Quarterhill Inc.

Management's Discussion and Analysis
For the six months ended June 30, 2024 and 2023

August 7, 2024

CONTENTS

INTRODUCTION

This Management's Discussion and Analysis of Quarterhill Inc. (this "MD&A") is dated August 7, 2024. References in this MD&A to "Quarterhill", "the Company", "we", "us" and "our" refer to Quarterhill Inc. and its consolidated subsidiaries during the periods presented, unless the context requires otherwise. References to "Common Shares" in this MD&A refer to common shares in the capital of Quarterhill. References to "Convertible Debentures" in this MD&A refer to Quarterhill's 6.0% Convertible Unsecured Subordinated Debentures due October 30, 2026.

The Common Shares and Convertible Debentures are listed under the symbols "QTRH" and "QTRH.DB" respectively on the Toronto Stock Exchange (the "TSX") and the Common Shares are listed on the United States OTCQX Best Market (the "OTCQX") under the symbol "QTRHF".

Quarterhill is a growth-oriented Canadian company operating in the intelligent transportation system ("ITS") industry. We are a global leader in ITS that manages attractive technology companies in the intelligent transportation systems industry and its adjacent markets.

This MD&A provides information for the three and six months ended June 30, 2024 and up to and including August 7, 2024. This MD&A should be read in conjunction with Quarterhill's consolidated financial statements ("financial statements") and the notes thereto for the six months ended June 30, 2024, which have been prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB").

Unless otherwise indicated, all financial information in this MD&A is reported in thousands of United States ("U.S.") dollars, except for Common Share and earnings per share data which is reported in number of Common Shares and U.S. dollars respectively. The tables and charts included in this document form an integral part of this MD&A.

This MD&A has been prepared with reference to National Instrument 51-102 - Continuous Disclosure Obligations of the Canadian Securities Administrators. Additional information filed by us with the Canadian Securities Administrators, including quarterly reports, annual reports and our Annual Information Form for the year ended December 31, 2023 (our "AIF"), is available online at www.sedarplus.ca and also on our website at www.Quarterhill.com.

Quarterhill and our operating subsidiaries operate in ever-changing business and competitive economic environments that expose us to a number of risks and uncertainties, many of which are discussed under the heading "Risks and Uncertainties" in this MD&A and/or under the heading "Risk Factors" in our AIF available online at www.sedarplus.ca.

Our management is responsible for establishing appropriate information systems, procedures and controls to ensure that all financial information disclosed externally, including in this MD&A, and used internally by us, is complete and reliable. These procedures include the review and approval of our financial statements and associated information, including this MD&A, first by our management's Disclosure Committee, then by the Audit Committee of our Board of Directors (the "Board") and, finally, by our Board as a whole.

SECOND QUARTER 2024 HIGHLIGHTS

Business Performance and Future Business Developments

Revenues for the three and six months ended June 30, 2024 were $41,513 and $76,410 compared to $38,623 and $66,969 in the comparative prior year periods, respectively. The increase in revenue is primarily driven by stronger performance in our North American tolling and enforcement revenue streams.

During the three months and six months ended June 30, 2024, through our wholly owned subsidiaries, we announced new customer contracts worth approximately $1.5 million and $5.4 million, respectively. The customer contract announced for the second quarter is to provide upgrades and installation services at multiple traffic data collection sites to a US government agency.

Acquisition of Red Fox I.D. Limited

On April 8, 2024, we closed the acquisition of Red Fox I.D. Limited ("Red Fox") by acquiring 100% of its issued and outstanding shares for a purchase price of $7,367 through a combination of cash and equity. Based in Haddenham, England, Red Fox is a profitable and growing provider of Automatic Vehicle Detection and Classification ("AVDC") software to the tolling industry. AVDC is responsible for the detection, classification and tracking of a vehicle as it enters and exits a tolling facility.

Change in Presentation Currency

As of January 1, 2024, with retrospective adjustment back to January 1, 2023, we transitioned our financial presentation currency to United States (U.S.) dollars. A significant proportion of our sales, expenses, assets, and liabilities are denominated in U.S. dollars. Our internal budgeting and reporting processes are structured around this currency and the decision aligns with our operational framework. This shift aims to enhance internal management efficiency, external stakeholders' ability to assess our financial performance, and to reduce the impact of foreign exchange volatility.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This MD&A contains forward-looking statements and forward-looking information within the meaning of Canadian securities laws, including such statements relating to:

- assumptions and expectations described in our critical accounting policies and estimates;
- our expectation regarding the adoption and impact of certain accounting pronouncements;
- our expectation regarding the growth rates of our subsidiaries' businesses;
- our estimates regarding our effective tax rate;
- our expectations regarding our ability to acquire additional businesses to further our growth; and
- our expectations with respect to the sufficiency of our financial resources.

The words "expect", "anticipate", "estimate", "may", "will", "should", "would", "intend", "believe", "plan", "continue", "project", "could", the negatives of these words or other variations on these words, comparable terms and similar expressions are intended to identify forward-looking statements and forward-looking information. Forward-looking statements and forward-looking information are based on estimates and assumptions made by us in light of our experience and our perception of historical trends, current conditions and expected future developments, as well as other factors that we believe are appropriate in the circumstances.

We provide forward-looking statements and forward-looking information to assist external stakeholders in understanding our management's expectations and plans relating to the future as of the date of this MD&A and such statements and information may not be appropriate for any other purposes. The forward-looking statements and forward-looking information in this MD&A are made as of the date of this MD&A only. We have no intention and undertake no obligation to update or revise any forward-looking statements or forward-looking information, whether as a result of new information, future events or otherwise, except as required by law.

NON-IFRS FINANCIAL MEASURES AND NON-IFRS RATIOS

Non-IFRS Financial Measures and Non-IFRS Ratios

Quarterhill uses both IFRS and certain non-IFRS financial measures to assess performance. Non-IFRS financial measures are financial measures disclosed by a company that (a) depict historical or expected future financial performance, financial position or cash flow of a company, (b) with respect to their composition, exclude amounts that are included in, or include amounts that are excluded from the composition of the most directly comparable financial measure disclosed in the primary financial statements of the company, (c) are not disclosed in the financial statements of the company and (d) are not a ratio, fraction, percentage or similar representation. Non-IFRS ratios are financial measures disclosed by a company that are in the form of a ratio, fraction, percentage or similar representation that has a non-IFRS financial measure as one or more of its components, and that are not disclosed in the financial statements of the Company.

These non-IFRS financial measures and non-IFRS ratios are not standardized financial measures under IFRS, and, therefore, are unlikely to be comparable to similar financial measures presented by other companies. Management believes these non-IFRS financial measures and non-IFRS ratios provide transparent and useful supplemental information to help investors evaluate our financial performance, financial condition, and liquidity using the same measures as management. These non-IFRS financial measures and non-IFRS ratios should not be considered as a substitute for, or superior to, measures of financial performance prepared in accordance with IFRS.

Adjusted EBITDA - Non-IFRS Financial Measures
In this MD&A, we use the non-IFRS financial measure “Adjusted EBITDA” to mean net (loss) income adjusted for (i) income taxes, (ii) finance expense or income; (iii) amortization and impairment of intangibles; (iv) other charges and other one-time items; (v) depreciation of right-of-use assets and property, plant and equipment; (vi) stock-based compensation; (vii) foreign exchange (gain) loss; (viii) other income which includes equity in earnings from joint ventures; (ix) dividends received from joint ventures; and (x) changes in fair value of derivative liability. Adjusted EBITDA is used by our management to assess our normalized cash generated. Adjusted EBITDA is also a performance measure that may be used by investors to analyze the cash generated by Quarterhill. Adjusted EBITDA should not be interpreted as an alternative to net loss and cash flows from operations as determined in accordance with IFRS or as a measure of liquidity. The most directly comparable IFRS financial measure is Net (loss) income. See the Reconciliation of Net (Loss) Income to Adjusted EBITDA within the Overall Performance section of this MD&A.

Adjusted EBITDA per share – Non-IFRS ratio
Adjusted EBITDA per share is calculated as Adjusted EBITDA divided by the basic weighted average of Common Shares. Adjusted EBITDA per share is used by our management and investors to analyze cash generated by Quarterhill on a per share basis. The most comparable IFRS measure is earnings per share.

Adjusted Working Capital
Adjusted Working Capital is calculated as current assets minus current liabilities, adjusted for convertible debentures and derivative liability. Adjusted Working Capital reflects our net working capital expected to be settled in cash within 12 months.

Supplementary Financial Measures
Supplementary financial measures are financial measures disclosed by a company that (a) are, or are intended to be, disclosed on a periodic basis to depict the historical or expected future financial performance, financial position or cash flow of a company (b) are not disclosed in the financial statements of the company, (c) are not non-IFRS financial measures, and (d) are not non-IFRS ratios.

Key supplementary measures disclosed in this MD&A are as follows:

Gross margin %
Calculated as gross profit as a percentage of revenue.

Working capital
Calculated as total current assets minus total current liabilities.

DESCRIPTION OF OUR BUSINESS

Quarterhill is a disciplined manager and acquirer of established ITS companies. Our goal is to pursue both organic and inorganic growth that capitalizes on attractive market trends in the ITS industry and its adjacent markets. Additionally, in appropriate circumstances, we may also divest certain assets if favourable conditions for such a divestiture are presented.

Strategy

We are focusing our business on building a consistently profitable company through the management and growth of companies in the ITS industry and its adjacent markets.

We believe that if we increase the share of our revenue derived from recurring sources we will also increase the predictability of our revenues and cash flows. This will allow us to better scale our operations to ensure we meet our strategic mandate of operating profitably regardless of the prevailing economic market conditions as we grow both organically and through acquisitions. In appropriate circumstances, we may also divest certain assets if favourable conditions for such a divestiture are presented.

Our existing businesses are fully described in more detail in our AIF.

Our Business

Our businesses are focused on enhancing safety, mobility, efficiency and environmental performance across road and other transportation infrastructure by providing ITS, products, solutions and services. Based on market research, we believe the global ITS industry is expected to exceed $90 billion by 2025, influenced by major driving factors such as infrastructure spending, public safety, traffic congestion, smart city development and environmental impact. We believe that we are well positioned to capitalize on these trends.

Our businesses are leading providers of essential ITS products, solutions and services with more than 60 years of combined experience in areas such as commercial vehicle enforcement and tolling. Our customers include government transportation and tolling agencies, traffic engineering operators and industrial, and transportation service companies worldwide.

We have predictable and recurring revenue streams derived from selling ITS systems, products and solutions through long-term customer relationships and recurring service contracts. Our businesses offer a portfolio of integrated hardware and software to detect, measure and analyze a variety of transportation metrics which produces a valuable source of analytics and telematics for users. With a variety of product and service offerings throughout our operations in North America and Europe, we believe there is an abundance of opportunity to create scale and efficiencies.

We remain focused on building robust cash flows and controlling expenses throughout all our businesses to facilitate a healthy and sustainable balance sheet capable of supporting both our organic and acquisitive growth strategies.

OVERALL PERFORMANCE

Interim Condensed Consolidated Statements of Loss

	Three months ended June 30,		Six months ended June 30,	
	2024	2023	**2024**	2023
		(restated)		(restated)
Revenues	**$41,513**	$38,623	**$76,410**	$66,969
Direct cost of revenues	**32,997**	28,616	**61,537**	53,205
Gross profit	**8,516**	10,007	**14,873**	13,764
Operating expenses				
Selling, general and administrative expenses	**7,073**	6,132	**13,448**	13,090
Research and development expenses	**479**	1,008	**796**	1,877
Depreciation of right-of-use assets	**364**	384	**708**	721
Depreciation of property, plant and equipment	**383**	407	**760**	818
Amortization of intangible assets	**2,140**	2,088	**4,377**	4,175
Other charges	**321**	555	**1,155**	1,519
	10,760	10,574	**21,244**	22,200
Results from operations	**(2,244)**	(567)	**(6,371)**	(8,436)
Finance income	**(97)**	(27)	**(365)**	(60)
Finance expense	**1,651**	1,731	**3,356**	3,368
Foreign exchange (gain) loss	**(387)**	769	**(1,497)**	1,104
Other income	**(267)**	(227)	**(134)**	(458)
Change in fair value of derivative liability	**(432)**	(11)	**(927)**	(215)
Loss before taxes	**(2,712)**	(2,802)	**(6,804)**	(12,175)
Current income tax expense (recovery)	**272**	(2,688)	**345**	(2,570)
Deferred income tax (recovery) expense	**(17)**	10,073	**36**	9,665
Income tax expense	**255**	7,385	**381**	7,095
Net loss from continuing operations	**(2,967)**	(10,187)	**(7,185)**	(19,270)
Net loss from discontinued operations	**-**	(11,594)	**-**	(14,061)
Net loss	**(2,967)**	(21,781)	**(7,185)**	(33,331)
Other comprehensive loss that may be reclassified subsequently to net loss:				
Foreign currency translation adjustment	**(247)**	(2,905)	**(932)**	(2,590)
Comprehensive loss	**($3,214)**	($24,686)	**($8,117)**	($35,921)
Loss per share - Basic				
From continuing operations	**($0.03)**	($0.09)	**($0.06)**	($0.17)
From discontinued operations	**-**	(0.10)	**-**	(0.12)
Loss per share - Basic	**($0.03)**	($0.19)	**($0.06)**	($0.29)
Loss per share - Diluted				
From continuing operations	**($0.03)**	($0.09)	**($0.06)**	($0.17)
From discontinued operations	**-**	(0.10)	**-**	(0.12)
Loss per share - Diluted	**($0.03)**	($0.19)	**($0.06)**	($0.29)

Our revenue streams consist of revenues earned on contracted projects, which are generally recognized over time, product sales, hardware and software system implementations, and service and maintenance contracts. Service and maintenance projects generally range from one to five-year terms but can be renewed with some contracts that could reach up to ten years or more. For project-based work, revenues will routinely vary significantly depending on the timing and nature of the specific projects underway in each reporting period.

Revenues for the three and six months ended June 30, 2024 were $41,513 and $76,410 compared to $38,623 and $66,969 in the comparative prior year period, respectively. The increase in revenue for the three and six months ended June 30, 2024 as compared to the comparative prior year period was a result of increased activity and improved performance in North American project revenue.

Gross profit as a value and as a percentage of revenues may be subject to significant variance in each reporting period due to the nature and type of contract and service work performed and currency volatility. Gross profit for the three and six months ended June 30, 2024 were $8,516 and $14,873, or 21% and 19%, as compared to $10,007 and $13,764, or 26% and 21%, in the prior year comparative periods, respectively. While gross profit margin percentage has increased on a sequential quarterly basis, the year-over-year decreases compared to the prior year periods were primarily due to one tolling project that is in the maintenance phase but experiencing a transitory period of lower-than-expected margin. The year-over-year decreases in gross profit margin were partially offset by continued strong performance in the Company's enforcement operations.

Total operating expenses are comprised of selling, general and administrative costs ("SG&A"), research and development ("R&D") costs, depreciation, amortization of intangible assets and other charges. Total operating expenses for the three and six months ended June 30, 2024 were $10,760 and $21,244 compared to $10,574 and $22,200 in the prior year comparative periods, respectively. The change for the three- and six-month periods, was primarily due to lower R&D expenses and other charges offset by higher SG&A.

We are committed to continual investments in R&D to enhance our current products and advance the availability of new products within the ITS industry. For the three and six months ended June 30, 2024, net R&D spending levels as a percentage of revenue were approximately 1.2% and 1.0% as compared to 2.6% and 2.8% in the comparative prior year periods, respectively. R&D expenses compared to the prior year comparative periods declined because of reassigning personnel to project revenue activities.

Income tax expense for the three and six months ended June 30, 2024 was $255 and $381 compared to $7,385 and $7,095 for the comparative prior year periods, respectively.

The Company is exposed to foreign exchange risk primarily relating to its revenue, operating and capital expenditures, and net assets held in foreign currencies. This is more fully described in the Risks and Uncertainties section.

Other income includes IRD's share of income or loss in its joint venture, Xuzhou-PAT Control Technologies Limited ("XPCT"). XPCT has two business divisions that provide products and services to the ITS industry and construction equipment manufacturers. For the six months ended June 30, 2024, IRD's share of XPCT's loss was $51 compared to income of $289 for the comparative prior year period. The loss for the six months ended June 30, 2024 in XPCT is a result of a decrease in the number of concurrent wire harness projects underway in comparison to the same period of the prior year.

Reconciliation of Net Loss to Adjusted EBITDA

Management considers Adjusted EBITDA, a non-IFRS financial measure, to be a useful indicator for the business to capture financial performance in a given period related to the operations of Quarterhill.

We reported Adjusted EBITDA of $1,612 and $1,781 for the three and six months ended June 30, 2024, compared to $2,906 and $(933) for the comparative prior year periods, respectively. The decrease in Adjusted EBITDA for the three months ended June 30, 2024, compared to the prior year period is due to the changes in revenue and direct costs of revenue as previously explained. Other charges generally consist of advisor fees, accounting and valuation fees, due diligence related expenses and legal fees, restructuring charges, and other one-time items. Although these expenses may recur, they are not fundamental to the actual operations of our businesses and, therefore, have been excluded in the calculation of Adjusted EBITDA. The remaining adjustments relate to finance income or expense, depreciation and amortization, non-cash stock-based compensation, equity loss or earnings and dividends received from joint venture, change in fair value of derivative liability, other acquisition related accounting items and other one-time charges.

From time to time, we may acquire businesses in purchase transactions that typically result in the recognition of goodwill and other identifiable intangible assets. Acquired goodwill is not amortized but is subject to impairment testing at least annually and as other events and circumstances dictate. Other identifiable intangible assets are typically subject to amortization and, therefore, will likely increase future expenses. The determination of the value of such intangible assets requires us to make estimates and assumptions. We have ascribed value to identifiable intangible assets other than goodwill in our purchase price allocations including, but not limited to, backlog, trade name, non-competition agreements, customers and developed software related intangible assets. To the extent we ascribe values to identifiable intangible assets that have finite lives, we amortize those values over the estimated useful lives of the assets.

Reconciliation of Net Loss to Adjusted EBITDA

	Three months ended June 30,			
	2024		2023	
	$	**Per Share [2]**	$	Per Share
			(restated)	
Net loss from continuing operations	**($2,967)**	**($0.03)**	($10,187)	($0.09)
Adjusted for:				
Income tax expense	**255**	**0.00**	7,385	0.06
Foreign exchange (gain) loss	**(387)**	**(0.00)**	769	0.01
Finance expense, net	**1,554**	**0.01**	1,704	0.02
Other charges	**321**	**0.00**	555	0.01
Depreciation and amortization	**2,887**	**0.03**	2,879	0.03
Stock based compensation expense	**708**	**0.01**	39	0.00
Change in fair value of derivative liability	**(432)**	**(0.00)**	(11)	(0.00)
Other income	**(267)**	**(0.00)**	(227)	(0.00)
Adjusted EBITDA [1]	**$1,672**	**$0.01**	$2,906	$0.03
Weighted average number of Common Shares				
Basic	**115,274,980**		114,649,772	

	Six months ended June 30,			
	2024		2023	
	$	**Per Share [2]**	$	Per Share
			(restated)	
Net loss from continuing operations	**($7,185)**	**($0.06)**	($19,270)	($0.17)
Adjusted for:				
Income tax expense	**381**	**-**	7,095	0.06
Foreign exchange gain	**(1,497)**	**(0.01)**	1,104	0.01
Finance expense, net	**2,991**	**0.03**	3,308	0.03
Other charges	**1,155**	**0.01**	1,519	0.01
Depreciation and amortization	**5,845**	**0.05**	5,714	0.05
Stock based compensation expense	**1,212**	**0.01**	270	0.00
Change in fair value of derivative liability	**(927)**	**(0.01)**	(215)	(0.00)
Other income	**(134)**	**-**	(458)	(0.00)
Adjusted EBITDA [1]	**$1,841**	**$0.02**	($933)	($0.01)
Weighted average number of Common Shares				
Basic	**115,186,092**		114,644,764	

[1] Refer to Adjusted EBITDA - Non-IFRS Financial Measures
[2] Refer to Adjusted EBITDA per share – Non-IFRS ratios

SELECTED CONSOLIDATED QUARTERLY RESULTS

	Revenues	Net loss from continuing operations	Net loss from continuing operations per share (basic)	Net loss	Net loss per share (basic)	Adjusted EBITDA *	Adjusted EBITDA per share *(basic)
Quarter ended	$ 000s	$ 000s	$	$ 000s	$	$ 000s	$
June 30, 2024	41,513	(2,967)	(0.03)	(2,967)	(0.03)	1,672	0.01
March 31, 2024	34,897	(4,218)	(0.04)	(4,218)	(0.04)	169	0.00
December 31, 2023	42,961	(11,474)	(0.10)	(11,474)	(0.10)	2,342	0.02
September 30, 2023	34,057	(1,663)	(0.01)	(1,391)	(0.01)	1,442	0.01
June 30, 2023	38,623	(10,187)	(0.09)	(21,781)	(0.19)	2,906	0.03
March 31, 2023	28,346	(9,083)	(0.08)	(11,550)	(0.10)	(3,839)	(0.03)
December 31, 2022	29,577	(13,959)	(0.12)	(15,166)	(0.13)	(1,099)	(0.01)
September 30, 2022	32,337	(3,821)	(0.03)	(7,446)	(0.06)	778	0.01

* Adjusted EBITDA and the respective per share amounts are non-IFRS measures; please refer to "Non-IFRS Financial Measures and Non-IFRS Ratios" and "Reconciliation of Adjusted EBITDA" sections of this MD&A.

Historically, our operating results have fluctuated on a quarterly basis and we expect that quarterly results will continue to fluctuate in the future, as revenues derived from the ITS business may be subject to varying project phases and seasonality. Operating results for interim periods should not be relied upon as an indication of the results to be expected or achieved in any future period or any fiscal year as a whole. The risk factors affecting our revenue and results, many of which are outside of our control, include those set out under the heading "Risk Factors" in our AIF.

Dividends declared on the Common Shares for the six months ended June 30, 2024 and 2023 were as follows:

	Six months ended June 30,	
	2024	2023
Dividends declared per common share	-	Can$0.0125
Amount	-	$1,060

In May 2023 the Company adjusted its capital allocation strategy and announced it will no longer pay a dividend. This decision creates financial flexibility and will best position the business to generate value through a capital allocation strategy focused on supporting the growth of the ITS business.

CAPITAL AND LIQUIDITY

The Company's capital management objectives are to maintain financial flexibility in order to pursue its strategy of organic growth and acquisition, and, from time to time, return capital to shareholders. The Company defines our capital as cash, the aggregate of cash and cash equivalents, short-term investments, restricted short-term investments, long-term debt, convertible debentures and shareholders' equity. The Company manages its capital structure in accordance with changes in economic conditions. To maintain or adjust its capital structure, the Company may purchase Common Shares for cancellation pursuant to one or more normal course issuer bids and/or substantial issuer bids, issue new Common Shares, issue convertible debentures or raise or retire our debts.

Our cash and cash equivalents totaled $24,041 as at June 30, 2024 compared to $42,733 as at December 31, 2023, representing a decrease of $18,692 primarily due to the acquisition of Red Fox, operational losses, debt repayment, and working capital fluctuations. At June 30, 2024, we had sufficient Adjusted Working Capital, a non-IFRS financial measure, of $68,422 to cover short and long-term obligations.

Due to the nature of our business activities, operating cash flows may vary significantly between periods due to changes and timing in working capital balances.

Our cash resources are generally used to fund our operations, provide working capital to any of our subsidiaries if needed and to acquire additional businesses. We may also fund our ongoing cash requirements through the use of additional short-term and long-term debt and, if desirable, based on market conditions, by selling Common Shares and debt securities to the public.

In 2021, in order to finance the ETC acquisition, we entered into a credit agreement to receive senior secured credit facilities from HSBC Bank Canada and Royal Bank of Canada consisting of a revolving credit facility in the maximum amount of $15,000 and a term credit facility of $50,000. These facilities replaced all existing credit facilities we had with HSBC Bank Canada. The interest rate as at June 30, 2024 was 7.43% and both facilities have a maturity date of September 1, 2026 with a general security agreement over all the assets in North America of IRD, ETC and its parent holding company, Quarterhill USA, Inc. The carrying value of these assets as at June 30, 2024 was $216,364 . As at and during the six months ended June 30, 2024, we repaid $531 of the term loan and had no borrowings or repayments on the revolving credit facility.

On June 27, 2023 (the "Amendment Date"), the Company finalized an amendment to its existing credit agreement. As of the Amendment Date, the balance on the term loan was $21,250. The amendment modified certain terms and conditions of the credit agreement to provide the Company with additional flexibility in its covenant and cash management, including a waiver on the Senior Leverage Ratio for all reporting periods up to March 31, 2024 (the "Covenant Relief Period") and a reduction in the revolving credit facility from $15,000 to $5,000.

Repayment of principal on the term credit facility was renegotiated to 2.5% of the balance as at the Amendment Date per quarter up to the maturity date, upon which the remaining balance is due.

Stated Capital Reduction

On May 8, 2023, the Company's shareholders approved a reduction of the stated capital of the Company in the amount of Can$120,000 or $87,948. The purpose of the stated capital reduction was to grant the board of directors more flexibility in capital management, specifically in relation to its ability to distribute dividends. The reduction in stated capital was offset by a corresponding increase in contributed surplus.

CONTRACTUAL OBLIGATIONS

Contractual obligations relating to accounts payable and accrued liabilities, long-term debt, convertible debentures and lease liabilities as at June 30, 2024 are due as follows:

	Total	Less than 1 year	2 - 3 years	4 - 5 years	Thereafter
Accounts payable and accrued liabilities	$28,350	$28,350	-	-	-
Long-term debt	18,594	2,125	16,469		-
Convertible debentures	42,460	-	42,460		-
Lease liabilities	7,585	2,056	3,776	1,340	413
	$96,989	$32,531	$62,705	$1,340	$413

OUTSTANDING COMMON SHARE DATA

We are authorized to issue an unlimited number of Common Shares, 6,351 special preferred, redeemable, retractable, non-voting shares and an unlimited number of preferred shares, issuable in series. As at June 30, 2024, there were 115,363,994 Common Shares and no special or preferred shares issued and outstanding. We also maintain the Quarterhill Inc. 2018 Equity Incentive Plan (the "Equity Plan"). Under the Equity Plan, we can issue a maximum of 10% of our issued and outstanding Common Shares from time to time which was, as at June 30, 2024, up to 11,536,399 Common Shares. As at June 30, 2024, we had options granted to purchase up to 4,980,515 Common Shares.

OFF-BALANCE SHEET ARRANGEMENTS

As at June 30, 2024, IRD has an outstanding 100% guarantee to XPCT, for a loan in the amount of 15,000 Chinese yuan or $2,064 (December 31, 2023 - $2,119); however, IRD has the right to seek recourse against its joint venture partner for any amount greater than IRD's proportionate share of the liability. The amount owing represents the maximum amount available to be drawn under this facility.

RELATED PARTY TRANSACTIONS

Subsidiaries

The financial statements include the accounts of Quarterhill Inc. and its wholly-owned subsidiaries. Balances and transactions between the Company and its subsidiaries, which are related parties, have been eliminated on consolidation and are not disclosed in this section.

Investment in Joint Venture

Investment in Joint Venture comprises a 50% interest, held by the Company's IRD subsidiary, in XPCT, an ITS products and manufacturing service provider in China. IRD had no sales during the six months ended June 30, 2024 (2023 - $8). At June 30, 2024, XPCT had $nil owing to IRD (December 31, 2023- $nil).

PROPOSED TRANSACTIONS

There are no proposed transactions.

CRITICAL ESTIMATES

Key areas involving estimation, uncertainty and critical judgments include the following:

Business Combinations
Purchase prices related to business combinations are allocated to the underlying acquired assets and liabilities based on their estimated fair value at the time of acquisition. The determination of fair value requires the Company to make assumptions, estimates and judgments regarding cash flow projects, valuation techniques, economic risk, weighted average cost of capital and future events. Significant judgments, estimates and assumptions are also required by management in estimating the amount of contingent consideration payable. As a result, the purchase price allocation impacts the Company’s reported assets and liabilities, including the amounts allocated to intangible assets and goodwill, and future earnings due to the impacts of amortization expense and impairment testing.

Revenue Recognition
Contract revenue, contract costs, contract liabilities and contract assets are based on estimates and judgments used in determining the progress of a contract. Estimates include amounts derived to measure the progress of the contract. Progress towards completion is measured by comparing the actual costs incurred to the total estimated costs for the contract. In determining the estimated costs to complete the contracts, assumptions and estimates are required to evaluate issues related to schedule, material and labour costs, changes in contract scope and subcontractor costs. Due to the nature of project contracts, estimates may change significantly between accounting periods. Changes in estimates are reflected in the period in which the circumstances that gave rise to the change became known and affect the Company’s revenue, contract assets, and contract liabilities.

Impairments for non-financial assets and Impairment Reversals
Quarterhill’s estimate of the recoverable amount for the purpose of impairment testing requires management to make assumptions regarding estimates of the present value of future cash flows including growth opportunities, economic risk, and the discount rate. These same assumptions are also used when assessing recoverability of impairments previously recognized.

Income Taxes and Deferred Taxes
Quarterhill is subject to income taxes in Canada and other foreign jurisdictions. The calculation of income taxes in many cases, however, requires significant judgment in interpreting tax rules and regulations. The Company's tax filings are subject to audits which could materially change the amount of current and deferred income taxes and liabilities. Additionally, estimation of the income tax provision includes evaluating the recoverability of deferred tax assets based on the assessment of the Company's ability to use the underlying future tax deductions before they expire against future taxable income. The assessment is based on existing tax laws, estimates of future profitability and tax planning strategies. If the future taxable results of the Company differ significantly from those expected, the Company would be required to increase or decrease the carrying value

of the deferred tax assets with a potentially material impact on the Company's consolidated statements of financial position and consolidated statements of comprehensive income. The carrying amount of deferred tax assets is reassessed at each reporting period and reduced to the extent that it is no longer probable that sufficient taxable income will be available to utilize all or part of the deferred tax assets. Unrecognized deferred tax assets are recognized to the extent that it is more likely than not that taxable income will be available against which deferred tax assets can be utilized.

FUTURE ACCOUNTING PRONOUNCEMENTS

Amendments to IAS 21, *The Effects of Changes in Foreign Exchange Rates – Lack of Exchangeability*

In August 2023, the IASB issued *Lack of Exchangeability* (Amendments to IAS 21). The amendment to IAS 21 specifies how an entity should assess whether a currency is exchangeable and how it should determine a spot exchange rate when exchangeability is lacking. The amendments will be effective for annual periods on or after January 1, 2025, with early adoption permitted. Comparative information cannot be restated when applying the amendments.

IFRS 18, "Presentation and Disclosure in the Financial Statements"

In April 2024, the IASB issued IFRS 18, *Presentation and Disclosure in the Financial Statements* which aims to improve the quality of financial reporting by introducing three sets of new requirements which include new required categories and subtotals in the statement of profit and loss, disclosure about management-defined performance measures, and enhanced guidance on grouping of information. This standard is effective for annual periods beginning on or after January 1, 2027, with early adoption permitted.

Amendments to IFRS 9 and IFRS 7, "Classification and Measurement of Financial Instruments"

In May 2024, the IASB issued Amendments to the Classification and Measurement of Financial Instruments (Amendments to IFRS 9 and IFRS 7) which aims to clarify the classification and measurement of certain financial instruments. For a financial liability the amendments clarify derecognition should be on settlement date – when the obligation is discharged, canceled, expired or otherwise qualified for derecognition. In addition, a new accounting policy option allows for derecognition of financial liabilities through electronic payment systems before settlement date, provided specific conditions are met.

The amendments also clarify how to assess the contractual cash flow characteristics of financial assets with ESG-linked features or other similar contingent features, and treatment of non-recourse assets and contractually linked instruments. Enhanced disclosure requirements are introduced for financial assets and liabilities with contractual terms referencing contingent events (including those that are ESG-linked) and equity instruments classified at fair value through other comprehensive income. The new requirements will be applied retrospectively with adjustment to opening retained earnings. Prior periods are not required to be restated and can only be restated without using hindsight. The amendments will be effective for annual periods beginning on or after January 1, 2026, with early adoption permitted for financial assets classification and the related disclosures.

Management is currently assessing the impact of these amendments.

RISKS AND UNCERTAINTIES

Quarterhill operates in a dynamic and competitive business environment that exposes it to a number of risks and uncertainties. This MD&A is qualified in its entirety by the risk factors described under the heading "Risk Factors" in the AIF. The risks and uncertainties discussed in greater detail under the heading "Risk Factors" in our AIF are not, however, the only risks we face. We may also be subject to additional risks and uncertainties that are currently unknown or not currently deemed material to our business operations. If any of the risks or uncertainties we face were to occur, they could materially affect our future operating results and could cause actual events and results to differ materially from those which we expect or that we have described in our forward-looking statements.

In addition to the risk factors identified in our AIF, we may be exposed to other risks as follows:

Credit Risk

Credit risk is the risk of financial loss to the Company if a counter-party to a financial instrument fails to meet its contractual obligations. Financial instruments that potentially subject us to concentrations of credit risk consist primarily of cash and cash equivalents, accounts receivable and unbilled revenue.

Our cash and cash equivalents consist primarily of deposit investments that are held primarily with Canadian and American chartered banks. Management does not expect any counter-parties to fail to meet their obligations.

We recognize a loss allowance provision using the simplified approach based on lifetime expected credit losses. Our exposure to credit risk with our accounts receivable from customers is influenced mainly by the individual characteristics of each customer. Our operating subsidiaries' customers are for the most part, large multinational companies or government organizations which do not have a history of non-payment. Credit risk from accounts receivable encompasses the default risk of customers. Prior to entering into transactions with new customers, we assess the risk of default associated with the particular customer. In addition, on an ongoing basis, management monitors the level of accounts receivable attributable to each customer and the length of time taken for amounts to be settled and where necessary, takes appropriate action to follow up on those balances considered overdue. We have had no material bad debts for any periods presented.

None of the amounts outstanding have been challenged by the respective counterparties and we continue to conduct business with them on an ongoing basis.

Quarterhill reviews financial assets on an ongoing basis with the objective of identifying potential matters which could delay the collection of funds at an early stage. Once items are identified as being past due, contact is made with the respective customer to determine the reason for the delay in payment and to establish an agreement to rectify the breach of contractual terms.

Liquidity Risk
Liquidity risk is the risk that we will not be able to meet our financial obligations as they fall due. Our objective in managing liquidity risk is to ensure that we have sufficient liquidity available to meet our liabilities when due. We manage our liquidity needs through various sources including cash generated through operations, cash reserves, various revolving credit facilities, long-term debt, convertible debentures and the issuance of Common Shares.

Market Risk
Market risk is the risk that the fair value of future cash flows from our financial instruments will fluctuate due to changes in interest rates and foreign currency exchange rates.

Interest Rate Risk
The financial instruments that expose the Company to interest rate risk are its cash and cash equivalents, short-term investments, bank indebtedness and long-term debt. The Company's objectives of managing its cash and cash equivalents and short-term investments are to ensure sufficient funds are maintained on hand at all times to meet day-to-day requirements and to place any amounts that are considered in excess of day-to-day requirements on short-term deposit with the Company's banks so that they earn interest. When placing amounts of cash and cash equivalents into short-term investments, the Company only places investments with Canadian chartered banks and ensures that access to the amounts placed can be obtained on short notice. A one percent increase or decrease in interest rates would not have resulted in a material increase or decrease in interest income or expense during the six months ended June 30, 2024.

Currency Risk
Portions of the Company's revenues and operating expenses are denominated in Canadian dollars, Chilean pesos, Mexican pesos, euros and Chinese yuan. Because these financial statements are reported in U.S. dollars, the Company's operating results are subject to changes in the exchange rate of the foreign currencies (primarily Canadian dollars and euros) relative to the U.S. dollar. For instance, a decrease in the value of the Canadian dollar relative to the U.S. dollar has an unfavourable impact on Canadian dollar denominated revenues and a favourable impact on Canadian dollar denominated direct cost of revenues and operating expenses. Approximately 14% of the Company's cash and cash equivalents are denominated in Canadian dollars and euros, and are subject to changes in the exchange rate of the Canadian dollar and euro relative to the U.S. dollar.

DISCLOSURE CONTROLS AND PROCEDURES AND INTERNAL CONTROL OVER FINANCIAL REPORTING

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

In addition, our Chief Executive Officer and Chief Financial Officer have designed or caused to be designed under their supervision internal controls over financial reporting ("ICFR") to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements. The control framework used to design our ICFR is the "Internal Control - Integrated Framework (2013)" published by the Committee of Sponsoring Organizations of the Treadway Commission.

As of June 30, 2024, an evaluation was performed on the effectiveness of ICFR to provide reasonable assurance regarding the reliability of financial reporting and financial statement compliance with IFRS. Based on the evaluation performed at that time, the Chief Executive Officer and Chief Financial Officer concluded they were able to certify that the design and operating effectiveness of ICFR were effective.

There were no changes to our ICFR during the three and six months ended June 30, 2024 that have materially affected, or are reasonably likely to materially affect, our ICFR.

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

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