



TINKERINE STUDIOS LTD.

MANAGEMENT DISCUSSION AND ANALYSIS

For the six months ended June 30, 2018



Ditto™ Pro 3D Printer & Tinkerine U online 3D content

MANAGEMENT DISCUSSION AND ANALYSIS
FOR
Tinkerine Studios Ltd. (“the Company”)

President’s Message

To all shareowners,

When I look at Tinkerine, I often evaluate and compare where we are today to where we are trying to achieve. At inception, we told ourselves that we were going to build the easiest to use hardware so that our users can focus on building innovation versus trouble-shooting hardware. In essence, we’re making our technology fade to the background. This was to ensure that when we set out a goal to educate and empower a generation of creatives to develop the skills, they can dedicate everything to understanding how to leverage the new gained knowledge.

We have often heard that education is a long-term play, and it is. However, what I believe is that if we are to be truly successful, we must focus on the long-term wins for everyone we touch. That means the teachers, the administrators, the parents, and ultimately the students.

Mission

At Tinkerine, we are building a creation system driven by 3D printing. Our mission is to provide foundational understanding about Applied Creativity. Education is at the center of this approach. Meaningful transfer of knowledge and efficacy is key to our success. While there is still a long road ahead of us, it is paramount that we continue investing into the infrastructures such as Tinkerine’s education platform, new hardware platforms, and Tinkerine’s software ecosystem.

As we execute on our strategy, I would like to thank all the shareowners for their continued support, and our educational customers for all the support and insight they have shared. Most importantly, the team at Tinkerine for the countless hours and dedication.

Financial results high lights for Q2 2018 are as follows:

Management's Discussion and Analysis of the Financial Position and Results of Operations

August 14, 2018

The following discussion and analysis regarding the financial position and results of operations provides information of the operations and financial results of Tinkerine Studios Ltd. ("the Company") that the management believes is relevant for the review, assessment and understanding the Company's unaudited condensed consolidated interim financial statements for the six months ended June 30, 2018. The Management's Discussion and Analysis (MD&A) should be read in conjunction with the unaudited consolidated interim financial statements. Readers may want to refer to the December 31, 2017 audited financial statements and the accompanying notes which are available at www.sedar.com.

Background and Description of the Business

Tinkerine Studios Ltd is one of Canada's largest developer, producer and distributor of 3D printers, with its innovative software platform that is supported through TinkerineU, the online educational support and content portal.

Tinkerine designs, manufactures and distributes 3D printers in Canada, USA and the APAC region. The Company's product offering is the Ditto, Litto and Ditto Pro that are well priced in each segment of the market and are gaining a reputation for quality 3D printers and innovative, high quality educational support.

The financial information in this MD&A is based on the Company's unaudited consolidated interim financial statements which have been prepared in Canadian dollars, in accordance with International Financial Reporting Standard ("IFRS").

Non-IFRS Measures

The accompanying unaudited interim condensed consolidated financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS) in Canadian dollars. Certain supplementary information and measures not recognized under IFRS are also provided in this MD&A where management believes they assist the reader in understanding Tinkerine's results. These measures are calculated by Tinkerine on a consistent basis unless otherwise specifically explained. These measures are further explained as follows:

EBITDA – means net earnings or losses before interest, taxes, depreciation, amortization, foreign exchange gains and losses and stock-based compensation. EBITDA is a metric used to assess the financial performance of an entity. Management believes that this metric assists in determining the ability of the Corporation to generate cash from operations.

Cash flow from operations – means cash flow from operations before changes in non-cash operating working capital. This measure is not intended to be an alternative to cash provided by operating activities as provided in the consolidated statements of cash flows, comprehensive income or other measures of financial performance calculated in accordance with IFRS. Cash flow from operations assists management and investors in analyzing operating performance and leverage.

Q2 2018 Overview and Highlights

The Company's principal business is the design, manufacture and distribution of 3D printers, software and related online educational content. It is also the exclusive supplier of the filament that is used in the printer

- Q2 2018 revenue is \$158,320 for the second 3 months of the year, versus Q2 2017 revenue of \$266,276, down by 40.5% compared to a year ago. The Q2 revenue was the result of weaker sales in the K-12 school education channel, that historically represented a significant portion of the company's business in this quarter
- Revenue for the first 6 months ended June 30, 2018 is \$312,161, down by 28% compared to revenue of \$433,123 a year ago. In analyzing the revenue for 6 months there was a significant decrease in the Canadian market of 49%, whereas both the US market and the Other market increased year over year by 38% and 23% respectively.

- In the first 6 months of 2018 revenue derived by geographic segment was Canada – \$168,183 and United States – \$135,135 and Other is \$8,843 versus geographic segmented sales in the first 6 months in 2017 of Canada – \$327,667, United States – \$98,235 and Other – \$7,221. Canadian sales were impacted by the weaker sales in the high school channel. However, this channel remains committed to technology focused programs. Tinkerine's education courses have been expanded from K-12, to the college and tertiary education market
- The Company utilizes its Tinkerine U portal to offer its 3D courses and 3D certification, that has been made available on-line for educators, students and professionals. In addition, the Company has used this portal for a large part of their sales and marketing initiatives. The Company's strategic focus is to build, expand and strengthen the demand for our Ditto™ Pro 3D printers with primary focus on the education market.

Q2 2018 loss before interest, taxes, depreciation, amortization, foreign exchange gains and losses and stock-based compensation (EBITDA) increased by \$32,582 to a deficit of \$61,571 in Q2 2018 compared to a deficit of \$28,989 in Q2 2017.

The Company's net loss for Q2 2018 increased to a net loss of \$77,875 compared to the net loss of \$35,137 in Q2 2017. This change is attributable to the lower sales in our Canadian market. Our total cash expenses are higher by \$4,637 at \$140,201 in Q2 2018 versus \$135,564 in Q2 2017.

Q2 2018 Financial Highlights

- **Sales revenue decreased by 40.5% to \$158,320 in Q2 2018 versus \$266,276 to a year ago.**
- **3% increase in expenses to \$158,107 in Q2 2018 from \$153,128 in Q2 2017.**
- **EBITDA increase to a deficit of \$61,571 in Q2 2018 compared to a deficit of \$28,989 in Q2 2017.**
- **Working capital was a deficit of \$18,205 in Q2 2018 versus \$283,102 in Q2 2017.**
- **A net cash deficit of \$55,643 from Operating Activities versus Net Cash position of \$136,457 in Q2 2017.**

Detailed Discussion and Analysis of Operating Results for the Periods Ended June 30 2018 and June 30 2017

1. Revenue

Revenue for Q2 2018 was \$158,320 for the three months ended June 30, 2018 versus \$266,276 for the comparative period Q2 2017. For the six months period ended June 30, 2018, the revenue was \$312,161 versus \$433,123 in 2017

For Q2 2018, revenue was represented by 55% hardware sales, 39% filament and 7% services/miscellaneous. Comparatively revenue for Q2 2017 was represented by 86% hardware sales, 8.4% filament and 5.6% services/miscellaneous. The change in the 2018 proportion of sales revenue between hardware sales and filament is due to distributors restocking their filament inventory in Q2.

The number of 3D printers sold in Q2 2018 was 42 3D printers compared to 137 3D printers sold in the second quarter of 2017.

Filament Revenue for Q2 2018 is \$61,057 compared to \$21,302 in Q2 2017. The increase in filament revenue was due to distributors restocking their filament inventory.

2. Gross Profit Margins

Gross profit for the three months ended June 30, 2018 was \$80,231 or 50.7%, an improvement of 6.7% in the gross profit margin versus \$117,991 or 44% for the three months ended June 30, 2017. This improvement in gross profit margin can be attributable the filament sales in Q2 and to the weak Canadian dollar in Q2. Gross profit margin for the six months ended June 30, 2018 is \$139,077 or 44.6% versus \$177,831 or 41% in 2017.

3. Expenses

In Q2 2018 the Company incurred \$158,107 of total expenses compared to \$153,128 in Q2 2017, a marginal increase of \$4,979 in total expenses. For the six months ended June 30, 2018 total expenses were \$331,810 versus \$329,681 for the six months ended June 30, 2017, a marginal increase in total expenses of \$2,129. The Company's RTO occurred in April 2014 and expenditures prior to that time were more limited. The Company continues to manage its controllable expenses and the total cash expenses was \$140,201 in Q2 2018 versus \$135,564 in Q2 2017, an increase of \$4,637. For the six months ended June 30, 2018 total cash expenses were \$294,414 versus \$288,699 for the six months ended June 30, 2017 an increase of \$5,715. We continue to review departmental budgets and corporate spending in all areas and these are further discussed below.

Highlighted quarterly expenses include the following:

- Remuneration and benefits is lower by \$6,156 at \$70,998 for Q2 2018 versus \$77,154 for Q2 2017. For the six months ended June 30, 2018 remuneration and benefits was marginally higher by \$1,030 at \$141,106 versus \$140,076 for the six months ended June 30, 2017.
- Stock based compensation was \$2,149 in Q2 2018 before the reversal of \$13,175 for share options that were cancelled, versus approximately \$1,875 in Q2 2017 before the reversal of \$13,895. For the six months ended June 30, 2018 stock-based compensation was \$5,890 before the reversal of \$13,175 for share options cancelled, versus \$8,612 before the reversal of \$13,895 for the six months ended June 30, 2017. This is a non-cash expense and represents the fair value of stock options granted and outstanding using the Black Scholes calculation. Under IFRS, the expense is recognized as the options vest each quarter with a larger proportion of the expense recognized in earlier quarters. There were no stock options issued in the first 6 months of fiscal 2018. In Q3 of 2017 725,000 share options were issued to key consultants and directors. In Q1 2016 key employees were issued with a total of 1,075,000 share options at the exercise price of \$0.075. In Q2 2016 key personnel were issued with a total of 1,195,000 share options at the exercise price of \$0.075.
- Professional and consulting fees were \$33,649 for Q2 2018 versus \$29,650 in Q2 2017. For the six months ended June 30, 2018 professional and consulting fees was \$89,615 versus \$56,913 for the six months ended June 30, 2017. The increase in this expense was primarily related to certain sales and marketing consulting services of \$33,091 provided by a director of the Company.
- Product promotion, trade shows and travel is \$633 for Q2 2018 versus \$1,563 in Q2 2017. For the six months ended June 30, 2018 product promotion, trade shows and travel is \$993 versus \$1,928 for the six months ended June 30, 2017. These costs relate to marketing, branding, advertising and attending trade shows and while we strive to maintain meaningful marketing activities each quarter such costs are not incurred evenly from period to period but are based on the timing of the trade show. We have also supplemented our trade show strategy with the introduction of inhouse seminars hosted at our offices for selected attendees in education and expanded to professionals in other engineering, design and creative industries

LIQUIDITY

As at June 30, 2018, the Company had net working capital deficit of \$18,205 compared to \$137,132 at December 31, 2017. Our cash position was \$151,614 at the end of Q2 2018 compared to \$207,257 at December 31, 2017.

In Q2 2018 the Company's investment in inventory was \$226,122 with finished goods total \$166,767 and raw materials \$59,355, compared to finished goods of \$180,346 and raw materials of \$103,214 at December 31, 2017. The investment in 3D printer inventory improves our ability to fulfil dealers' orders in a timely manner and provides the infrastructure to sell into large institutions. Prepaid and Deposits were \$20,304 at June 30, 2018 versus \$15,167 in December 31, 2017 and these payments are related to prepayment of overseas parts purchases.

At the time of release of this MD&A management believes the Company is presently in a position that may require additional equity investment over the coming months. While our cash position is somewhat tight we believe we have managed our existing operations with the existing working capital. Any further downturn in sales or, alternatively, pursuit of a more aggressive growth strategy would necessitate further equity investment.

CAPITAL RESOURCES

As at June 30, 2018, the Company's share capital was \$4,329,369 representing 49,238,349 issued and outstanding common shares without par value. There were no share transactions for the first six months of 2018 fiscal year. Reserves, representing the fair value of stock options outstanding and vested and warrants issued, is recorded at \$315,168. The net decrease in Reserves during the first six months of 2018 is the net difference of \$7,285, based on the calculated charge for Stock-based Compensation of \$5,890 to the reserve account and the reversal of \$13,175 from the reserve account due to the cancellation of stock options.

As at June 30, 2018 the Company has 3,535,000 stock options outstanding with a weighted average exercise price of \$0.075 and an average remaining term of 2.33 years. There were no warrants outstanding at the end of the 2nd quarter. Warrants of 6,600,000 at \$0.10 expired in March 2018.

The Company has no debt facilities and no off-balance sheet arrangements.

OUTSTANDING SHARE INFORMATION

The Company's authorized capital is unlimited common shares without par value. As at August 18, 2018, the following common shares, options and share purchase warrants were outstanding:

As at August 18, 2018	Number of Issued and outstanding
Common Shares	49,238,349
Stock Options	3,535,000
Warrants ¹	-
	<u>52,773,349</u>

TRANSACTIONS WITH RELATED PARTIES

Balances due to related parties are unsecured, non-interest bearing and have no fixed terms of repayment. Included in trade payables at June 30, 2018 is \$1,429 (December 31, 2017 - \$11,546) due to officers in the normal course of business.

Key management personnel compensation

During the six months ended June 30, 2018, the officers of the Company were paid salaries or independent contractor fees as follows: Eugene Suyu, CEO, \$30,000 (2017 - \$30,000); Justin Sy Interim CFO, \$22,500 (2017 - \$22,500). In aggregate Stock-based compensation of \$4,671 was attributable to options held by directors and officers in the six months ended June 30, 2018 (2017 - \$2,218).

Officers and directors

The following individuals were re-elected to director at the June 28, 2018 AGM and continue to the date of this MD&A. There were no board changes in the current year.

- Eugene Suyu -- Chief Executive Officer, President and Director
- Justin Sy – Director and iCFO
- Todd Blatt -- Director
- Bob Longo – Director

¹6,600,000 10c warrants were not exercised and expired in March 2018

- Dan Cugnet - Director

OFF-BALANCE SHEET ARRANGEMENTS

The Company does not have any off-balance sheet arrangements as at June 30, 2018 and to the date of this MD&A.

CHANGES IN ACCOUNTING POLICIES

The preparation of the condensed interim financial statements and related MD&A have been prepared in conformity with IFRS requires estimates and assumptions that affect the amounts reported in these financial statements. Accounting policies for these condensed financial statements have been prepared consistent with those applied and disclosed in the Company's annual audited financial statements.

APPROVAL

The Board of Directors of the Company has approved the disclosure contained in this MD&A on August 15, 2018

ADDITIONAL INFORMATION

Additional information relating to the Company is on SEDAR at www.sedar.com.

CAUTION REGARDING FORWARD-LOOKING INFORMATION

The MD&A contains forward-looking statements and forward-looking information (collectively, "forward-looking statements") within the meaning of applicable Canadian and US securities legislation. These statements relate to future events or the future activities or performance of the Company. All statements, other than statements of historical fact are forward-looking statements. Forward-looking statements are typically identified by words such as: believe, expect, anticipate, intend, estimate, postulate and similar expressions, or which by their nature refer to future events. These forward looking statements include, but are not limited to, statements concerning:

- the Company's strategies and objectives, both generally and in respect of its existing business and planned business operations;
- the Company plans to grow sales and expand its distribution network;
- the Company's future cash requirements;
- general business and economic conditions;
- the Company's ability to meet its financial obligations as they come due, and to be able to raise the necessary funds to continue operations; and,
- the timing, pricing, completion, regulatory approval of proposed financings if applicable.

Although the Company believes that such statements are reasonable, it can give no assurance that such expectations will prove to be correct. Inherent in forward looking statements are risks and uncertainties beyond the Company's ability to predict or control, including, but not limited to, risks related to the Company's ability to raise the necessary capital or to be fully able to implement its business strategies, and other risks identified herein under "Risk Factors".

The Company cautions investors that any forward-looking statements by the Company are not guarantees of future performance, and that actual results are likely to differ, and may differ materially, from those expressed or implied by forward looking statements contained in this report. Such statements are based on a number of assumptions, which may prove incorrect, including, but not limited to, assumptions about:

- general business and economic conditions;
- conditions in the financial markets generally, and with respect to the prospects for small capitalization commercial/technology companies specifically;
- the Company's ability to roll out its business plan which includes new product launches and associated planning in production, sales, distribution and marketing;

- the Company's ability to secure and retain employees and contractors to carry out its business plans;

These forward-looking statements are made as of the date hereof and the Company does not intend and does not assume any obligation, to update these forward-looking statements, except as required by applicable law. For the reasons set forth above, investors should not attribute undue certainty to or place undue reliance on forward-looking statements.

Historical results of operations and trends that may be inferred from the following discussion and analysis may not necessarily indicate future results from operations

BUSINESS RISK FACTORS

Each of the following factors could have a material adverse effect on the Company's financial condition and results of operations.

3D Printing Industry: The Company operates in the desktop market (alternatively described as the consumer segment) of the 3D printing industry. The desktop market has existed since 2008. Although projected to grow at a high rate, this segment can be viewed as being an early adopter stage market. The ability for the Company to successfully negotiate this market represents a substantial risk.

Dependence upon key personnel: The success of the Company's operations will also depend upon its ability to attract and retain talented and qualified personnel. The Company currently has a small management team, several of which can be considered key to expanding the Company's business operation, the loss of which would likely be detrimental to the Company.

Competition: The desktop market of the 3D printing industry is competitive with several direct competitors having much greater financial resources than the Company and more operating experience. Furthermore, the desktop market is undergoing a period of rapid innovation with many of the participants striving to improve the technology and the flexibility of the products. These factors combine to make the competitive environment a substantial risk.

Financing risks: The Company's existing financial resources have come from the issue of new equity and, may be viewed as limited. Further the Company has negative operating cash flow and a cash balance of \$151,614, as at June 30, 2018. Therefore, without growth in operating cash flow the Company will require further equity capital injection(s) to sustain itself. There can be no assurance that the Company will be able to obtain adequate financing in the future or that the terms of such financing will be favorable.

Dilution to the Company's existing shareholders: Any future equity issues may be dilutive to present and prospective holders of common shares.

Regulatory requirements: The activities of the Company are subject to regulations governing various matters, including but not limited to standards and certifications for electronic devices, employment standards for employees engaged in manufacturing and assembly, export and import regulations and duties, and sales and goods and service tax compliance. While the Company endeavours to remain compliant in all such aspect, the inability to do so could have an adverse effect on its ability to continue to operate.

Foreign currency risk: The Company's functional and reporting currency is the Canadian dollar. The Company incurs foreign currency risk on purchases that are denominated in a currency other than the functional currency of the Company, which will have an impact on the profitability of the Company and may also affect the value of the Company's assets, liabilities and the amount of equity. The Company's main risks are associated with fluctuations in the US dollar as a substantial portion of its parts and materials purchases are denominated in US dollars and a portion of its sales are denominated in US dollars. The Company does not enter into any foreign exchange hedging contracts.

Corporate Information

<p>REGISTERED OFFICE</p> <p>1500-1055 West Georgia Street Vancouver, British Columbia, Canada V6E 4N7</p> <p>HEAD OFFICE and OPERATIONS</p> <p>Tinkerine Studios Ltd. 213A 8275 92 Street Delta, British Columbia, Canada V4G 0A4</p> <p>OFFICERS & DIRECTORS</p> <p>Eugene Suyu <i>Director and CEO</i></p> <p>Justin Sy <i>Director and CFO</i></p> <p>Todd Blatt <i>Director</i></p> <p>Bob Longo <i>Director</i></p> <p>Dan Cugnet <i>Director</i></p>	<p>LISTINGS</p> <p>TSX Venture Exchange: TTD.V OTC Pink: TKSTF FSE: WB6B</p> <p>CAPITALIZATION (as at June 30th, 2018)</p> <p>Shares Issued: 49,238,349</p> <p>TRANSFER AGENT Computershare 3rd Floor, 510 Burrard Street Vancouver, British Columbia V6C 3B9</p> <p>AUDITOR Dale Matheson Carr-Hilton LaBonte LLP 1500 – 1140 West Pender Street Vancouver, British Columbia V6E 4G1</p> <p>LEGAL COUNSEL McMillan LLP Royal Centre 1500-1055 West Georgia Street Vancouver, British Columbia V6E 4N7</p>
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