2019.

(2) The information was provided by Letko, Brosseau & Associates and is current as at April 2, 2019.

Business of the Meeting

Presentation of the Annual Audited Consolidated Financial Statements

The annual audited consolidated financial statements for the fiscal year ended December 31, 2018 and the report of the auditors will be placed before the Meeting. The annual audited consolidated financial statements were mailed with the Notice of Meeting to shareholders who requested them. Copies of the annual audited consolidated financial statements for the fiscal year ended December 31, 2018 may be obtained from the Corporation upon request and will be available at the Meeting.

Election of Directors

Seven directors are to be elected to hold office until the close of the next Annual General Meeting of Shareholders or until their successor is elected or appointed. Each of the persons presented in this Management Proxy Circular is proposed to be nominated as a director of the Corporation and each nominee has agreed to serve as a director if elected.

Appointment of Auditors

Except where authorization to vote with respect to the appointment of auditors is withheld, the persons named in the accompanying form of proxy intend to vote FOR the appointment of PricewaterhouseCoopers LLP, Chartered Accountants, as the auditors of the Corporation, at such remuneration as may be determined by the Board of Directors. PricewaterhouseCoopers LLP, Chartered Accountants, have served as the auditors of the Corporation since September 3, 2010.

Shareholder Proposals

The *Canada Business Corporations Act* provides that a registered holder or beneficial owner of shares that is entitled to vote at an annual meeting of the Corporation may submit to the Corporation notice of any matter that the person proposes to raise at the meeting (referred to as a “**Proposal**”) and discuss at the meeting any matter in respect of which the person would have been entitled to submit a Proposal. The *Canada Business Corporations Act* further provides that the Corporation must set out the Proposal in its management proxy circular along with, if so requested by the person who makes the Proposal, a statement in support of the Proposal by such person. However, the Corporation will not be required to set out the Proposal in its management proxy circular or include a supporting statement if, among other things, the Proposal is not submitted to the Corporation at least 90 days before the anniversary date of the notice of meeting that was sent to the shareholders in connection with the previous annual meeting of shareholders of the Corporation. As the notice in connection with the Meeting is dated April 2, 2019 the deadline for submitting a proposal to the Corporation in connection with the next annual meeting of shareholders is January 2, 2020.

The foregoing is a summary only. Shareholders should carefully review the provisions of the *Canada Business Corporations Act* relating to Proposals and consult with a legal advisor.

Other Matters

Management of the Corporation knows of no other matter to come before the Meeting other than those referred to in the Notice of Meeting. However, if any other matters which are not known to management should properly come before the Meeting, the accompanying form of proxy confers discretionary authority upon the persons named therein to vote on such matters in accordance with their best judgement.

Election of Directors

The articles of the Corporation provide for a minimum of one (1) and a maximum of fifteen (15) directors. The Board of Directors currently consists of seven directors. **Unless otherwise specified, the persons named in the enclosed form of proxy intend to vote FOR the election of the seven nominees whose names are set forth below.** Each director will hold office until the next annual meeting of shareholders or until the election of his or her successor, unless he or she resigns or his or her office becomes vacant by removal, death or other cause.

As part of the Corporation's ongoing Board renewal process, the Corporation is mindful of the interests of its existing shareholders. In that respect, the Corporation has agreed to consider nominees provided by Caisse de dépôt et placement du Québec having the skills and attributes identified as priorities by the Corporation, which include independence, financial experience and the requisite expertise to contribute to the Board. Subject to the *Canada Business Corporations Act*, applicable securities law and the Corporation's by-laws, and in accordance with the current processes of the Governance & Compensation Committee, the Corporation has agreed to propose one candidate to the Board for election at any annual shareholder meeting until such time as Caisse de dépôt et placement du Québec holds at least 10% of the issued and outstanding shares of the Corporation. Ms. Nathalie Le Prohon is the candidate proposed by Caisse de dépôt et placement du Québec. Ms. Le Prohon and all other nominee directors named in the table below are currently members of the Board of Directors of the Corporation.

The Board of Directors has adopted a Majority Voting Policy which requires that any nominee who receives a greater number of votes “withheld” from his or her election than votes “for” such election, promptly tender his or her resignation to the Board of Directors to be effective upon acceptance by the Board of Directors. The Governance & Compensation Committee will review the circumstances of the election and make a recommendation to the Board of Directors as to whether or not to accept the tendered resignation. The Board of Directors must determine whether or not to accept the tendered resignation as soon as reasonably possible and in any event within 90 days of the election. The nominee in question may not participate in any committee or board votes concerning his or her resignation. This policy does not apply in circumstances involving contested director elections.

Luc Bertrand



Age: 64
Baie d'Urfé, Québec, Canada

Chairman of the Board of Directors

Director since January 2016
Independent

Shares held: 1,150,000

Mr. Bertrand is Vice-Chairman of National Bank of Canada, a position he has assumed since February 2011, where he is responsible for developing and maintaining relations with corporate, institutional and government clients in Canada. He also acts as strategic advisor to management, particularly on matters pertaining to government relations and capital market regulations. Mr. Bertrand has held various management positions in the financial services industry. From 2000 to 2009, he was President and Chief Executive Officer of Montreal Exchange Inc. and held the position of Vice-President and Managing Director of Institutional Equity Sales at National Bank Financial from 1998 to 2000. Aside from his professional duties, Mr. Bertrand is an active member of boards of directors and industry committees. He currently serves as Chairman of the Board of the Montreal Canadiens/CH Group Inc. He is also on the Board of TMX Group and on the Board of the Boston Options Exchange and previously held the position of Chief Executive Officer of Maple Group Acquisition Corporation. In recent years, he has been a director of the Canadian Derivatives Clearing Corporation, Vice-Chairman of the Board of the Boston Options Exchange, Chairman of the Board of the Montréal Climate Exchange, and a director of the Natural Gas Exchange.

Board/Committees

- Board of Directors
- Total

Attendance

5 of 5 (100%)
5 of 5 (100%)

Jean-Marie Bourassa



Age: 68
Montreal, Québec, Canada

Chairman of the Audit & Risk Management Committee

Director since December 2007
Independent

Shares held: 1,222,000

Mr. Bourassa was the founding President and Chief Executive Officer of Bourassa Boyer Inc., an accounting firm, from January 1, 1989 to June 30, 2018 and has served as consulting partner since July 1, 2018. He is the Chief Financial Officer of Savaria Corporation, a TSX-listed company, and he has served since 2001 on its Board of Directors. Mr. Bourassa is also involved with various private companies as a shareholder and director and he is President of the Palliative Care Residence of Vaudreuil-Soulanges Foundation. Mr. Bourassa has been a chartered accountant since 1976 and attained corporate governance certification at Université Laval in 2009.

Board/Committees

- Board of Directors
- Audit & Risk Management Committee
- Total

Attendance

5 of 5 (100%)
4 of 4 (100%)
9 of 9 (100%)

Nathalie Le Prohon



Age: 56
Westmount, Québec, Canada

Chair of the Governance & Compensation Committee

Director since May 2014
Independent

Shares held: 183,500

Ms. Le Prohon is a professional board member with over 30 years of extensive experience in management and consulting including 20 years in senior executive positions at IBM in Montreal, Québec City, Toronto and Paris including her current position as Vice President, Telecommunication, Media and Entertainment Industry, IBM Canada. Ms. Le Prohon was President of Nokia Canada from 2003 and 2004. From 2007 to July 2016, Ms. Le Prohon was a full-time corporate director for various public and private entities and not-for-profit organizations. She is currently a director of BlackRock Metals and Casavant Frères. Ms. Le Prohon was Chair of the Board of Groupe Conseil OSI, was Chair of the Board of the Québec Breast Cancer Foundation, was a director of Alithya, ACCEO Solutions, Bentall Kennedy LP and Hydro-Québec and was a member of the external audit committee of the Department of National Defence (Canada). She has a BCOM (Major in MIS) from McGill University, a MBA from Concordia University and was named Concordia University 'Alumna of the Year' in 2009. She is a member of the Institute of Corporate Directors and has attained corporate governance certification at McGill University in 2009.

Board/Committees

- Board of Directors
- Governance & Compensation Committee
- Total

Attendance

4 of 5 (80%)
1 of 2 (50%)
5 of 7 (71.43%)

Arjang J. (AJ) Roshan



Age: 48
Lexington, Massachusetts, USA

President and Chief Executive Officer

Director since February 2016
Non-Independent

Shares held: 100,000

Mr. Roshan was appointed as the Corporation's President and Chief Executive Officer on February 15, 2016. He has 25 years of international and executive experience in managing and growing businesses in industries related to Automotive, Specialty Chemicals, Materials Technology and Electronics. In addition to managing businesses in his native United States, he has extensive experience with managing businesses in Asia-Pacific and Europe while living in these regions. Prior to joining 5N Plus, he worked for Umicore, a global materials technology group for 18 years and managed various businesses and ventures. Mr. Roshan was Senior Vice President for Energy & Surface Technologies; based in Belgium and prior to this appointment was Senior Vice President of Automotive Catalysts Division of Umicore in Asia-Pacific. Throughout his executive tenure, Mr. Roshan has established a track record of success in both sustainably growing businesses in various markets including Asia-Pacific, Europe and North-America along with transforming underperforming global ventures. Earlier in his career, Mr. Roshan worked for Bosch North America and Ford Motor Company. He is a graduate of Executive Program at The University of Michigan's Ross School of Business. He holds an Executive MBA degree from Broad School of Business at Michigan State University and a degree in Electrical Engineering from Michigan Technological University.

Board/Committees

- Board of Directors
- Total

Attendance

5 of 5 (100%)
5 of 5 (100%)

Jennie S. Hwang



Age: 69
Bedford, New York, USA

Member of the Audit & Risk Management Committee and of the Governance & Compensation Committee

Director since May 2014
Independent

Shares held: 365,100

Ms. Hwang, a seasoned director and experienced CEO, has over 35 years of business experience in materials, metals, electronics, chemical and coating industries through her management and/or ownership of businesses in both corporate and entrepreneurial enterprises. She is president of H-Technologies Group, encompassing global market assessment, advanced manufacturing and business strategy advisory services. She was the CEO of International Electronic Materials Corp. and has held senior executive positions with Lockheed Martin Corp., Hanson, PLC and Sherwin-Williams Co., and served as Global President of the Surface Mount Technology Association and in other global leadership positions. An international speaker and author of 475+ publications including several textbooks on leading technologies, advanced manufacturing and global market thrusts, her acclaimed career in electronics infrastructure has put her on the global stage across 28 countries. Her work is highlighted with many awards/honors, including the U.S. Congressional Recognition of Achievements, induction into the International Hall of Fame (Women in Technology) and the National Academy of Engineering, YWCA Women of Achievement Award, R&D Stars-to-Watch (Industry Week), and Distinguished Alumni Awards by her alma maters. An innovator and industry leader, her patents are widely used in today's leading Smartphones and advanced automotive electronics. Additionally, she has served on the board of public and private companies including, Second National Bank, Ferro Corp., DataMicrosystems, Inc., and a long list of university, civic, government and industry boards. She serves on U.S. Commerce Department – Export Council, U.S. Defense Department - Board of Army Science and Technology, National Laboratory Assessment Board and National Materials and Manufacturing Board. She is Chairman of Board of Assessment Panels on Army Research Laboratory. Her formal education includes four academic degrees (Ph.D., M.S., M.A., B.S.) in metallurgical engineering, material sciences, liquid crystals and chemistry, and Harvard Business School Executive Program and Columbia University Corporate Governance programs. As a guest contributor to Financial Times and Corporate Board Member of NYSE Euronext, she timely addresses important corporate governance issues. Throughout her distinguished career, she is especially credited in bridging the gap between technology and marketplace and in bringing innovations to commercialization. With her unique combination of vast knowledge in materials and chemicals, experience as a global advisor to business/government/university coupled with hands-on operation of both corporate and entrepreneurial businesses, she offers ongoing worldviews and provides essential insights and accomplished perspectives in management and governance.

Board/Committees

- Board of Directors
- Audit & Risk Management Committee
- Governance & Compensation Committee
- Total

Attendance

5 of 5 (100%)
4 of 4 (100%)
2 of 2 (100%)
11 of 11 (100%)

James T. Fahey



Age: 55
Berlin, Massachusetts, USA

Member of the Audit & Risk Management Committee and of the Governance & Compensation Committee

Director since May 2014
Independent

Shares held: 164,500

Mr. Fahey has over 20 years of experience in the Electronics Industry in various roles including scientist, engineering (manufacturing and product development), marketing and sales and senior management, including 17 years in senior executive positions with Rohm and Haas and The Dow Chemical Company. Mr. Fahey is a dynamic leader with demonstrated strategic and operational strengths across various functions (Operations, Engineering, Research and Development, Sales and Marketing, and Business Leadership), and across various businesses (Microelectronics, Circuit Board Technologies, Optics and Ceramics). Mr. Fahey successfully directed global teams and supported business development in Asia, North America & Europe. Mr. Fahey holds a Bachelor of Science (First Class Honors) from St. Francis Xavier University, a Masters in Science and a PhD in Chemistry (Area of Research: Polymers for Microelectronic Applications) from Cornell University. Mr. Fahey is currently serving on the Semiconductor North American Advisory Board, was a member of the Board of NEMI (National Electronics Manufacturing Initiative) and has produced numerous technical publications and patents in the semiconductor industry related to both materials and semiconductor processing.

Board/Committees

- Board of Directors
- Audit & Risk Management Committee
- Governance & Compensation Committee
- Total

Attendance

5 of 5 (100%)
4 of 4 (100%)
2 of 2 (100%)
11 of 11 (100%)

Donald F. Osborne



Age: 59
Delta, British Columbia, Canada

Director since May 2018
Independent

Shares held: 30,000

Mr. Osborne has over 30 years of experience in Satellite Communications, Space and Defence, most recently as President and Chief Executive Officer and director of Urthecast Corporation. Mr. Osborne served as President of the MDA Information Systems Group from January 2014 to October 2017 where he was responsible for MDA's Canadian businesses. Mr. Osborne joined MDA in 2009 as President, Satellite Systems. Prior to joining MDA, he held the position of President, Advantech Networks, a provider of Satellite and Wireless Solutions for the telecommunications and broadband markets. Mr. Osborne began his career with Spar Aerospace in 1983 as a Design Engineer. After joining the management team in 1989, he held positions of increasing responsibility in Manufacturing, Engineering, Program Management, Sales & Marketing and Business Unit Management. Mr. Osborne holds a Bachelor of Mechanical Engineering and a Masters of Business Administration, both from McGill University, Montreal, Canada. Until recently, he also served on the Board of Directors of the Aerospace Industries Association of Canada.

Board/Committees

- Board of Directors

Attendance

3 of 3 (100%)

To the knowledge of the Corporation, none of the foregoing nominees for election as director of the Corporation:

- (a) is, or within the last ten years has been, a director, chief executive officer or chief financial officer of any company that:
 - (i) was subject to a cease-trade order, an order similar to a cease-trade order, or an order that denied the relevant company access to any exemption under applicable securities legislation, and which in all cases was in effect for a period of more than 30 consecutive days (an “**Order**”), which Order was issued while the director or executive officer was acting in the capacity as director, chief executive officer or chief financial officer of such company; or
 - (ii) was subject to an Order that was issued after the proposed director ceased to be a director, chief executive officer or chief financial officer and which resulted from an event that occurred while that person was acting in the capacity as director, chief executive officer or chief financial officer of such company; or
- (b) is, or within the last ten years has been, a director or executive officer of any company that, while the proposed director was acting in that capacity, or within a year of that person ceasing to act in that capacity, became bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or was subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold its assets; or
- (c) has, within the last ten years, become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or become subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold his assets.

None of the foregoing nominees for election as director of the Corporation has been subject to:

- (a) any penalties or sanctions imposed by a court relating to securities legislation or by a securities regulatory authority or has entered into a settlement agreement with a securities regulatory authority; or
- (b) any other penalties or sanctions imposed by a court or regulatory body that would likely be considered important to a reasonable securityholder in deciding whether to vote for a proposed director.

Executive Compensation

Compensation Discussion and Analysis

The purpose of this Compensation Discussion and Analysis is to provide information about the Corporation’s executive compensation objectives and process and to discuss compensation relating to each person who acted as President and Chief Executive Officer (“**CEO**”) and Chief Financial Officer (“**CFO**”) and the three most highly-compensated executive officers of the Corporation (or three most highly-compensated individuals acting in a similar capacity), other than the CEO and the CFO, whose total compensation was more than \$150,000 in the Corporation’s last fiscal year (each a “**NEO**” and collectively the “**NEOs**”). For the fiscal year ended December 31, 2018, the Corporation’s NEOs are Arjang J. (AJ) Roshan, President and CEO, Richard Perron, CFO, Nicholas Audet, Executive Vice President, Electronic Materials (“**EVP-EM**”), Paul Tancell, Executive Vice President, Eco-Friendly Materials (“**EVP-EFM**”) and Pascal Coursol, Vice President, Recycling, Refining and Corporate R&D (“**VP**”).

Governance & Compensation Committee

The Governance & Compensation Committee of the Board of Directors (the “**Governance & Compensation Committee**”) is comprised of three directors, namely Nathalie Le Prohon (Chair), Jennie S. Hwang and James T. Fahey, each of whom is an “independent” director within the meaning of National Instrument 52-110 *Audit Committees*. The Board of Directors is of the view that the Governance & Compensation Committee collectively has the knowledge, experience and background to fulfill its mandate, and that each of the members of the Governance & Compensation Committee has direct experience relevant to his or her responsibilities regarding executive compensation. In particular, Mrs. Le Prohon is a professional board member with extensive experience in management and consulting including twenty years in senior executive positions at IBM, is a member of the Institute of Corporate Directors and has attained corporate governance certification at McGill University. Mrs. Hwang has extensive experience with numerous public companies and obtained certificates in corporate governance from Harvard Business School Executive Program and from Columbia University Corporate Governance programs, and is a guest contributor to the *AGENDA of Financial Times* and *Corporate Board Member* of NYSE Euronext on corporate governance issues, and Mr. Fahey is an experienced senior executive. These collective skills and extensive experience enable the Governance & Compensation Committee to make decision on the suitability of the Corporation’s compensation policies and practices.

The mandate of the Governance & Compensation Committee is to periodically (at least twice a year) review and make recommendations to the Board of Directors with respect to the Corporation’s compensation and benefit programs for the NEOs and directors as well as other members of senior management of the Corporation, including base salaries, bonuses, stock options (or stock appreciation rights (“**SAR**”) in the case of foreign directors and officers), restricted share units (“**RSU**”), performance share units (“**PSU**”) and deferred share units (“**DSU**”) grants. In the assessment of the annual compensation of the NEOs, the Governance & Compensation Committee consults with senior management to develop, recommend and implement compensation philosophy and policy. The Governance & Compensation Committee also takes into consideration the competitiveness of the compensation packages offered to the NEOs. Compensation decisions are usually made in the first quarter of a fiscal year, in respect of the performance achieved in the prior fiscal year.

Compensation Philosophy and Objectives

The compensation of the NEOs is determined by the Board of Directors upon recommendations made by the Governance & Compensation Committee. The Corporation’s executive compensation program is generally designed to pay for performance and to be competitive with other companies of comparable size in similar fields. The CEO makes recommendations to the Governance & Compensation Committee as to the compensation of the Corporation’s executive officers, other than himself. The Governance & Compensation Committee makes recommendations to the Board of Directors as to the compensation of the CEO and the other NEOs for approval, in accordance with the same criteria upon which the compensation of all other executive officers is based.

The general objective of the Corporation’s compensation philosophy is to: (i) produce long-term, positive results for the Corporation’s shareholders; (ii) align executive compensation with corporate performance; (iii) provide market-competitive compensation and benefits that will enable the Corporation to recruit, retain and motivate the executive talent necessary to be successful; and (iv) support the Corporation’s business strategy.

Executive Compensation Policy

The Corporation’s executive compensation program is generally comprised of a base salary, a bonus opportunity and long-term incentives in the form of stock options granted under the stock option plan (the “**Stock Option Plan**”), the SAR plan (the “**SAR Plan**”), the old RSU plan (the “**Old RSU Plan**”), the new RSU and PSU plan (the “**New RSU & PSU Plan**”) and the DSU plan (the “**DSU Plan**”).

The annual bonus provides an opportunity for executives to earn an annual cash incentive based on the degree of achievement of individual, strategic, commercial, operational and financial targets set by the Board of Directors. The Stock Option Plan, the SAR Plan, the Old RSU Plan, the New RSU & PSU Plan and the DSU Plan are designed to attract and retain the key talent required to drive the Corporation’s long-term success by providing participants with an opportunity to share in the shareholder value to which they contribute. The Governance & Compensation Committee, at its sole discretion, and from time to time, may propose modifications to the executive compensation policy, including the removal or addition of compensation elements and

amendments to the Stock Option Plan, the SAR Plan, the Old RSU Plan, the New RSU & PSU Plan and the DSU Plan. Any such modifications will be presented to the Board of Directors and, when required, to the shareholders, for approval.

Executives’ Involvement in the Determination of Executive Compensation Policy

Certain executives of the Corporation are involved in the process of determining executive compensation, as follows: the CEO and the Corporation’s Vice President, Human Resources work jointly with the Governance & Compensation Committee to define the elements of executive compensation, including eligibility for the annual incentive (bonus) plan and long-term incentive compensation, the size, terms and conditions of bonus opportunities, and long-term incentive grants, based on the Corporation’s pay-for-performance compensation philosophy and target-market positioning. The NEOs and other senior managers are involved in the preparation of the financial budgets which are recommended for approval by the Board of Directors and which form the basis for the financial-performance targets on which a portion of the bonuses are based; the CFO and the Corporation’s Vice President, Legal Affairs oversee the financial, accounting, legal and regulatory aspects of the Stock Option Plan, the SAR Plan, the Old RSU Plan, the New RSU & PSU Plan and the DSU Plan, including maintaining a record of options, SARs, RSUs, PSUs and DSUs granted, exercised or paid and cancelled.

Comparative Group and External Compensation Consultant

To ensure the competitiveness of the compensation offered to the NEOs and other senior executives of the Corporation, the Governance & Compensation Committee may retain, from time to time, the services of executive compensation consultants to provide advice on executive compensation.

In 2017, the Corporation retained the services of PCI - Perrault Consulting Inc. (“**PCI**”) to provide a benchmarking analysis and to advise the Corporation on the competitiveness and appropriateness of compensation programs offered to its executives. As part of the review process, the Governance & Compensation Committee conducted an analysis to examine and compare the Corporation’s compensation programs with a group of comparable companies to ensure the competitiveness and reasonableness of the compensation offered. The Corporation has retained PCI since the Corporation’s initial public offering in 2007.

The Governance & Compensation Committee used executive-compensation analyses prepared by PCI to position the Corporation’s compensation programs in the context of the market. Although the Governance & Compensation Committee may rely on information and advice obtained from consultants such as PCI, all decisions with respect to executive compensation are made by the Board of Directors upon recommendation of the Governance & Compensation Committee and may reflect factors and considerations that differ from information and recommendations provided by such consultants, such as merit and the need to retain high-performing executives.

In 2017, the Corporation’s compensation levels and practices were compared to eight Canadian companies, four U.S. companies and one U.K. company (the “**Comparative Group**”) as listed in the table below. Companies selected in our Comparative Group had to be publicly-listed with similar commercial and operational complexities as the Corporation, with an international footprint and a comparable EBITDA and market capitalization.

Comparative Group	
Canadian Companies	U.S. Companies
Avigilon Corporation ⁽¹⁾	AXT, Inc.
EXFO Inc.	Calgon Carbon Corporation ⁽¹⁾
Héroux-Devtek Inc.	II-VI Inc.
Lumenpulse Inc. ⁽¹⁾	Materion Corporation
Naptec Inc. ⁽¹⁾	
Novadaq Technologies Inc. ⁽¹⁾	U.K. Company
ProMetic Life Sciences Inc.	IQE plc
Velan Inc.	

(1) Since the issuance of the PCI report, these companies have either been privatized or acquired by larger companies thus, they will be removed or replaced in any updated report.

The Governance & Compensation Committee will periodically review the Comparative Group to ensure that the companies included in the group continue to share similar characteristics with the Corporation.

Compensation Process

The Board of Directors, upon recommendation of the Governance & Compensation Committee, ensures that total compensation paid to the NEOs is fair and reasonable and accomplishes the following long-term objectives:

- produce long-term, positive results for the Corporation's shareholders;
- align executive compensation with corporate performance;
- provide market-competitive compensation and benefits that will enable the Corporation to recruit, retain and motivate the executive talent necessary to be successful; and
- support the Corporation's business strategy.

Elements of Executive Compensation

The compensation for the NEOs consists of three main components: base salary, annual bonus, and long-term incentives currently in the form of stock options, SARs, RSUs, PSUs and DSUs. The NEOs also benefit from the Corporation's group insurance plans. The Corporation also contributes up to 2% of the base salary of the NEOs (with the exception of the CEO) to the Corporation's Deferred Profit-Sharing Plan through which the Corporation shares a portion of the Corporation's profits with some or all of its employees. The CEO is eligible to the 401K program of the Corporation and the Corporation makes a contribution equal to 100% on the first 3% of the CEO's eligible earnings that is deferred and an additional 50% on the next 2% of the CEO's eligible earnings up to limits defined by Internal Revenue Service (IRS). Other terms and conditions of employment contracts of the NEOs are described in the section entitled "Termination and Change of Control Benefits" below.

Base Salaries

The base salary component of the compensation for the Corporation's executives aims to reflect the salaries paid by companies in the Comparative Group and companies of a size comparable with the Corporation for positions involving similar responsibilities, complexity and impact, as well as the ability and experience of each executive.

Salaries are reviewed annually based on changes in the marketplace, the evolution of the executive's competencies, and his or her individual performance as measured by the achievement of objectives determined annually by the executive together with the CEO and, with respect to the CEO, with the Governance & Compensation Committee.

The Corporation's salary policy is to pay salaries for executive officers between the 25th percentile and the 50th percentile of the Comparative Group which is currently the case for the EVP-EM, the EVP-EFM and the VP. However, the salaries of the CEO and the CFO are slightly above the 50th percentile of the Comparative Group.

Annual Incentive (Bonus)

The annual incentive (bonus) plan is intended to encourage and reward each executive for his or her contribution to the Corporation's annual business plan and for the Corporation's financial success. It is the intent of the Corporation that the combination of salary and annual bonus target be between the 25th percentile and the 50th percentile of the Comparative Group which is currently the case for all NEOs with the exception of the CFO's combined salary and annual bonus target which is slightly above the 50th percentile of the Comparative Group.

Individual, strategic, commercial, operational and financial objectives are determined at the beginning of the year by the executive in concert with the CEO and, with respect to the CEO, in concert with the Governance & Compensation Committee. Each year, the Board of Directors determines the strategic, commercial, operational and financial performance targets which have to be achieved by the Corporation and its divisions in order for bonuses to be paid, the bonus amount to be paid to each executive for achieving such performance, as well as the maximum bonus amount to be paid to each executive should the targets be exceeded.

For the fiscal year ended December 31, 2018, the target bonus was based on (i) achieving a certain level of EBITDA (which, for the purposes of determining the target bonus, the Corporation defines as net earnings (loss) before interest expenses (revenues), income taxes, depreciation and amortization as determined in the budget approved by the Board of Directors, and (ii) on each executive’s individual performance. The “forced ranking” approach was duly applied and has allowed for increased variability of payouts based on individual performance. The following table presents the bonus payouts, as a percentage of base salary for threshold, target and maximum performance for each NEO:

Position title	Bonus based on the Corporation’s and individual’s results (as a percentage of base salary)			
	Below threshold bonus	Minimum Threshold bonus	Target bonus	Maximum bonus
CEO	0%	10%	50%	75%
CFO	0%	10%	40%	90%
Other NEOs	0%	10%	40%	90%

The following table presents the Corporation’s EBITDA objective for the fiscal year ended December 31, 2018, approved by the Board of Directors and the results achieved by the Corporation:

<i>In thousands of dollars</i>	<u>Target</u>	<u>Result</u>	<u>Evaluation of Performance</u>
EBITDA	US\$28,200	US\$29,021	102.9%

The target EBITDA for 2018 was achieved at 102.9%. EBITDA is not the only objective set for the CEO, the CFO and other NEOs. There are individual (and divisional objectives), and other financial objectives such as commercial performance and debt reduction, which also factor into the bonus calculation, which were variously achieved.

Long-Term Incentive Plans (“LTIP”)

Long-term incentives are comprised of stock options, SARs, RSUs, PSUs and DSUs and are intended to align executive compensation with the interests of the Corporation’s shareholders.

Stock Options

Pursuant to the Stock Option Plan, options may be granted by the Board of Directors, from time to time, to executives and other key employees. Option-grant guidelines are established pursuant to the Governance & Compensation Committee’s periodic review of the compensation policy, taking into account the competitiveness of total compensation and compensation practices within the Comparative Group, market trends as well as the Corporation’s pay-for-performance philosophy. Option grants are expressed as a percentage of a participant’s salary, which is determined based on the participant’s position and responsibility levels, without taking into account the number of stock options already held by such participant. Options granted to NEOs usually have a six-year term and vest equally over a four-year period at an annual rate of 25% per year. See “Executives’ Involvement in the Determination of Executive Compensation Policy” above for a discussion of the role of executive officers in setting and administering the Stock Option Plan.

If an optionee’s employment is terminated for cause, options not then exercised terminate immediately.

If an optionee dies, retires from the workforce or becomes, in the determination of the Board of Directors, permanently disabled, while employed by the Corporation, options may be exercised for that number of common shares which the optionee was entitled to acquire at the time of death or retirement or permanent disability, as the case may be, for a period of one year after the date of death, retirement or permanent disability.

Upon an optionee's employment terminating or ending other than by reason of death, retirement, permanent disability or termination for cause, options may be exercised for that number of common shares which the optionee, or the person to whom the option is transferred by will or the laws of succession, was entitled to acquire at the time of such termination, for a period of thirty (30) days after such date.

SARs

On June 7, 2010, the Board of Directors of the Corporation adopted a Restricted Share Unit for Foreign Employees plan (the "RSUFE Plan") which was slightly amended on November 7, 2012 by the Board of Directors to become the SAR Plan which replaced the RSUFE Plan. The SAR Plan enables the Corporation to award eligible participants phantom stock options to foreign directors, officers and employees. SAR-grant guidelines are established pursuant to the Governance & Compensation Committee's periodic review of the compensation policy, taking into account the competitiveness of total compensation and compensation practices within the Comparative Group, market trends as well as the Corporation's pay-for-performance philosophy. SAR grants are expressed as a percentage of a participant's salary, which is determined based on the participant's position and responsibility levels, without taking into account the number of SARs already held by such participant. SARs granted to NEOs usually have a six-year term and vest equally over a four-year period at an annual rate of 25% per year. The amount of cash payout is equal to the sum of the positive differences between the volume weighted average of the trading price of the common shares of the Corporation on the Toronto Stock Exchange in the last twenty (20) days immediately preceding the exercise date and the grant price of each SAR redeemed.

Upon a participant's employment with the Corporation being terminated for cause, any SAR not exercised prior to termination shall immediately lapse and become null and void.

If a participant dies, retires from the workforce, or becomes, in the determination of the Board of Directors, permanently disabled, while employed by the Corporation, any SAR or unexercised part thereof granted to the participant may be redeemed by the participant or the person to whom the SAR is transferred by will or the laws of succession and distribution only for that number of vested SARs which he or she was entitled to exercise under the SAR Plan at the time of his or her death, retirement or permanent disability, as the case may be. Such SARs are exercisable within one year after the participant's death, retirement or permanent disability, as the case may be, or prior to the end of the SAR expiry date, whichever occurs earlier.

Upon a participant's employment with the Corporation terminating or ending otherwise than by reason of death, retirement, permanent disability, or termination for cause, any SARs or unexercised part thereof granted to such participant may be redeemed by him or her only for that number of vested SARs which he or she was entitled to redeem under the SAR Plan at the time of such termination. A redemption notice must be sent to the Corporation for such SAR within thirty (30) days after such termination or prior to the end of the SAR expiry date or prior to the expiration of the term of the SAR Plan, whichever occurs earlier.

RSUs under the Old RSU Plan

On June 7, 2010, the Board of Directors of the Corporation adopted the Old RSU Plan to complement the Stock Option Plan. Minor amendments to the RSU Plan were adopted by the Board of Directors in May 2013. However, on November 4, 2015, the Board of Directors terminated the Old RSU Plan and replaced it with the New RSU & PSU Plan, thus no additional RSUs shall be credited to the accounts of participants under the Old RSU Plan. Only previously granted RSUs shall continue to vest and be settled as per the terms of the Old RSU Plan.

The Old RSU Plan enabled the Corporation to award eligible participants phantom share units that vested after a three-year period. Each vested RSU is settled in cash, for an amount equivalent to the volume weighted average of the trading price of the common shares of the Corporation on the Toronto Stock Exchange in the last month immediately preceding the valuation date.

In the case of a participant's termination by the Corporation for cause or as a result of a voluntary resignation by the participant before the end of a performance cycle, all RSUs will be cancelled immediately as of the date on which the participant is advised of his termination or resigns.

In the case of a participant's termination by the Corporation other than for cause, if such participant is deemed to be on long-term disability or if such participant retires before the end of a performance cycle, the number of RSUs which will vest at such event will be pro-rated based on the number of months worked at the end of the performance cycle. In the case of a



participant's death before the end of a performance cycle, the number of RSUs which will vest will be pro-rated based on the number of months worked at the end of the fiscal year preceding the participant's death.

RSUs and PSUs under the New RSU & PSU Plan

On November 4, 2015, the Board of Directors of the Corporation adopted the New RSU & PSU Plan to replace the Old RSU Plan, for the purpose of enhancing the Corporation's ability to attract and retain talented individuals to serve as employees, officers and executives of the Corporation and its affiliates and promoting a greater alignment of interests between such employees, officers and executives and the shareholders of the Corporation. RSU and PSU-grant guidelines are established pursuant to the Governance & Compensation Committee's periodic review of the compensation policy, taking into account the competitiveness of total compensation and compensation practices within the Comparative Group, market trends as well as the Corporation's pay-for-performance philosophy. The New RSU & PSU Plan enables the Corporation to award eligible participants: (i) phantom RSUs that vest no later than three years following the grant date; and (ii) phantom PSUs that vest after certain periods of time and subject to the achievement of certain performance criteria as determined by the Board of Directors. Such plan provides for the settlement of RSUs and PSUs through either cash or the issuance of common shares of the Corporation from treasury, for an amount equivalent to the volume weighted average of the trading price of the common shares of the Corporation on the Toronto Stock Exchange for the five trading days immediately preceding the applicable RSU vesting determination date or PSU vesting determination date.

In the event the Corporation proposes to amalgamate, merge, consolidate or enter into any similar transaction with any other company (other than with a wholly-owned subsidiary of the Corporation) or to liquidate, dissolve or wind-up, or in the event an offer to purchase the common shares of the Corporation or any part thereof shall be made to all holders of common shares of the Corporation, the Corporation shall have the right to accelerate the vesting of all or any portion of the RSUs and PSUs granted under the New RSU & PSU Plan which are not then vested, immediately prior to the consummation of such transaction.

RSUs and PSUs issued under the New RSU & PSU Plan may not be transferred or assigned other than by will or the laws of succession.

In the case of a participant's termination by the Corporation for cause or as a result of a voluntary resignation by the participant before the end of a performance cycle, all RSUs and PSUs will be cancelled immediately as of the date on which the participant is advised of his termination or resigns.

In the case of a participant's termination by the Corporation other than for cause, if such participant is deemed to be on long-term disability or if such participant retires before the end of a performance cycle, the number of RSUs which will vest at such event will be pro-rated based on the number of months worked at the end of the performance cycle and all PSUs will be cancelled immediately.

In the case of a participant's death before the end of a performance cycle, the number of RSUs which will vest will be pro-rated based on the number of months worked at the end of the fiscal year preceding the participant's death and all PSUs will be cancelled immediately.

The maximum number of common shares which may be issued under the New RSU & PSU Plan is 5,000,000 common shares (approximately 6% of the currently-outstanding total of common shares) in respect of RSUs or PSUs to be settled through the issuance of common shares but that have been forfeited, cancelled or settled in cash shall be available for RSUs or PSUs to be granted thereafter pursuant to this plan. No RSUs or PSUs to be settled through the issuance of common shares may be granted to any participant unless the number of common shares: (a) issued to "Insiders" within any one-year period; and (b) issuable to "Insiders" at any time, under the plan, or when combined with all of the Corporation's other security-based compensation arrangements, could not exceed 10% of the total number of issued and outstanding common shares, respectively.

Subject to the exceptions set out below, the Board of Directors may amend, suspend or terminate the New RSU & PSU Plan, or any portion thereof, at any time, and may do so without shareholder approval, subject to those provisions of applicable law, if any, that require the approval of shareholders or any governmental or regulatory body. Without limiting the generality of the foregoing, the Board of Directors may make the following types of amendments to the New RSU & PSU Plan without seeking shareholder approval:

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- (i) amendments of a “housekeeping” or ministerial nature including, without limiting the generality of the foregoing, any amendment for the purpose of curing any ambiguity, error or omission in the Plan or to correct or supplement any provision of the New RSU & PSU Plan that is inconsistent with any other provision of the New RSU & PSU Plan;
 - (ii) amendments necessary to comply with the provisions of applicable law (including, without limitation, the rules, regulations and policies of the TSX);
 - (iii) amendments necessary in order for awards to qualify for favourable treatment under applicable taxation laws;
 - (iv) amendments respecting administration of the New RSU & PSU Plan;
 - (v) any amendment to the vesting provisions of the New RSU & PSU Plan or any award of RSUs or PSUs made thereunder (an “Award”), it being understood that in the event of the amendment to the vesting provisions of an Award, the Board of Directors shall not be under any obligation to amend the vesting provisions of any other Award;
 - (vi) any amendment to the early termination provisions of the New RSU & PSU Plan or any Award, whether or not such award is held by an Insider, provided such amendment does not entail an extension beyond the original expiry date;
 - (vii) amendments necessary to suspend or terminate the New RSU & PSU Plan; and
 - (viii) any other amendment, whether fundamental or otherwise, not requiring shareholder approval under applicable law.

Shareholder approval will be required for the following types of amendments:

- (i) amendments to the number of common shares issuable under the New RSU & PSU Plan, including an increase to a maximum percentage or number of common shares;
- (ii) amendments required to be approved by shareholders under applicable law (including, without limitation, the rules, regulations and policies of the TSX); and
- (iii) any amendment to the amending provisions of the New RSU & PSU Plan.

As of December 31, 2018, 2,645,974 RSUs and PSUs remained available for future issuance under the New RSU & PSU Plan, representing 3.1% of the issued and outstanding common shares.

During the fiscal year ended December 31, 2018, a total of 393,897 RSUs and nil PSUs were granted under the New RSU & PSU Plan, representing 0.6% and 0% of the issued and outstanding common shares as at December 31, 2018, respectively, and 0.6% in the aggregate. As of December 31, 2018, there were 1,854,026 outstanding RSUs and 500,000 outstanding PSUs under the New RSU & PSU Plan, representing 2.2% and 0.6% of the issued and outstanding common shares, respectively, and 2.8% in the aggregate.

In accordance with the requirements of section 613(d)(iii) and 613(p) of the TSX Company Manual, the following table sets out, among other things, the burn rate of the awards granted under the Corporation's New RSU & PSU Plan as of the end of the fiscal year ended December 31, 2018 and for the two preceding financial years. The burn rate is calculated by dividing the number of RSUs and PSUs granted under the New RSU & PSU Plan during the applicable fiscal year by the weighted average number of common shares outstanding for the applicable fiscal year.

	Fiscal year ended December 31, 2018	Fiscal year ended December 31, 2017	Fiscal year ended December 31, 2016
Burn rate	0.5%	0.4%	2.1%

DSUs

On May 7, 2014, the Board of Directors of the Corporation adopted the DSU Plan to enhance the Corporation's ability to attract and retain individuals with the right combination of skills and experience to serve on the Corporation's Board or as Corporation's executives.

Each Board director shall have the right to elect twice each calendar year to receive all or part of his or her annual retainers in DSUs and a designated executive may be offered by the Board to convert for a calendar year all or part of his or her bonus amounts in DSUs. DSUs granted to a Board director or designated executive vest immediately upon conversion of his or her annual retainer or bonus amounts respectively into DSUs, unless the Board decides otherwise at its sole discretion.

Each vested DSU is settled in cash upon such participant's Termination of Service, for an amount equivalent to the volume weighted average of the trading price of the common shares of the Corporation on the Toronto Stock Exchange on the twenty (20) trading days immediately preceding the payment date of the DSUs. "**Termination of Service**" means the termination of (i) the mandate and assignment of a director as a member of the Board or (ii) the office or employment of a designated executive with the Corporation, including in the event of a dismissal, a retirement, a long-term disability or the death of a designated executive.

In the case of a participant's termination by the Corporation for cause or as a result of a voluntary resignation by the designated executive, all DSUs will be cancelled immediately as of the date on which the participant is advised of his termination or resigns.

The Governance & Compensation Committee believes that the terms and conditions of the Stock Option Plan combined with those of the SAR Plan, the New RSU & PSU Plan and the DSU Plan adequately meet the objectives of attracting and retaining quality executives while promoting long-term profitability and maximizing shareholder value.

It is the intent of the Corporation that the target total direct compensation, which is the aggregate of salary, target annual bonus and estimated value of LTIP be between the 25th percentile and the 50th percentile of the Comparative Group which is the case for the CEO, the CFO and the VP. However, the target total direct compensation for the EVP-EM and the EVP-EFM is lower than the 25th percentile of the Comparative Group.

Executive Compensation-Related Fees

"Executive Compensation-Related Fees" consist of fees for professional services billed by each consultant or advisor, or any of its affiliates, that are related to determining compensation for any of the Corporation's directors and executive officers. No such fees were paid by the Corporation in the fiscal year ended December 31, 2018 and \$30,000 of such fees were paid to PCI by the Corporation for services performed in the fiscal year ended December 31, 2017.

All Other Fees

"All Other Fees" consist of fees for services that are billed by each consultant or advisor and which are not reported under "Executive Compensation-Related Fees". No such fees were paid by the Corporation in the fiscal years ended December 31, 2018 and December 31, 2017.

Assessment of Risk Associated with the Corporation's Compensation Policies and Practices

The Governance & Compensation Committee has assessed the Corporation's compensation plans and programs for its executive officers to ensure alignment with the Corporation's business plan and to evaluate the potential risks associated with those plans and programs. The Governance & Compensation Committee has concluded that the compensation policies and practices do not create any risks that are reasonably likely to have a material adverse effect on the Corporation.

The Corporation has not adopted a policy restricting its NEOs or directors from purchasing financial instruments that are designed to hedge or offset a decrease in market value of equity securities granted as compensation or held, directly or indirectly, by its NEOs or directors. To the knowledge of the Corporation, none of the NEOs or directors has purchased such financial instruments.

Summary of the Compensation of the NEOs

The following table provides information for the fiscal years ended December 31, 2018, December 31, 2017 and December 31, 2016 regarding compensation paid to, or earned by, the NEOs in Canadian dollars.

Summary Compensation Table

Name and Principal Occupation	Year	Salary (\$) ⁽¹⁾	Share-Based Awards (\$) ⁽²⁾	Option-Based Awards (\$) ⁽³⁾	Non-Equity Incentive Plan Compensation		Total Compensation (\$)
					Annual Incentive Plans (\$) ⁽⁴⁾	All other Compensation (\$) ⁽⁵⁾	
Arjang J. (AJ) Roshan President and CEO	2018	581,940	211,936	182,581	349,164	210,621	1,536,241
	2017	584,730	221,130	194,879	365,456	244,993	1,611,188
	2016	499,950 ⁽⁶⁾	3,087,000 ⁽⁷⁾	—	295,425	209,942	4,092,317
Richard Perron CFO	2018	321,058	78,614	40,950	154,224	16,564	611,411
	2017	315,000	56,000	49,969	170,100	16,300	607,369
	2016	315,000	57,750	495,591 ⁽⁸⁾	157,500	16,300	1,042,141
Nicholas Audet EVP-EM	2018	309,910	72,373	37,700	124,120	18,634	562,737
	2017	290,000	52,500	46,003	145,000	15,800	549,303
	2016	290,000	57,750	495,591 ⁽⁸⁾	145,000	15,800	1,004,141
Paul Tancell EVP-EFM	2018	302,264	72,373	37,700	116,000	18,492	546,830
	2017	251,805 ⁽⁹⁾	87,500 ⁽¹⁰⁾	79,316 ⁽¹⁰⁾	100,401	14,043	533,065
	2016	—	—	—	—	—	—
Pascal Coursol VP	2018	245,481	57,401	29,900	98,440	16,564	447,786
	2017	228,846	38,500	33,313	92,000	14,192	406,851
	2016	200,000	41,250	43,095	64,000	4,000	352,345

- (1) This column discloses the actual salary earned during the fiscal year indicated.
- (2) This amount is equal to the number of RSUs, PSUs and DSUs multiplied by the volume weighted average trading price of the common shares of the Corporation on the Toronto Stock Exchange in the last five days (twenty days in the case of DSUs) immediately prior to the grant. See “Long-Term Incentive Plan — RSUs under the Old RSU Plan, RSUs and PSUs under the New RSU & PSU Plan and DSUs under the DSU Plan” above. It should be noted that the granting of RSUs is usually based on the performance of a NEO during the previous fiscal year than the fiscal year indicated and that the actual value received will be different as it will depend on the value of the Corporation shares at the end of a performance cycle. RSUs granted under the Old RSU Plan and DSUs are to be settled in cash only. RSUs and PSUs granted under the New RSU & PSU Plan are to be settled either in cash or by the issuance of common shares as determined by the Board of Directors on settlement dates.
- (3) This column discloses the total value of stock options (or SARs) at the time of grant. It should be noted that the granting of stock options (or SARs) is usually based on the performance of a NEO during the previous fiscal year than the fiscal year indicated. These figures do not reflect the current value of the stock options (or SARs) or the value, if any, that may be realized if and when the stock options (or SARs) are exercised. The value of the stock option (or SAR) awards was calculated using the Black-Scholes option-pricing model using the same assumptions used for determining the equity-based compensation expense in the Corporation’s financial statements for the fiscal years ended December 31, 2018, December 31, 2017 and December 31, 2016 in accordance with the International Financial Reporting Standards (IFRS). These assumptions are:

	Dec. 2018	Dec. 2017	Dec. 2016
risk-free interest rate	2.03%	0.98%	0.63%
expected life of options	4 years	4 years	4 years
expected volatility	53%	59%	70%
dividend rate	0%	0%	0.0%
exercise price	\$2.71	\$1.75	\$1.65

- (4) See “Annual Incentive (Bonus)” above.
- (5) This amount includes the Corporation’s contribution to the Deferred Profit Sharing Plan or, in the case of Mr. Roshan, to the 401K program (see “Elements of Executive Compensation” above). In the case of Messrs. Perron, Audet and Tancell, this amount includes a car allowance. In the case of Mr. Roshan, this amount includes for 2016: relocation fees to the U.S., travel accommodation and lodging when traveling to the Corporation’s head office in Montreal; for 2017 and 2018: travel accommodation and lodging when traveling to the Corporation’s head office in Montreal, any amounts reimbursed for the payment of taxes and consulting fees for financial and tax advices.
- (6) Mr. Roshan was appointed President and CEO of the Corporation on February 15, 2016 and his annual salary was US\$450,000.
- (7) In order to attract, motivate and retain Mr. Roshan who was appointed as the Corporation’s new President and CEO on February 15, 2016 and drive the Corporation’s long-term success, the Corporation has granted Mr. Roshan with a number of one-time RSUs, PSUs and DSUs deemed reasonable in the circumstances by the Board of Directors of the Corporation. A significant portion of the share-based awards granted to Mr. Roshan were granted

to compensate for tangible opportunity losses incurred by Mr. Roshan in the process of change-over to join the Corporation, reconciled to share price as of late 2015. The stated value of these awards is as of February 24, 2016. For the purpose of compliance with standard reporting, all potential share-based awards for Mr. Roshan have been reported, even though a number of these awards will only vest upon delivery of specific performance criteria which have been designed by the Board of Directors to be aligned with the interests of the shareholders of the Corporation. Such RSUs, DSUs and PSUs all vest within a certain period of time, which is considered to be optimal by the Corporation to align the interests of Mr. Roshan with those of the shareholders of the Corporation. For a description of the DSU Plan and of the New RSU & PSU Plan, see "Compensation Process - Long-Term Incentive Plans".

- (8) In order to motivate and retain Mr. Perron and Mr. Audet during the transitional period while the Corporation was searching for a new CEO, and drive the Corporation's long-term success, the Corporation has issued in 2016 to each of Mr. Perron and Mr. Audet a one-time special grant of 500,000 stock options deemed reasonable in the circumstances by the Board of Directors of the Corporation.
- (9) Mr. Tancell was appointed Executive Vice President, Eco-Friendly Materials of the Corporation on February 20, 2017 and his annual salary was \$290,000.
- (10) Mr. Tancell received 100,000 SARs and 50,000 RSUs as one-time welcome grants.

Incentive Plan Awards

The following table sets out the details of all stock options (or SARs), RSUs, PSUs and DSUs held by the NEOs as at December 31, 2018.

Name	Option-Based Awards				Share-Based Awards ⁽²⁾		
	Number of securities underlying unexercised options	Option exercise price (\$)	Option expiration date	Value of unexercised in-the-money options (\$) ⁽¹⁾	Number of shares or units of shares that have not vested	Market or payout value of share-based awards that have not vested (\$)	Market or payout value of vested share-based awards not paid out or distributed (\$)
Arjang J. (AJ) Roshan ⁽³⁾	245,700	1.75	February 24, 2023	331,695	2,104,565	6,524,152	—
	156,786	2.71	February 23, 2024	61,147			
Richard Perron ⁽⁴⁾	100,000	4.29	June 5, 2020	—	96,009	297,628	—
	42,000	2.40	March 4, 2021	29,400			
	162,500	1.65	March 2, 2022	235,625			
	63,000	1.75	February 24, 2023	85,050			
	35,165	2.71	February 23, 2024	13,714			
Nicholas Audet ⁽⁴⁾	40,000	3.84	March 14, 2020	—	91,706	284,289	—
	40,000	2.40	March 4, 2021	28,000			
	200,000	1.65	March 2, 2022	290,000			
	58,000	1.75	February 24, 2023	78,300			
	32,374	2.71	February 23, 2024	12,626			
Paul Tancell ⁽⁵⁾	100,000	1.75	February 24, 2023	135,000	76,706	237,789	—
	32,374	2.71	February 23, 2024	12,626			
Pascal Coursol	50,000	3.84	March 14, 2020	—	68,181	211,361	—
	25,000	2.40	March 4, 2021	17,500			
	50,000	1.65	March 2, 2022	72,500			
	42,000	1.75	February 24, 2023	56,700			
	25,676	2.71	February 23, 2024	10,014			

- (1) This column sets out the aggregate value of in-the-money unexercised options (or SARs) as at December 31, 2018, calculated based on the difference between the closing price of the common shares on the Toronto Stock Exchange as at December 31, 2018 (\$3.10), the last trading day in the 2018 fiscal year, and the exercise price of the stock options (or SARs).
- (2) This column sets out the market value of the RSUs, PSUs and DSUs as at December 31, 2018, calculated based on the closing price of the common shares on the Toronto Stock Exchange as at December 31, 2018 (\$3.10), the last trading day in the 2018 fiscal year. Vesting of these RSUs, PSUs and DSUs is subject to the officer continuing to be employed at the end of a performance cycle.
- (3) Mr. Roshan was appointed President and CEO of the Corporation on February 15, 2016. Most of Mr. Roshan's total number of share-based awards units that have not vested are the one-time share-based awards linked to tangible opportunity losses incurred by Mr. Roshan in the process of change-over to join the Corporation, reconciled to share price as of late 2015, and performance units linked to delivery of specific performance criteria which have been designed by the Board of Directors to be aligned with the interests of the shareholders.
- (4) In order to motivate and retain Mr. Perron and Mr. Audet during the transitional period while the Corporation was searching for a new CEO, and drive the Corporation's long-term success, the Corporation has issued in 2016 to each of Mr. Perron and Mr. Audet a one-time special grant of 500,000 stock options deemed reasonable in the circumstances by the board of directors of the Corporation.
- (5) Mr. Tancell was appointed Executive Vice President, Eco-Friendly Materials of the Corporation on February 20, 2017 and he received 100,000 SARs and 50,000 RSUs as one-time welcome grants.

Incentive Plan Awards - Value Vested or Earned during the Year

The following table sets out, for each NEO, the value of option-based awards and share-based awards which vested during the fiscal year ended December 31, 2018 and the value of non-equity incentive plan compensation earned during the fiscal year ended December 31, 2018.

Name	Option-based awards Value vested during the year (\$) ⁽¹⁾	Share-based awards – Value vested during the year (\$) ⁽²⁾	Non-equity incentive plan compensation – Value earned during the year (\$) ⁽³⁾
Arjang J. (AJ) Roshan	71,253	—	349,164
Richard Perron	193,953	82,560	154,224
Nicholas Audet	192,283	82,560	124,120
Paul Tancell ⁽⁴⁾	29,000	—	116,000
Pascal Coursol	29,805	51,600	98,440

- (1) This amount corresponds to the difference between the closing price of the common shares of the Corporation on the Toronto Stock Exchange on the vesting date or the last day before the vesting date and the exercise price of the stock options (or SARs). The actual gain, if any, will depend on the value of the common shares on the dates on which the options (or SARs) are exercised. See “Long-Term Incentive Plan (Stock Options or SARs)” above.
- (2) The value of the RSUs, PSUs and DSUs which vested during the year ended December 31, 2018 is calculated based on the closing price of the common shares on the Toronto Stock Exchange as at December 31, 2018 (\$3.10), the last trading day in the 2018 fiscal year, and assumes the officer is still employed at the end of a performance cycle.
- (3) Corresponds to the same amount as disclosed in column “Non-Equity Incentive Plan Compensation — Annual Incentive Plan” of the “Summary Compensation Table” above.
- (4) Mr. Tancell was appointed Executive Vice President, Eco-Friendly Materials of the Corporation on February 20, 2017.

Termination and Change of Control Benefits

The employment agreements entered into by the Corporation with the NEOs contain customary confidentiality, two-year non-competition and non-solicitation provisions. Provided a NEO’s employment is terminated by the Corporation without cause, such NEO would be entitled to severance payments as detailed in the table below.

The table below sets out the dates, terms and conditions applicable to each NEO as well as the severance payment that would have been payable had the Corporation terminated their employment without cause on December 31, 2018.

Name	Original employment date	Severance entitlement (number of months’ base salary)		Severance payable as of December 31, 2018	
		Minimum	Maximum	Number of months’ salary	Amount
Arjang J. (AJ) Roshan	February 15, 2016	24	24	24	\$1,227,780 ⁽¹⁾
Richard Perron	March 17, 2014	12	12	12	\$321,300 ⁽²⁾
Nicholas Audet	February 24, 2003	12	12	12	\$310,300 ⁽³⁾
Paul Tancell	February 20, 2017	6	12	9	\$217,500 ⁽⁴⁾
Pascal Coursol	October 7, 2013	6	12	12	\$246,100 ⁽⁵⁾

- (1) In addition to the amount disclosed in the above table, Mr. Roshan would have also been entitled to (i) \$613,890, being an amount equal to twice Mr. Roshan’s annual target bonus, (ii) \$3,734,152, being the value of all RSUs granted calculated based on the closing price of the common shares on the Toronto Stock Exchange as at December 31, 2018 (\$3.10), the last trading day in the 2018 fiscal year and (iii) \$2,531,792, being the value of all PSUs and DSUs vested as well as those not yet vested, pro-rated to reflect the period of time into the performance cycle as at December 31, 2018 calculated based on the closing price of the common shares on the Toronto Stock Exchange as at December 31, 2018 (\$3.10), the last trading day in the 2018 fiscal year.
- (2) In addition to the amount disclosed in the above table, Mr. Perron would have also been entitled to \$189,396, being an amount equal to the value of all RSUs vested as well as those not yet vested, pro-rated to reflect the period of time into the performance cycle as at December 31, 2018 calculated based on the closing price of the common shares on the Toronto Stock Exchange as at December 31, 2018 (\$3.10), the last trading day in the 2018 fiscal year.
- (3) In addition to the amount disclosed in the above table, Mr. Audet would have also been entitled to \$183,536, being an amount equal to the value of all RSUs vested as well as those not yet vested, pro-rated to reflect the period of time into the performance cycle as at December 31, 2018 calculated based on the closing price of the common shares on the Toronto Stock Exchange as at December 31, 2018 (\$3.10), the last trading day in the 2018 fiscal year.
- (4) In addition to the amount disclosed in the above table, Mr. Tancell would have also been entitled to \$119,257, being an amount equal to the value of all RSUs vested as well as those not yet vested, pro-rated to reflect the period of time into the performance cycle as at December 31, 2018 calculated based on the closing price of the common shares on the Toronto Stock Exchange as at December 31, 2018 (\$3.10), the last trading day in the 2018 fiscal year.

- (5) In addition to the amount disclosed in the above table, Mr. Coursol would have also been entitled to \$134,049, being an amount equal to the value of all RSUs vested as well as those not yet vested, pro-rated to reflect the period of time into the performance cycle as at December 31, 2018 calculated based on the closing price of the common shares on the Toronto Stock Exchange as at December 31, 2018 (\$3.10), the last trading day in the 2018 fiscal year.

Had a NEO's employment been terminated without cause on December 31, 2018, any options (or SARs) previously granted to such NEO and outstanding on that date and not exercised within a thirty-day period following such termination would have been cancelled.

The Corporation entered into change of control agreements (the "**Change of Control Agreements**") with Messrs. Roshan, Perron, Audet, Tancell and Coursol. The purpose of these agreements is to reinforce and encourage each officer's continued attention and dedication to his or her assigned duties without distraction in the face of solicitations by other employers and the potentially disruptive circumstances arising from the possibility of a change of control of the Corporation. Under the Change of Control Agreements, an officer must be terminated or must resign for good reason within two years of a change of control event in order to receive benefits. The Corporation believes this "double-trigger" practice is in the best interest of shareholders as it does not pay any benefits to an officer unless he or she is negatively impacted by a change of control event that is in the best interest of the Corporation's shareholders.

The following benefits would be payable to each of Messrs. Perron, Audet, Tancell and Coursol following a change of control in circumstances described above:

- (a) an amount equal to twice the officer's base salary (once with respect to Mr. Coursol), at the rate in effect at the time of termination of employment; plus
- (b) an amount equal to twice the officer's average annual bonus (once with respect to Mr. Coursol), calculated on the basis of the average of the annual bonuses received by the officer in the last three (3) years preceding the date of termination of the officer's employment; plus
- (c) a payment equal to the value, as of the date of termination of the officer's employment, of the costs of providing two (2) years coverage (one (1) year with respect to Messrs. Tancell and Coursol) under the life insurance policy and under all other health and benefits programs and plans in force immediately prior to the date of termination, excluding any payment for the termination of the short-term and long-term disability plans; plus
- (d) a payment of all amounts and sums to be paid by the Corporation under any retirement plan applicable to the officer for a period of twenty-four (24) months following termination (twelve (12) months with respect to Messrs. Tancell and Coursol); plus
- (e) a payment equal to all monetary compensation available to the officer under any LTIP or similar plans considering that all stock options (or SARs) and restricted share units previously granted to the officer under the LTIP shall become fully vested and payable on the date the officer's employment is terminated with the exception that this benefit does not apply to Mr. Tancell.

The following benefits would be payable to Mr. Roshan following a change of control in circumstances described above:

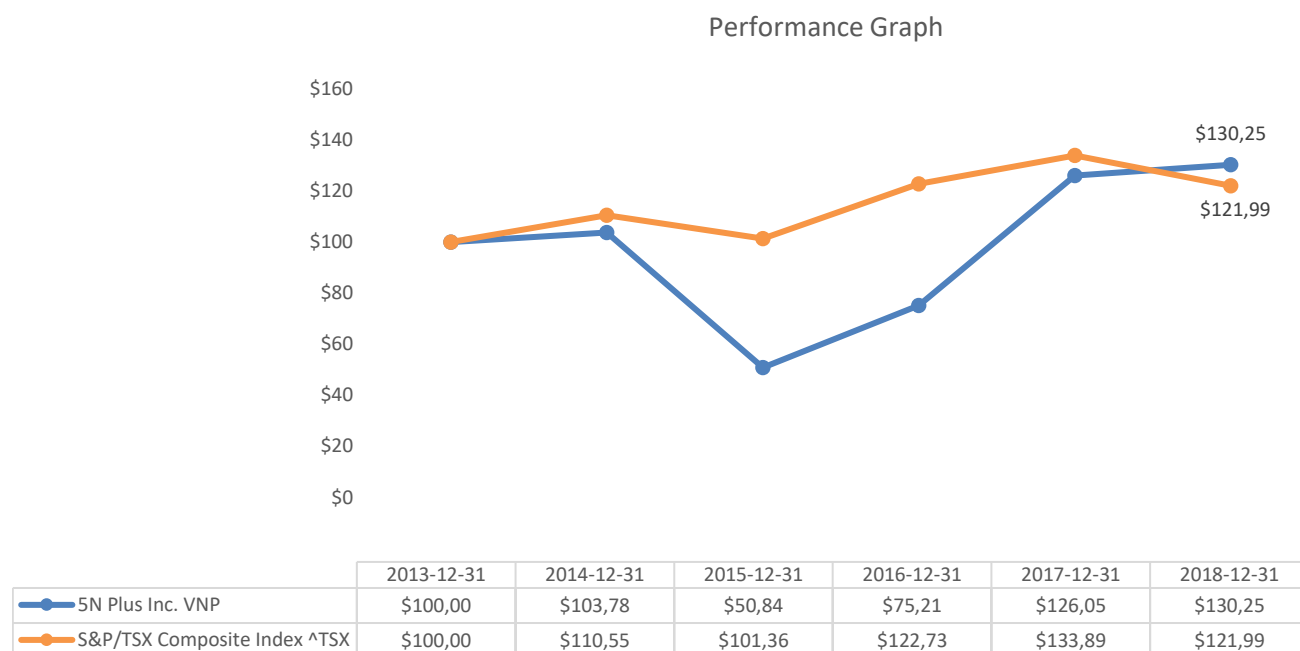
- (a) an amount equal to twice Mr. Roshan's base salary, at the rate in effect at the time of termination of employment; plus
- (b) an amount equal to twice Mr. Roshan's annual target bonus in effect at the time of termination of employment; plus
- (c) an amount equal to the value of all RSUs granted; plus
- (d) an amount equal to the value of all PSUs and DSUs vested as well as those not yet vested, pro-rated to reflect the period of time into the performance cycle at the termination date.

Based on the above terms and conditions, the table below sets out the severance payment applicable to all NEOs had the NEOs employment been terminated as at December 31, 2018 following a change of control event.

Name	Severance Entitlement following a Change of Control			Total
	Severance Payment	Value of Early Vested Options and Share-Based Awards	Other Benefits	
Arjang J. (AJ) Roshan	\$1,841,670	\$6,658,785	\$0	\$8,500,455
Richard Perron	\$963,816	\$553,185	\$20,820	\$1,537,821
Nicholas Audet	\$896,680	\$592,462	\$26,586	\$1,515,728
Paul Tancell	\$796,401	\$266,883	\$25,999	\$1,089,283
Pascal Coursol	\$330,913	\$290,762	\$8,906	\$630,582

Performance Graph

The following graph compares the total return of a \$100 investment in the common shares of the Corporation made on December 31, 2013, with the cumulative return of the S&P/TSX Composite Index for the period from December 31, 2013 to December 31, 2018, the last trading day in the 2018 fiscal year.



During this period, NEOs' salaries have been adjusted annually to reflect their respective scope of responsibilities, experience and contribution to the Corporation's success. Annual variable compensation reflects the Corporation's annual operational financial performance during the period as well as each individual's contribution to the Corporation's strategy and growth. The ultimate value of long-term incentives in the form of stock options, SARs, RSUs, PSUs and DSUs granted during the period is directly linked to the Corporation's share price increase or decrease during and beyond this period.

Compensation of Directors

In establishing and reviewing the Corporation’s director compensation program, the Board of Directors has three goals:

- recruit and retain qualified individuals to serve as members of the Board and contribute to the Corporation’s overall success;
- align the interests of the Board and shareholders by requiring directors to own at least a minimum number of shares and/or DSUs, and permitting directors to receive up to 100% of their annual retainer in DSUs; and
- pay competitively by positioning director compensation near or at the median of the Comparative Group (as defined above).

As of May 2, 2018, each independent director is entitled to the following fees and share-based awards:

Chairman	\$75,000 annual retainer and \$75,000 in DSUs annually	Annual retainers are payable in cash or DSUs as elected by the director
Board Member	\$35,000 annual retainer and \$65,000 in DSUs annually	
Chair of the Audit and Risk Management Committee	\$25,000 annual retainer	
Chair of the Governance and Compensation Committee	\$18,000 annual retainer	
Audit and Risk Management Committee Member	\$7,000 annual retainer	
Governance and Compensation Committee Member	\$6,000 annual retainer	

Effective as at May 2, 2018, meeting attendance fees are no longer paid to directors of the Corporation. The independent directors were not granted any stock options in 2018 and have not been granted any stock options since the Board’s decision in 2014 to discontinue stock option grants to independent directors.

The aggregate amount of such fees and share-based awards incurred by the Corporation for the fiscal year ended December 31, 2018 was \$719,000.

The following table provides information for the financial year ended December 31, 2018 regarding compensation paid to or earned by the Corporation's current and former directors (other than the directors who are a NEO).

Name and principal position	Year	Fees earned ⁽¹⁾ (\$)	Share-based awards ⁽²⁾ (\$)	Option-based awards ⁽³⁾ (\$)	Non-equity incentive plan compensation ⁽⁴⁾ (\$)	Pension value ⁽⁵⁾ (\$)	All other compensation ⁽⁶⁾ (\$)	Total compensation (\$)
Jean-Marie Bourassa Chairman of the Audit & Risk Management Committee	2018	—	125,000	—	—	—	—	125,000
Luc Bertrand Chairman of the Board	2018	—	150,000	—	—	—	—	150,000
Nathalie Le Prohon Chair of the Governance & Compensation Committee	2018	—	118,000	—	—	—	—	118,000
Jennie S. Hwang Member of the Audit & Risk Management Committee and member of the Governance & Compensation Committee	2018	—	113,000	—	—	—	—	113,000
James T. Fahey Member of the Audit & Risk Management Committee and member of the Governance & Compensation Committee	2018	—	113,000	—	—	—	—	113,000
Donald F. Osborne ⁽⁷⁾	2018	—	100,000	—	—	—	—	100,000

- (1) This amount represents the aggregate of the annual retainer and meeting attendance fees paid in cash to the director as described above. All of the independent directors have elected to receive in DSUs all of their 2018 annual retainer. Meeting attendance fees are no longer paid to directors of the Corporation.
- (2) The Corporation has a share-based compensation plan in the form of the DSU Plan. This amount is equal to the number of DSUs multiplied by the volume weighted average trading price of the common shares of the Corporation on the Toronto Stock Exchange in the last twenty days immediately prior to their grants.
- (3) This column sets out the total value of stock options granted to the directors during the last fiscal year.
- (4) The Corporation does not have any non-equity long-term incentive plan for directors.
- (5) The Corporation does not provide directors with any retirement benefits.
- (6) The Corporation does not provide directors with any other form of compensation.
- (7) Mr. Osborne was elected to the Corporation's Board of Directors at the Corporation's annual and general meeting of its shareholders held on May 2, 2018.

Outstanding Share-Based Awards and Option-Based Awards

The following table sets out for each Director all awards outstanding as at December 31, 2018.

Name	Option-based awards ⁽¹⁾				Share-based awards ⁽³⁾		
	Number of securities underlying unexercised options	Option exercise price (\$)	Option expiration date	Value of unexercised in-the-money options ⁽²⁾ (\$)	Number of shares or units of shares that have not vested	Market or payout value of share-based awards that have not vested (\$)	Market or payout value of vested share-based awards not paid out or distributed ⁽³⁾ (\$)
Jean-Marie Bourassa Chairman of the Audit & Risk Management Committee	62,500	2.22	March 15, 2019	55,000	—	—	870,663
Luc Bertrand Chairman of the Board	—	—	—	—	—	—	545,755
Arjang J. (AJ) Roshan ⁽⁴⁾ President and CEO	—	—	—	—	—	—	—
Nathalie Le Prohon Chair of the Governance & Compensation Committee	—	—	—	—	—	—	618,180
Jennie S. Hwang Member of the Audit & Risk Management Committee and member of the Governance & Compensation Committee	—	—	—	—	—	—	648,839
James T. Fahey Member of the Audit & Risk Management Committee and member of the Governance & Compensation Committee	—	—	—	—	—	—	648,839
Donald F. Osborne ⁽⁵⁾	—	—	—	—	—	—	91,338

(1) Options become 100% vested on the first anniversary of their grant date.

(2) This column sets out the aggregate value of in-the-money unexercised options as at December 31, 2018, calculated based on the difference between the closing price of the common shares on the Toronto Stock Exchange as at December 31, 2018 (\$3.10), the last trading day in the 2018 fiscal year, and the exercise price of the stock options.

(3) This column sets out the market value of the DSUs as at December 31, 2018, calculated based on the closing price of the common shares on the Toronto Stock Exchange as at December 31, 2018 (\$3.10), the last trading day in the 2018 fiscal year.

(4) The information on Mr. Roshan's share-based awards is fully described in the "Incentive Plan Awards" table.

(5) Mr. Osborne was elected to the Corporation's Board of Directors at the Corporation's annual and general meeting of its shareholders held on May 2, 2018.

Incentive Plan Awards - Value Vested or Earned during the Year

The following table sets out, for each director, the value of option-based awards and share-based awards which vested during the fiscal year ended December 31, 2018 and the value of non-equity incentive plan compensation earned during the fiscal year ended December 31, 2018.

Name	Option-based awards – Value vested during the year (\$) ⁽¹⁾	Share-based awards – Value vested during the year (\$) ⁽²⁾	Non-equity incentive plan compensation – Value earned during the year (\$) ⁽³⁾
Jean-Marie Bourassa	—	125,000	—
Luc Bertrand	—	150,000	—
Arjang J. (AJ) Roshan ⁽⁴⁾	—	—	—
Nathalie Le Prohon	—	118,000	—
Jennie S. Hwang	—	113,000	—
James T. Fahey	—	113,000	—
Donald F. Osborne ⁽⁵⁾	—	100,000	—

- (1) The options vest at a rate of 100% on the first anniversary of their date of grant. This amount corresponds to the difference between the closing price of the common shares of the Corporation on the Toronto Stock Exchange on the vesting date or the last day before the vesting date. The actual gain, if any, will depend on the value of the common shares on the dates on which the options are exercised. See “Long-Term Incentive Plan (Stock Options)” above.
- (2) The Corporation has a share-based compensation plan in the form of the DSU Plan. This amount is equal to the number of DSUs multiplied by the volume weighted average trading price of the common shares of the Corporation on the Toronto Stock Exchange in the last twenty days immediately prior to the grant.
- (3) The Corporation does not have any non-equity incentive plan for directors.
- (4) The information on Mr. Roshan’s share-based awards is fully described in the “Incentive Plan Awards” table.
- (5) Mr. Osborne was elected to the Corporation’s Board of Directors at the Corporation’s annual and general meeting of its shareholders held on May 2, 2018.

Securities Authorized for Issuance under Equity Compensation Plans

The following table sets out certain details as at December 31, 2018 with respect to plans of the Corporation pursuant to which equity securities of the Corporation are authorized for issuance.

Equity Compensation Plan Information

Plan category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted-average exercise price of outstanding options, warrants and rights (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
Equity compensation plan approved by securityholders	3,844,567	\$2.03	6,155,433

Stock Option Plan

On April 11, 2011, the Corporation adopted the Stock Option Plan replacing the one in place since October 2007. The only change was to the maximum number of options that can be granted, which cannot exceed 5,000,000. In 2012, the Board of Directors adopted minor amendments to the Stock Option Plan. The aggregate number of shares which could be issued upon the exercise of options granted under the 2007 plan could not exceed 10% of the issued shares of the Corporation at the time of granting the options. At an annual general and special meeting of shareholders of the Corporation held on October 6, 2011, shareholders approved the 2011 plan which is referred to herein as the Stock Option Plan. The Stock Option Plan is administered by the Board of Directors of the Corporation. The following is a description of certain features of the Stock Option Plan, as required by the Toronto Stock Exchange:

- (a) the maximum number of common shares that can be issued upon the exercise of options granted under the Stock Option Plan is 5,000,000, currently representing 5.91% of the issued and outstanding shares of the Corporation on April 2, 2019;
- (b) no option may be granted under the Stock Option Plan to any optionee unless the number of the common shares: (i) issued to “insiders” within any one-year period; and (ii) issuable to “insiders” at any time, under the Stock Option Plan, or when combined with all of the Corporation’s other security-based compensation arrangements, could not exceed 10% of the total number of issued and outstanding common shares of the Corporation. For the purpose of the Stock Option Plan, the term “insiders” means “reporting insiders” as defined in National Instrument – 55-104 Insider Reporting Requirements and Exemptions;
- (c) the exercise price of options granted under the Stock Option Plan is set at the time of the grant of the options, but cannot be less than the volume weighted average trading price of the common shares of the Corporation on the Toronto Stock Exchange for the five trading days immediately preceding the day on which an option is granted;
- (d) the maximum period during which an option may be exercised is ten years from the date on which it is granted;

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- (e) at the time of granting an option, the Board of Directors, at its discretion, may set a “vesting schedule”, that is, one or more dates from which an option may be exercised in whole or in part;
 - (f) options granted under the Stock Option Plan are not transferable other than by will or by the laws of succession of the domicile of the deceased optionee;
 - (g) if an optionee’s employment or service provider relationship with the Corporation is terminated for cause, options not then exercised terminate immediately;
 - (h) if an optionee dies, retires or becomes, in the determination of the Board of Directors, permanently disabled, options may be exercised for that number of common shares which the optionee was entitled to acquire at the time of death, retirement or permanent disability, as the case may be, for a period of one year after the date of death, retirement or permanent disability;
 - (i) upon an optionee’s employment, office, directorship or service provider relationship with the Corporation terminating or ending other than by reason of death, retirement, permanent disability or termination for cause, options may be exercised for that number of common shares which the optionee was entitled to acquire at the time of such termination, for a period of 30 days after such date;
 - (j) the Stock Option Plan does not provide for financial assistance from the Corporation to option holders;
 - (k) if the Corporation is required under the *Income Tax Act* (Canada) or any other applicable law to remit to any governmental authority an amount on account of tax on the value of any taxable benefit associated with the exercise of an option by an optionee, then the optionee shall, concurrently with the exercise of the option:
 - (i) pay to the Corporation, in addition to the exercise price for the options, sufficient cash as is determined by the Corporation, in its sole discretion, to be the amount necessary to fund the required tax remittance;
 - (ii) authorize the Corporation, on behalf of the optionee, to sell in the market, on such terms and at such time or times as the Corporation determines, in its sole discretion, such portion of the common shares being issued upon exercise of the option as is required to realize cash proceeds in an amount necessary to fund the required tax remittance; or
 - (iii) make other arrangements acceptable to the Corporation, in its sole discretion, to fund the required tax remittance;
 - (l) in the event that the Corporation proposes to amalgamate or merge with another company (other than a wholly-owned subsidiary of the Corporation), or to liquidate, dissolve or wind-up, or in the event that an offer to purchase common shares is made to all shareholders of the Corporation, the Corporation has the right, upon written notice, to permit the exercise of all options outstanding under the Stock Option Plan within a 20 day period following the date of such notice and to determine that upon the expiry of such 20 day period, all options terminate and cease to have effect;
 - (m) approval by the shareholders of the Corporation is required for the following amendments to the Stock Option Plan: (i) amendments to the number of shares issuable under the Stock Option Plan, including an increase to a maximum percentage or number of shares; (ii) any amendment to the Stock Option Plan that increased the length of the blackout extension period; (iii) any amendment which reduces the exercise price or purchase price of an option; (iv) any amendment extending the term of an option held by an “insider” beyond its original expiry date except as otherwise permitted by the Stock Option Plan; and (v) amendments required to be approved by shareholders under applicable law (including, without limitation, the rules, regulations and policies of the Toronto Stock Exchange); and

- (n) the Board of Directors of the Corporation may make the following types of amendments to the Stock Option Plan without seeking approval from the shareholders of the Corporation: (i) amendments of a “housekeeping” or ministerial nature, including any amendment for the purpose of curing any ambiguity, error or omission in the Stock Option Plan or to correct or supplement any provision of the Stock Option Plan that is inconsistent with any other provision of the Stock Option Plan; (ii) amendments necessary to comply with the provisions of applicable law (including, without limitation, the rules, regulations and policies of the Toronto Stock Exchange); (iii) amendments necessary in order for options to qualify for favourable treatment under applicable taxation laws; (iv) amendments respecting administration of the Stock Option Plan; (v) any amendment to the vesting provisions of the Stock Option Plan or any option; (vi) any amendment to the early termination provisions of the Stock Option Plan or any option, whether or not such option is held by an “insider” of the Corporation, provided such amendment does not entail an extension beyond the original expiry date; (vii) the addition of any form of financial assistance by the Corporation for the acquisition by all or certain categories of eligible participants of shares under the Stock Option Plan, and the subsequent amendment of any such provisions; (viii) the addition or modification of a cashless exercise feature, payable in cash or shares of the Corporation; (ix) amendments necessary to suspend or terminate the Stock Option Plan; and (x) any other amendment, whether fundamental or otherwise, not requiring shareholder approval under applicable law.

As of December 31, 2018, 3,509,459 options remained available for future issuance under the Stock Option Plan, representing 4.1% of the issued and outstanding common shares.

During the fiscal year ended December 31, 2018, a total of 143,335 options were granted under the Stock Option Plan, representing 0.2% of the issued and outstanding common shares as at December 31, 2018. As of December 31, 2018, there were 1,490,541 issued and outstanding options under the Stock Option Plan, representing 1.8% of the issued and outstanding common shares.

In accordance with the requirements of section 613(d)(iii) and 613(p) of the TSX Company Manual, the following table sets out, among other things, the burn rate of the options granted under the Corporation's Stock Option Plan as of the end of the fiscal year ended December 31, 2018 and for the two preceding financial years. The burn rate is calculated by dividing the number of options granted under the Stock Option Plan during the applicable fiscal year by the weighted average number of common shares outstanding for the applicable fiscal year.

	Fiscal year ended December 31, 2018	Fiscal year ended December 31, 2017	Fiscal year ended December 31, 2016
Burn rate	0.2%	0.3%	1.7%

Indebtedness of Directors and Executive Officers

No person who is, or who was at any time during the fiscal year ended December 31, 2018, a director, executive officer or senior officer of the Corporation or a subsidiary thereof, and no person who is a nominee for election as a director of the Corporation, and no associate of such persons, is, or was at any time since the beginning of the fiscal year ended December 31, 2018, indebted to the Corporation or a subsidiary of the Corporation, nor has any such person been indebted at any time since the beginning of the fiscal year ended December 31, 2018 to any other entity where such indebtedness is the subject of a guarantee, support agreement, letter of credit or other similar arrangement or understanding provided by the Corporation or a subsidiary of the Corporation.

Interest of Informed Persons in Material Transactions

For the purposes of this Management Proxy Circular, “informed person” means: (i) a director or executive officer of the Corporation; (ii) a director or executive officer of a person or corporation that is itself an informed person or subsidiary of the Corporation; (iii) any person or corporation who beneficially owns, directly or indirectly, voting securities of the Corporation or who exercises control or direction over voting securities of the Corporation or a combination of both, carrying more than 10% of the voting rights attached to all outstanding voting securities of the Corporation, other than voting securities held by the person or corporation as underwriter in the course of a distribution; and (iv) the Corporation if it has purchased, redeemed or otherwise acquired any of its own securities, for so long as it holds any of its securities.

To the best of the Corporation's knowledge, no informed person of the Corporation, and no associate or affiliate of the foregoing persons, at any time since the beginning of the Corporation's last completed financial year, has or had any material interest, direct or indirect, by way of beneficial ownership of securities or otherwise, in any transaction since the beginning of the Corporation's last completed financial year that has materially affected the Corporation, or in any proposed transaction that could materially affect the Corporation, or in any matter to be acted upon at this Meeting.

Audit & Risk Management Committee Information

Reference is made to the section entitled "Audit & Risk Management Committee" of the Corporation's Annual Information Form for the fiscal year ended December 31, 2018 for required disclosure relating to the Audit & Risk Management Committee. The Annual Information Form is available on SEDAR at www.sedar.com and can be obtained by contacting the Secretary of the Corporation at 4385 Garand, Montreal, Québec H4R 2B4, telephone (514) 856-0644.

Corporate Governance

National Policy 58-201 Corporate Governance Guidelines and National Instrument 58-101 Disclosure of Corporate Governance Practices set out a series of guidelines for effective corporate governance. The guidelines address matters such as the composition and independence of corporate boards, the functions to be performed by boards and their committees, and the effectiveness and education of board members. Each reporting issuer, such as the Corporation, must disclose on an annual basis and in prescribed form, the corporate governance practices that it has adopted. The following is the Corporation's required annual disclosure of its corporate governance practices.

National Instrument Requirements

1. Board of Directors

(a) *Disclose the identity of directors who are independent.*

The Board of Directors considers that Jean-Marie Bourassa, Luc Bertrand, Jennie S. Hwang, Nathalie Le Prohon, James T. Fahey and Donald F. Osborne who are currently directors are independent within the meaning of Multilateral Instrument 52-110 *Audit Committees*.

(b) *Disclose the identity of directors who are not independent, and describe the basis for that determination.*

The Board of Directors considers that Arjang J. (AJ) Roshan is not independent within the meaning of Multilateral Instrument 52-110 *Audit Committees*, in that he is a senior officer of the Corporation.

(c) *Disclose whether or not a majority of directors are independent. If a majority of directors is not independent, describe what the board of directors does to facilitate its exercise of independent judgment in carrying out its responsibilities.*

The Board of Directors considers that of the seven current and proposed directors, six are independent within the meaning of Multilateral Instrument 52-110 *Audit Committees*. Accordingly, a majority of the Board of Directors is independent.

In addition, all three current members of the Audit & Risk Management Committee of the Board of Directors are independent directors. The current members of the Audit & Risk Management Committee are Jean-Marie Bourassa, Jennie S. Hwang and James T. Fahey.

At each meeting of the Board of Directors, the independent directors meet without the non-independent directors, if any, or members of management of the Corporation present.

- (d) *If a director is presently a director of any other issuer that is a reporting issuer (or the equivalent) in a jurisdiction or a foreign jurisdiction, identify both the director and the other issuer.*

The following directors or nominees are currently directors of other issuers that are reporting issuers (or the equivalent) in a jurisdiction of Canada or a foreign jurisdiction:

Name of Director	Issuer
Jean-Marie Bourassa	Savaria Corporation
Luc Bertrand	Boston Options Exchange Montreal Canadiens/CH Group Inc. (Chair) TMX Group
Jennie S. Hwang	Ferro Corporation Case Western Reserve University U.S. National Materials and Manufacturing Board Assessment Panels on Army Research Laboratory of the U.S. Department of Defense (Chair)
Nathalie Le Prohon	BlackRock Metals Casavant Frères
James T. Fahey	None
Donald F. Osborne	Urthecast Corporation

- (e) *Disclose whether or not the independent directors hold regularly scheduled meetings at which non-independent directors and members of management are not in attendance. If the independent directors hold such meetings, disclose the number of meetings held since the beginning of the issuer's most recently completed financial year. If the independent directors do not hold such meetings, describe what the board does to facilitate open and candid discussion among its independent directors.*

At each meeting of the Board of Directors, the independent directors meet without the non-independent directors, if any, or members of management of the Corporation present. During the fiscal year ended December 31, 2018, the independent directors met without the non-independent director and members of management five times.

- (f) *Disclose whether or not the chair of the board is an independent director. If the board has a chair or lead director who is an independent director, disclose the identity of the independent chair or lead director, and describe his or her role and responsibilities. If the board has neither a chair that is independent nor a lead director that is independent, describe what the board does to provide leadership for its independent directors.*

Luc Bertrand, the Chairman of the Board of Directors, is an independent director. The responsibilities of the Chairman include chairing all meetings of the Board of Directors.

- (g) *Disclose the attendance record of each director for all board meetings held since the beginning of the issuer's most recently completed financial year.*

During the period from January 1, 2018 to December 31, 2018, the Board of Directors held 5 meetings, the Audit & Risk Management Committee held 4 meetings and the Governance & Compensation Committee held 2 meetings. Overall directors attended 96.08% of the meetings held by the Board of Directors and its committees. The following table presents a detailed record of the number of board meetings and committee meetings attended by each director.

Director	Board of Directors (5 meetings)		Audit & Risk Management Committee (4 meetings)		Governance & Compensation Committee (2 meetings)		Total Attendance %
	Number	%	Number	%	Number	%	
Arjang J. (AJ) Roshan	5	100%	—	—	—	—	100%
Jean-Marie Bourassa	5	100%	4	100%	—	—	100%
Luc Bertrand	5	100%	—	—	—	—	100%
Jennie S. Hwang	5	100%	4	100%	2	100%	100%
Nathalie Le Prohon	4	80%	—	—	1	50%	71.43%
James T. Fahey	5	100%	4	100%	2	100%	100%
Donald F. Osborne ⁽¹⁾	3	100%	—	—	—	—	100%

(1) Mr. Osborne was elected to the Corporation's Board of Directors at the Corporation's annual and general meeting of its shareholders held on May 2, 2018.

2. Board Mandate

Disclose the text of the board's written mandate. If the board does not have a written mandate, describe how the board delineates its role and responsibilities.

The Board of Directors' stewardship role, specific responsibilities, compositional requirements and various other matters are set forth in Appendix A – Charter of the Board of Directors – to this Management Proxy Circular.

3. Position Descriptions

- (a) *Disclose whether or not the board has developed written position descriptions for the chair and the chair of each board committee. If the board has not developed written position descriptions for the chair and/or the chair of each board committee, briefly describe how the board delineates the role and responsibilities of each such position.*

The Board of Directors has approved written position descriptions for the Chairman of the Board of Directors and the Chair of each committee of the Board of Directors.

The Chairman of the Board of Directors is responsible for setting the agenda for, and chairing meetings of, the Board of Directors. In addition, the Chairman of the Board of Directors is responsible for the management, development and effective performance of the Board and provides leadership to the Board in all aspects of its work.

The primary role and responsibility of the chair of each committee of the Board of Directors is to: (i) in general, ensure that the committee fulfills its mandate, as determined by the Board of Directors; (ii) chair meetings of the committee; (iii) report thereon to the Board of Directors; and (iv) act as liaison between the committee and the Board of Directors and, if necessary, management of the Corporation.

- (b) *Disclose whether or not the board and Chief Executive Officer (CEO) have developed a written position description for the CEO. If the board and CEO have not developed such position description, briefly describe how the board delineates the role and responsibilities of the CEO.*

The Board of Directors has developed a written position description and has set objectives for the CEO. The CEO's objectives constitute a mandate on a year-to-year basis. These objectives include a general mandate to maximize shareholder value. The Board of Directors approves the CEO's objectives for the Corporation on an annual basis.

4. Orientation and Continuing Education

(a) *Briefly describe what measures the board takes to orient new directors regarding*

(i) *the role of the board, its committees and its directors; and*

(ii) *the nature and operation of the issuer's business.*

The Board of Directors considers that orienting and educating new directors is an important element of ensuring responsible governance. New directors are to be provided with the Corporation's continuous disclosure documents, copies of the charters of each of the Committees, copies of the position descriptions of the Chairman of the Board, President and CEO and the Chairman of each of the Committees, and are invited to attend orientation sessions in the form of informal meetings with members of the Board and senior management, complemented by presentations on the main areas of the Corporation's business to improve their understanding of the Corporation's business.

(b) *Briefly describe what measures, if any, the board takes to provide continuing education for its directors. If the board does not provide continuing education, describe how the board ensures that its directors maintain the skill and knowledge necessary to meet their obligations as directors.*

The Board of Directors does not formally provide continuing education to its directors. The directors are experienced members, including four who are directors of other reporting issuers (or the equivalent). The Board of Directors relies on professional assistance when judged necessary in order to be educated or updated on a particular topic.

5. Director Share Ownership Guidelines

The Board of Directors adopted on May 7, 2014 a policy intended to encourage non-executive directors to hold common shares or DSUs (including debentures convertible into common shares) of the Corporation for an amount equivalent to three times the annual retainer received as a director excluding the attendance fees. Directors have a period of three years from the date of their appointment as a director or from the date of an increase in the annual retainer paid to directors to comply with this policy. The common shares and DSUs are valued at the greater of the market price of the Corporation's common shares on the Toronto Stock Exchange as of December 31 of each year or the weighted average purchase price of the applicable shares. The Board of Directors may grant exceptions to this policy where circumstances warrant, including, but not limited to, tax and estate planning considerations.

The share ownership on the part of the Corporation's non-executive directors as at April 2, 2019 and the date on which their holding must meet the minimum level of share ownership are set out in the following table.

Director	Annual retainer	Holding requirement	Number of common shares	Number of DSUs	Total number of common shares and DSUs	Total market value of shares and DSUs ⁽¹⁾	Date by which minimum ownership level must be met
Luc Bertrand	\$75,000	\$225,000	1,100,000	176,050	1,326,050	\$4,110,755	Complies with the ownership guideline
Jean-Marie Bourassa	\$60,000	\$180,000	1,222,000	280,859	1,502,859	\$4,658,863	Complies with the ownership guideline
James Fahey	\$48,000	\$144,000	164,500	209,303	373,803	\$1,158,789	Complies with the ownership guideline
Jennie Hwang	\$48,000	\$144,000	365,100	209,303	574,403	\$1,780,649	Complies with the ownership guideline
Nathalie Le Prohon	\$53,000	\$159,000	183,500	199,416	382,916	\$1,187,040	Complies with the ownership guideline
Donald F. Osborne	\$35,000	\$105,000	30,000	29,464	59,464	\$184,338	Complies with the ownership guideline

(1) Greater of market value as at December 31, 2018 (\$3.10) or weighted average purchase price of the applicable common shares or DSUs.

6. Ethical Business Conduct

(a) *Disclose whether or not the board has adopted a written code for the directors, officers and employees.*

The Board of Directors adopted a Code of Ethics on April 7, 2009 applicable to directors, senior officers and employees of the Corporation. The text of the *Code of Ethics* is available at www.sedar.com and www.5nplus.com.

(b) *Describe any steps the board takes to ensure directors exercise independent judgement in considering transactions and agreements in respect of which a director or executive officer has a material interest.*

Under the *Canada Business Corporations Act*, to which the Corporation is subject, a director or officer of the Corporation must disclose to the Corporation, in writing or by requesting that it be entered in the minutes of meetings of the Board of Directors, the nature and extent of any interest that he or she has in a material contract or material transaction, whether made or proposed, with the Corporation, if the director or officer: (i) is a party to the contract or transaction; (ii) is a director or an officer, or an individual acting in a similar capacity, of a party to the contract or transaction; or (iii) has a material interest in a party to the contract or transaction. Subject to limited exceptions set out in the *Canada Business Corporations Act*, the director cannot vote on any resolution to approve the contract or transaction.

Further, it is the policy of the Corporation that an interested director or officer recuses himself or herself from the decision-making process pertaining to a contract or transaction in which he or she has an interest.

(c) *Describe any other steps the board takes to encourage and promote a culture of ethical business conduct.*

The directors are apprised of the activities of the Corporation and ensure that it conducts such activities in an ethical manner. The directors encourage and promote an overall culture of ethical business conduct by promoting compliance with applicable laws, rules and regulations; providing guidance to consultants, officers and directors to help them recognize and deal with ethical issues; promoting a culture of open communication, honesty and accountability; and ensuring awareness of disciplinary actions for violations of ethical business conduct.

7. Nomination of Directors

- (a) *Describe the process by which the board identifies new candidates for board nomination.*

When the Board of Directors determines that new candidates for board nomination are advisable, it approves an outline of the skill-set and background which are desired in a new candidate. Board members or management have an opportunity to suggest candidates for consideration. Prospective candidates are interviewed by the Chairman and other Board members on an *ad hoc* basis. An invitation to join the Board is then extended only after the Board had reached a consensus on the appropriateness of the candidates.

- (b) *Disclose whether or not the board has a nominating committee composed entirely of independent directors. If the board does not have a nominating committee composed entirely of independent directors, describe what steps the board takes to encourage an objective nomination process.*

The Board of Directors has a Governance & Compensation Committee which participates in the nomination process and which is composed entirely of independent directors.

- (c) *If the board has a nominating committee, describe the responsibilities, powers and operation of the nominating committee.*

The Governance & Compensation Committee is mandated to review the composition and contribution of the Board of Directors and its members and to recommend Board nominees to the Board of Directors. The Governance & Compensation Committee reviews criteria regarding the composition of the Board of Directors and committees of the Board of Directors, such as size, proportion of independent directors and as to criteria to the profile of the Board of Directors (age, geographical representation, disciplines, etc.) and establish a Board of Directors comprised of members who facilitate effective decision-making.

8. Compensation

- (a) *Describe the process by which the board determines the compensation for the issuer's directors and officers.*

The Governance & Compensation Committee is mandated to review and recommend to the Board of Directors for approval the remuneration of directors. The Governance & Compensation Committee considers time commitment, comparative fees and responsibilities in determining remuneration. See "Compensation of Directors" above.

With respect to the compensation of the Corporation's officers, see "Executive Compensation" above.

- (b) *Disclose whether or not the board has a compensation committee composed entirely of independent directors. If the board does not have a compensation committee composed entirely of independent directors, describe what steps the board takes to ensure an objective process for determining such compensation.*

The Governance & Compensation Committee is composed entirely of independent directors within the meaning of National Instrument 52-110 *Audit Committees*. The current members of the Governance & Compensation Committee are Nathalie Le Prohon, Jennie S. Hwang and James T. Fahey.

- (c) *If the board has a compensation committee, describe the responsibilities, powers and operation of the compensation committee.*

The Governance & Compensation Committee's primary role and responsibility concerns human resources and compensation policies and processes. Among the main responsibilities of the Governance & Compensation Committee is recommending the compensation of the Corporation's executive officers to the Board of Directors.

If the Governance & Compensation Committee considers it necessary, it may investigate and review any human resources or compensation matter relating to the Corporation. The Governance & Compensation Committee may, with approval of the Board of Directors, retain outside experts and engage special legal counsel, if necessary.

9. Other Board Committees

If the board has standing committees other than the audit, compensation and nominating committees, identify the committees and describe their function.

The Board does not have committees other than the Audit & Risk Management Committee and Governance & Compensation Committee.

10. Assessments

Disclose whether or not the board, its committees and individual directors are regularly assessed with respect to their effectiveness and contribution. If assessments are regularly conducted, describe the process used for the assessments. If assessments are not regularly conducted, describe how the board satisfies itself that the board, its committees, and its individual directors are performing effectively.

Assessments were not conducted on a regular basis. The Board of Directors from time-to-time examined and commented on its effectiveness and that of its committees and made adjustments when warranted. However, in 2017, the Board of Directors conducted an internal evaluation for the Board and each committee with the objective of assessing current practices and performance to identify areas of strength and opportunities of improvement. Such assessment is summarized in the following table.

Review (Frequency)	By	Action	Outcome
Full Board (Periodic)	All Members of the Board	<ul style="list-style-type: none"> Board members complete a detailed questionnaire which: (a) provides for quantitative ratings in key areas and (b) seeks subjective comment in each of those areas. Responses are reviewed by the Chair of the G&C Committee. 	<ul style="list-style-type: none"> A summary report is prepared by the Chair of the G&C Committee and provided to the Board Chair, the G&C Committee and the CEO. The summary report is reported to the full Board by the Chair of the G&C Committee. Matters requiring follow-up are identified and action plans are developed and monitored on a go-forward basis by the G&C Committee.
Full Board (Periodic)	Management	<ul style="list-style-type: none"> Members of senior management who regularly interact with the Board are surveyed to solicit their input and perspective on the operation of the Board and how the Board might improve its effectiveness. 	<ul style="list-style-type: none"> Results are reported by the Chair of the G&C Committee to the full Board.
Board Committees (Periodic)	All Members of the Board	<ul style="list-style-type: none"> Members of each Committee complete a detailed questionnaire to evaluate how well their respective Committee is operating and to make suggestions for improvement. The Chair of the G&C Committee receives responses and reviews them with the appropriate Committee Chair. 	<ul style="list-style-type: none"> A summary report is prepared and provided to the Board Chair, the Chair of the G&C Committee, the appropriate Committee and the CEO. The summary report for each Committee is then reported to the full Board by the appropriate Committee Chair. The Committee Chair is expected to follow-up on any matters raised in the assessment and take action, as appropriate.
Board Committees (Periodic)	Management	<ul style="list-style-type: none"> Members of senior management who regularly interact with the Board Committees are surveyed to solicit their input and perspective on the operation of the Committees and how the Committees might improve their effectiveness. 	<ul style="list-style-type: none"> Results are reported by the Chair of the G&C Committee to the full Board.

11. Diversity

The Corporation has not adopted a written policy relating to the identification and nomination of women directors to our board of directors, though we consider diversity of race, ethnicity, gender, age, cultural background and professional experience in evaluating candidates for board membership.

In 2014, the representation of women on the Board was taken into account in the selection of nominees, and as a result, two women were elected to the Board. Of the seven current directors serving on the Board of Directors of the Corporation as at the date hereof, two (28.57%) are women. If all seven nominees for election as director are elected, two women (28.57%) will serve on the Board. Although the Corporation has not adopted a written policy in this respect, the Corporation is conscious of the value of female representation within a group. It acknowledges that efforts must be made to increase the presence of women in key positions, even though no target has been determined for the time being. At this time, one woman (16.67%) holds a position as “executive officer” of the Corporation, as that term is defined under NI 58-101.

12. Term Limits

The Corporation has not adopted term limits for the directors comprising the Board. However, the Corporation's bylaws state that no person shall be elected director if he or she has attained the age of seventy-five (75) years prior to the date of the shareholders meeting at which an election of directors is to take place, provided however that a director who has been elected prior to his or her attaining the age of seventy-five (75) years may complete his or her term in office.

Additional Information

Financial information about the Corporation is contained in its comparative consolidated financial statements and Management's Discussion and Analysis for the fiscal year ended December 31, 2018, and additional information about the Corporation is available on SEDAR at www.sedar.com.

If you would like to obtain, at no cost to you, a copy of any of the following documents:

- (a) the latest Annual Information Form of the Corporation together with any document, or the pertinent pages of any document, incorporated by reference therein;
- (b) the comparative financial statements of the Corporation for the fiscal year ended December 31, 2018 together with the accompanying report of the auditors thereon and any interim financial statements of the Corporation for periods subsequent to December 31, 2018 and Management's Discussion and Analysis with respect thereto; and
- (c) this Management Proxy Circular,

please send your request to:

5N Plus Inc.
4385 Garand
Montreal, Québec
H4R 2B4
Telephone: (514) 856-0644
Telecopier: (514) 856-9611

Authorization

The contents and the mailing of this Management Proxy Circular have been approved by the Board of Directors of the Corporation.

(s) Arjang J. (AJ) Roshan

Arjang J. (AJ) Roshan
President and Chief Executive Officer

Montreal, Québec
April 2, 2019

APPENDIX "A"
CHARTER OF THE BOARD OF DIRECTORS

1. INTERPRETATION

"**Financially Literate**" means the ability to read and understand a set of financial statements that present a breadth and level of complexity of accounting issues that are generally comparable to the breadth and complexity of the issues that can reasonably be expected to be raised by the Corporation's financial statements.

"**Independent Director**" means a director who is independent within the meaning of sections 1.4 and 1.5 of *Regulation 52-110 Respecting Audit Committees*.

2. OBJECTIVES

5N Plus' shareholders are the first and most important element in the Corporation's governance structures and processes. At each annual general meeting, the Corporation's shareholders elect the members of the Corporation's Board of Directors and give them a mandate to manage and oversee the management of the Corporation's affairs for the coming year.

In the normal course of operations, certain corporate actions which may be material to 5N Plus are initiated from time to time by the Corporation's senior management and, at the appropriate time, are submitted to 5N Plus' Board of Directors for consideration and approval. When appropriate, such matters are also submitted for consideration and approval by 5N Plus' shareholders. All such approvals are sought in accordance with the charters of the Board of Directors and standing committees, 5N Plus' corporate governance practices and applicable corporate and securities legislation.

The overall stewardship of the Company is the responsibility of the Board of Directors. In accomplishing the mandate it receives from the Corporation's shareholders, the Board of Directors may delegate certain of its authority and responsibilities to committees and management and reserve certain powers to itself. Nonetheless, it will retain full effective control over the Company.

3. COMPOSITION

3.1 The majority of the Board of Directors shall be comprised of Independent Directors. The application of the definition of Independent Director to the circumstances of each individual director is the responsibility of the Board of Directors which will disclose on an annual basis whether it is constituted with the appropriate number of directors which are Independent Directors and the basis for its analysis. The Board of Directors will also disclose which directors are Independent Directors or not and provide a description of the business, family, direct and indirect shareholding or other relationship between each director and the Company.

3.2 The Company expects and requires directors to be and remain free of conflictual interests or relationships and to refrain from acting in ways which are actually or potentially harmful, conflictual or detrimental to the Corporation's best interests. Each director shall comply with the Corporation's formal code of ethics and business conduct that governs the behaviour of members, directors and officers and shall complete and file annually with the Company any and all documents required pursuant to such formal code of ethics and business conduct with respect to conflict of interests. This matter will also be reviewed annually by the Governance and Compensation Committee. The Board of Directors will monitor compliance with said code as well as with the Corporation's executive code of conduct applicable to its principal executive officer, principal financial officer, principal accounting officer or controller, or other persons performing similar functions within the Company. The Board will also be responsible for the granting of any waivers from compliance with the codes for directors and officers. The Board of Directors will disclose in due time the adoption of such codes as well as all waivers and specify the circumstances and rationale for granting the waiver.

- 3.3 The Board of Directors, following advice of its Governance and Compensation Committee, is responsible for evaluating its size and composition and establishing a Board comprised of members who facilitate effective decision-making. The Board of Directors has the ability to increase or decrease its size.
- 3.4 It is a general requirement under the Corporation's corporate governance practices that all directors possess both financial and operational literacy. In addition, the membership of the Board of Directors will include a sufficient number of directors who are Financially Literate in order to ensure that the Audit and Risk Management Committee membership complies with those rules.
- 3.5 A director who makes a major change in principal occupation will forthwith disclose this fact to the Board of Directors and, if appropriate, will offer his or her resignation to the Board of Directors for consideration. It is not intended that directors who retire or whose professional positions change should necessarily leave the Board of Directors. However, there should be an opportunity for the Board of Directors to review the continued appropriateness of the Board of Directors membership under such circumstances.
- 3.6 The Board of Directors is responsible for approving new nominees to the Board. New directors will be provided with an orientation and education program which will include written information about the duties and obligations of directors, the business and operations of the Company, documents from recent Board of Directors meetings and opportunities for meetings and discussion with senior management and other directors. The details of the orientation of each new director will be tailored to that director's individual needs and areas of interest. The prospective candidates should fully understand the role of the Board of Directors and its committees and the contribution expected from individual directors and the Board of Directors will ensure that they are provided with the appropriate information to that effect. In addition, the Board of Directors will ascertain and make available to its members, when required, continuing education as per the business and operations of the Company.

4. RESOURCES

- 4.1 The Board of Directors will implement structures and procedures to ensure that it functions independently of management.
- 4.2 The Board of Directors appreciates the value of having certain members of senior management attend each Board of Directors meeting to provide information and opinion to assist the directors in their deliberations. The Chief Executive Officer will seek the Board of Directors' concurrence in the event of any proposed change to the management attendees at Board of Directors meetings. Management attendees will be excused for any agenda items which are reserved for discussion among directors only.

5. RESPONSIBILITIES AND DUTIES

The principal responsibilities and duties of the Board of Directors include the following, it being understood that in carrying out their responsibilities and duties, directors may consult with management and may retain external advisors at the expense of the Company in appropriate circumstances. Any engagement of external advisors shall be subject to the approval of the Chair of the Governance and Compensation Committee.

5.1 General Responsibilities

- 5.1.1 The Board of Directors will oversee the management of the Company. In doing so, the Board of Directors will establish a productive working relationship with the Chief Executive Officer and other members of senior management.
- 5.1.2 The Board of Directors will oversee the formulation of long-term strategic, financial and organizational goals for the Company. It shall approve the Corporation's strategic plan and review same on at least an annual basis. This plan will take into account the opportunity and risks of the Corporation's business.
- 5.1.3 As part of the responsibility of the Board of Directors to oversee management of the Company, the Board of Directors will engage in active monitoring of the Company and its affairs in its stewardship capacity.
- 5.1.4 The Board of Directors will engage in a review of short and long-term performance of the Company in accordance with approved plans.
- 5.1.5 The officers of the Company, headed by the Chief Executive Officer, shall be responsible for general day to day management of the Company and for making recommendations to the Board of Directors with respect to long term strategic, financial, organizational and related objectives.
- 5.1.6 The Board of Directors will periodically review the significant risks and opportunities affecting the Company and its business and oversee the actions, systems and controls in place to manage and monitor risks and opportunities. The Board of Directors may impose such limits as may be in the interests of the Company and its shareholders.
- 5.1.7 The Board of Directors will oversee how the Company communicates its goals and objectives to its shareholders and other relevant constituencies.
- 5.1.8 The Board of Directors will oversee the succession planning including appointing, training and monitoring senior management and the Chief Executive Officer in particular.
- 5.1.9 The Board of Directors is responsible for overseeing a Communication Policy for the Company. In doing so, the Board of Directors will ensure that the policy (i) addresses how the Company interacts with analysts, investors, other key stakeholders and the public, (ii) contains measures for the Company to comply with its continuous and timely disclosure obligations and to avoid selective disclosure, and (iii) is reviewed at least annually.
- 5.1.10 The Board of Directors will oversee the integrity of the Corporation's internal control and management information systems.
- 5.1.11 The Board of Directors will make sure that the Company adopts prudent financial standards with respect to the business of the Company and prudent levels of debt in relation to the Corporation's consolidated capitalization.

5.1.12 The Board of Directors will also consider and approve:

- (i) transactions out of the ordinary course of business including, without limitation, proposals on mergers, acquisitions or other major investments or divestitures;
- (ii) all matters that would be expected to have a major impact on shareholders;
- (iii) the appointment of any person to any position that would qualify such person as an officer of the Company; and
- (iv) any proposed changes in compensation to be paid to members of the Board of Directors on the recommendation of the Governance and Compensation Committee.

5.1.13 The Board of Directors will also receive reports and consider:

- (i) The quality of relationships between the Company and its key customers;
- (ii) Changes in the shareholder base of the Company from time to time and relationships between the Company and its significant shareholders;
- (iii) Periodic reports from Board of Directors' committees with respect to matters considered by such committees;
- (iv) Health, safety and environmental matters as they affect the Company and its business; and
- (v) Such other matters as the Board of Directors may, from time to time, determine.

5.1.14 The Board of Directors will oversee management through an ongoing review process.

5.1.15 The Board of Directors will develop a position description for the Chief Executive Officer. The Board of Directors will also approve the corporate objectives that the Chief Executive Officer is responsible for meeting and assess management's performance in relation to such objectives. The Board of Directors will raise any concerns related to the performance of the Chief Executive Officer as appropriate.

5.1.16 The Board of Directors will receive a report from its Governance and Compensation Committee on succession planning as set forth in such committee's mandate.

5.2 Annual Assessment of the Board of Directors

The Board of Directors will annually review the assessment of the Board of Directors' performance and recommendation provided by the Governance and Compensation Committee. The objective of this review is to increase the effectiveness of the Board of Directors and contribute to a process of continuous improvement in the Board of Directors' execution of its responsibilities. It is expected that the result of such reviews will be to identify any areas where the directors and/or management believe that the Board of Directors and/or the directors individually could make a better contribution to the affairs of the Company. The Board of Directors will take appropriate action based upon the results of the review process.

5.3 Committees

- 5.3.1 The Board of Directors shall appoint committees to assist it in performing its duties and processing the quantity of information it receives.
- 5.3.2 Each committee operates according to a Board of Directors approved written mandate outlining its duties and responsibilities. This structure may be subject to change as the Board of Directors considers from time to time which of its responsibilities can best be fulfilled through more detailed review of matters in committee.
- 5.3.3 The Board of Directors will review annually the work undertaken by each committee and the responsibilities thereof.
- 5.3.4 The Board of Directors will annually evaluate the performance and review the work of its committees, including their respective mandates and the sufficiency of such mandates.
- 5.3.5 The Board of Directors will annually appoint a Chairman of the Board as well as a member of each of its committees to act as Chair of each committee.
- 5.3.6 Subject to subsection 5.3.7, committees of the Board of Directors shall be composed of a majority of Independent Directors.
- 5.3.7 The Board of Directors shall appoint members of committees after considering the recommendations of the Governance and Compensation Committee as well as the skills and desires of individual Board members, all in accordance with the mandates of such committees approved by the Board.
- 5.3.8 The Audit Committee shall be composed only of Independent Directors and all members of the Audit Committee shall be Financially Literate.

5.4 Chairman of the Board

- 5.4.1 The Chairman of the Board shall be an Independent Director. He will oversee that the Board of Directors discharges its responsibilities, ensure that the Board of Directors evaluates the performance of management objectively and that the Board of Directors understands the boundaries between the Board of Directors and management responsibilities.
- 5.4.2 The Chairman of the Board will chair periodic meetings of the Independent Directors and assume other responsibilities which the Independent Directors as a whole might designate from time to time.
- 5.4.3 The Chairman of the Board should be able to stand sufficiently back from the day-to-day running of the business to ensure that the Board of Directors is in full control of the Corporation's affairs and alert to its obligations to the shareholders.
- 5.4.4 The Chairman of the Board shall provide input on preparation of agendas for Board and committee meetings.
- 5.4.5 The Chairman of the Board shall chair Board meetings, subject to the provisions of the by-laws of the Company.

- 5.4.6 The Chairman of the Board shall provide leadership for the independent directors and ensure that the effectiveness of the Board is assessed on a regular basis.
- 5.4.7 The Chairman of the Board shall set the agenda for the meetings of the Independent Directors.
- 5.4.8 The Chairman of the Board shall report to the Board concerning the deliberations of the Independent Directors as required.
- 5.4.9 The Chairman of the Board shall facilitate the effective and transparent interaction of Board members and management.
- 5.4.10 The Chairman of the Board shall provide feedback to the Chief Executive Officer and act as a sounding board with respect to strategies, accountability, relationships and other issues.

5.5 Review of the Board Mandate

In order to ensure that this mandate is kept current in the light of changes which may occur in corporate practice or the structure of the Company, the Board of Directors will annually reconfirm this mandate or initiate a review to revise it.

5.6 Board of Directors Compensation

The Governance and Compensation Committee will review the adequacy and form of compensation of the senior management and directors each year and it shall make recommendations to the Board of Directors for consideration when it believes changes in compensation are warranted. Furthermore, the Board of Directors will ensure the compensation realistically reflects the responsibility and risk involved in being a director.

6. COMMUNICATIONS POLICY

- 6.1 The Board of Directors will consider and review the means by which shareholders can communicate with the Company including the opportunity to do so at the annual meeting, communications interfaces through the Corporation's website and the adequacy of resources available within the Company to respond to shareholders through the office of the Corporate Secretary and otherwise. However, the Board of Directors believes that it is the function of the management to speak for the Company in its communications with the investment community, the media, customers, suppliers, employees, governments and the general public. It is understood that individual directors may from time to time be requested by management to assist with such communications. It is expected, if communications from stakeholders are made to individual directors, management will be informed and consulted to determine any appropriate response.
- 6.2 The Board of Directors has the responsibility for monitoring compliance by the Company with the corporate governance requirements and guidelines of the Toronto Stock Exchange. The Board of Directors will approve the disclosure of the Corporation's system of governance and the operation of such system.