

This Management's Discussion and Analysis ("MD&A") of BTQ Technologies Corp. ("BTQ", or the "Company") is for the quarter ended June 30, 2024 and is dated August 13, 2024. The MD&A should be read in conjunction with the Company's unaudited condensed interim consolidated financial statements and related notes for the quarter ended June 30, 2024. The unaudited condensed interim consolidated financial statements are prepared in accordance with International Financial Reporting Standards ("IFRS") and all monetary amounts are expressed in Canadian dollars. The following comments may contain management estimates of anticipated future trends, activities, or results. These are not a guarantee of future performance since actual results could change based on other factors and variables beyond management control.

The management of the Company is responsible for the preparation and integrity of the consolidated financial statements, including the maintenance of appropriate information systems, procedures, and internal controls and to ensure that information used internally or disclosed externally, including the consolidated financial statements and MD&A, is complete and reliable. The Company's board of directors (the "Board") follows recommended corporate governance guidelines for public companies to ensure transparency and accountability to shareholders. The Board's audit committee meets with management quarterly to review the financial statements including the MD&A and to discuss other financial, operating, and internal control matters.

Additional information relating to the Company, including its AIF for the year ended December 31, 2023, is available under the Company's profile on SEDAR+ at www.sedarplus.ca.

#### **DESCRIPTION OF BUSINESS AND OVERVIEW**

BTQ is a British Columbia corporation founded by a group of experienced post-quantum cryptographers with an interest in addressing the urgent security threat that a large-scale universal quantum computer poses to the Bitcoin network. Bitcoin's store of value thesis - one that supports a crypto ecosystem of over \$1 trillion in market capitalization - has several potential quantum attack vectors that could compromise the network. This paradigm shift requires a new direction in cryptography and blockchain design. BTQ is building a portfolio of intellectual property to safeguard the crypto asset class with energy efficient quantum processes and currently holds several patent applications for generating quantum algorithms.

Quantum computers can take a very large integer and find out its prime factor extremely rapidly by using Shor's algorithm. Theoretically, a universal large scale quantum computer could be used to disrupt cryptocurrencies, break into digital wallets, and access and decrypt confidential communications. Ethereum and Algor, two of the most technologically advanced cryptocurrencies, announced plans to transition to post-quantum standards.

BTQ has strategically established a branch office in Taipei, Taiwan, home to the most advanced hardware and post-quantum ecosystems. The Taipei engineering office will focus on research and development related to post-quantum cryptography, eco-friendly proof of work mining, and formal verification within smart contracts platforms.

BTQ is listed on the NEO Exchange (the "NEO") under the symbol "BTQ", the OTCQB under the symbol "BTQQF" and the Frankfurt Stock Exchange under the symbol "NG3".

### Acquisition

On December 31, 2021 (as amended on April 29, 2022, July 30, 2022, and November 29, 2022), the Company entered into a share exchange agreement with BTQ AG (the "Acquisition"). BTQ AG was incorporated in the Principality of Liechtenstein on March 26, 2021 by a group of experienced post-quantum cryptographers with an interest in addressing the urgent security threat that a large-scale universal quantum



computer poses to the Bitcoin network.

In connection with the Acquisition, the Company completed a private placement (the "Offering") of 18,001,250 subscription receipts at a price of \$0.40 per subscription receipt, for gross proceeds of \$7,200,500, with each subscription receipt automatically converting with no additional consideration into one post-Consolidation Share (each as defined below) concurrent with the closing of the Acquisition.

On February 17, 2023, the Company closed the Acquisition resulting in the issuance of 92,000,000 post-Consolidation Shares to the BTQ AG shareholders. Concurrent with the closing, the Company changed its name from Sonora Gold & Silver Corp. to BTQ Technologies Corp. and completed a consolidation (the "Consolidation") of its common shares on the basis of ten pre-Consolidation shares to one post-Consolidation share (each, a "Share"). Immediately following the Consolidation, and excluding those Shares issued pursuant to the Acquisition or the Offering, the former securityholders of Sonora Gold and Silver Corp. ("SOC") held an aggregate of 8,747,629 Shares and 350,000 stock options in the Company. All Share amounts have been retroactively restated to reflect the Consolidation for all periods presented.

On closing of the Acquisition, the gross proceeds of \$7,200,500 from the Offering were released from escrow and each subscription receipt was converted into one Share. In connection with the Acquisition, the Company issued 2,500,000 Shares with a fair value of \$1,000,000 to a finder as a success fee. In connection with the Offering, the Company also paid \$93,175 in finders' fees and issued 232,936 finders' warrants exercisable at an exercise price of \$0.40 per Share for a period of two years.

As a condition of the Acquisition, the Company voluntarily delisted its Shares from the TSX-V and the Shares commenced trading on the NEO on February 21, 2023 under the symbol "BTQ".

#### **DISCUSSION OF OPERATIONS**

The following are operational highlights for the year ended December 31, 2023 and events subsequent up until the date of this MD&A.

### **Product Updates**

On March 2, 2023, the Company announced the alpha release of Keelung, a domain-specific language designed for fast, private, and secure application development. Based on research in the field of post-quantum zero-knowledge cryptography, Keelung will empower developers to create secure and reliable post-quantum zero-knowledge proofs without the need for specialized cryptography skills. Both Keelung and its compiler have been implemented in Haskell, enabling developers to produce high-level zero-knowledge proofs protected by Haskell's type system while leveraging Haskell's extensive ecosystem and tooling. Keelung will be 100% open-source, allowing for transparency, collaboration, and community-driven development.

Keelung is now live and open-sourced. The release information can be found here: https://github.com/btq-ag/keelung/releases. The steps to complete over the coming year are as follows:

- 1. Language Extensions (v0.19.0 v0.20.0): Added support for user-defined datatypes, unsigned integer comparisons, and optimizations to the constraint system and compiler.
- 2. Optimization and Stability (v0.21.0): Introduced a more precise method for reference counting on unsigned integers, renaming of primitive datatype conversions, and numerous bug fixes and stability improvements for the compiler.
- 3. Upcoming Optimizations (v0.22.0+): Planned optimizations include operators for slicing and joining unsigned integers, improved polynomial representation, faster polynomial insertion, standard



library optimizations (e.g., AES, Blake2), and constraint reduction for faster proof generation.

- 4. Developer Experience (Ongoing): Refinements to the DSL syntax, performance improvements for common data types, benchmarking in the CI/CD pipeline, and expanded documentation and tutorials to improve the developer experience.
- 5. Ecosystem Integration (Future): Planned integration with popular ZK toolchains like Snarkjs/Circom, support for PLONK-based proving systems, and quantitative information flow analysis for privacy leakage detection.

On June 5, 2023, the Company published a research paper on proof-of-work consensus by quantum sampling. The paper presents a novel approach that has the potential to revolutionize blockchain consensus algorithms.

On June 26, 2023, the Company announced that it had received approval from the USPTO for its patent application, "A system and method for quantum-safe authentication, encryption, and decryption of information". The patent relates to methods for generating a private cryptographic key for use in a secure cryptogram for transmission between entities, enabling quantum-safe encryption.

On July 27, 2023, the Company announced that its Quantum-Secure Signature Technology "Preon" had been selected by the National Institute of Standards and Technology (NIST) for consideration in their Post-Quantum Cryptography (PQC) standardization process. Preon is a robust and efficient post-quantum signature scheme, showcasing distinctive features including small key size, rapid key generation, minimal assumptions, and flexible functionality. These attributes make it resistant to potential threats from both classical and quantum computers. The co-authors of this submission include Hon Hai Research Institute, the research arm of global leader Hon Hai Precision Industry Co., Ltd. (Foxconn).

On October 4, 2023, BTQ announced the advancement of its collaboration with ITRI to develop a security chip that utilizes QCIM (Quantum Computation in Memory) technology. This chip will be used for the computation of Kyber, a standardized algorithm by the National Institute of Standards and Technology (NIST). In 2022, BTQ entered a multi-year collaboration agreement with ITRI to develop energy-efficient post-quantum hardware solutions for applications in blockchain, telecom, and other industries with a need for long-term data security. In the first phase of collaboration, BTQ and ITRI successfully validated the proof of concept of applying computation-in-memory in an ASIC chip. To further the collaboration, BTQ is entering into this new phase of the project with ITRI.

#### Market-Related Activity

Effective March 14, 2023, the Company began trading on the FSE under the symbol "NG3" (ISIN: CA0558691014 | WKN: A3D4V9). The Frankfurt Stock Exchange is the largest of the seven stock exchanges in Germany.

Effective May 9, 2023, the Company began trading on the OTCQX under the symbol "BTQQF". OTC Markets Group operates markets on which 12,000 U.S. and global securities trade with the OTCQX Best Market as the highest tier. Trading on OTCQX will enhance the visibility and accessibility of the Company to U.S. investors.

On March 18, 2024, the Company announced a revised timeline for the filing of its annual consolidated financial statements for the year ended December 31, 2023 (the "Financial Statements") and the related management's discussion and analysis and certifications (collectively, with the Financial Statements, the "Annual Filings"). The default in filing within the required 90 days is primarily due to delays relating to the restatement of the comparative period in the Financial Statements, comprising BTQ AG's financial statements for the period ended December 31, 2022, which were audited by another auditor. As a result of



the delays, the Company has applied for a management cease trade order (an "MCTO") under National Policy 12-203 Management Cease Trade Orders ("NP 12-203") in respect of the default, which is subject to approval by the British Columbia Securities Commission, as principal regulator of the Company.

### **Business Development Activities**

On March 2-3, 2023, representatives of the Company attended the Quantum Beach conference in Miami in order to meet with companies, investors, and potential partners across the quantum technologies industry. Mathieu Gauthier, Head of Corporate Development, spoke on the quantum security panel, alongside other industry executives from leading companies in the post-quantum security space, as well as senior government officials.

On April 24, 2023, Chris Tam, Head of Partnerships at the Company, spoke at ETHTaipei. The talk, titled "The Future of Zero-Knowledge: Challenges, Advancements, and Tools for Developing Post-Quantum zk-SNARKs," examined the challenges and successes of using post-quantum proving systems. The presentation also examined the strengths, weaknesses, and trends of arithmetic circuit backends such as R1CS, PLONK, and AIR, while introducing tools to transition towards developing post-quantum zk-SNARKs. This presentation reinforced the Company's commitment to advancing the blockchain and quantum technology industry.

On May 1, 2023, the Company was informed that it was the recipient of a US\$10,000 grant from the Stellar Community Fund. The grant is specifically aimed at funding the Company's research in building an Efficient Scaling Mechanism for Lattice-Based Post-Quantum Signatures. The Stellar Community Fund ("SCF") is an open-application awards program that draws on community input to support developers and startups building on Stellar and Soroban. The Stellar Blockchain network is a distributed ledger used to transmit digital currencies and has a market cap of over US\$2 billion.

On May 1, 2023, the Company secured office space at the Bentall II Tower located at 555 Burrard Street in Downtown Vancouver, BC. The company is leasing this office space from WeWork at a monthly rate of C\$3,180 per month for a total commitment of 12 months. This additional office space will be used for meetings with investors and potential clients, and for the hiring of both technical and non-technical personnel in Canada. Starting October 1, 2023, the Company increased office space at the Bentall II Tower in Vancouver. The new monthly rate per month is C\$10,100 for a reset commitment of 12 month.

On May 15, 2023, BTQ Technologies Announced its Acceptance into the Quantum Industry Canada (QIC) Consortium, joining other leading quantum technology companies such as DWave and Xanadu. Quantum Industry Canada's mission is to ensure that Canadian quantum innovation and talent is translated into Canadian business success and economic prosperity. Earlier this year, the Canadian Minister of Innovation, Science, and Industry announced a \$1.4 million investment in QIC as part of the National Quantum Strategy.

On May 22, 2023, BTQ was awarded a US\$10,000 grant by StarkWare Industries, the developer of StarkNet, a permissionless decentralized ZK-Rollup. The grant was specifically awarded to implement BTQ's PQScale technique for digital signatures onto the StarkNet infrastructure.

On May 24, 2023, the Company announced the nomination of Mr. Lonny Wong as the company's Chief Financial Officer. Lonny has been leading BTQ's finance and accounting organization and reports directly to Olivier Roussy Newton, Chief Executive Officer and Chairman. He brings over 25 years of public practice experience and specializes in providing auditing, assurance, financial reporting, and consulting services to public companies and companies looking to go public.



On June 22, 2023, BTQ announced that it had joined leading quantum technology companies and research labs like Microsoft Azure Quantum and the Centre for Quantum Technologies (CQT) in the Quantum Energy Initiative (QEI). The Quantum Energy Initiative seeks to develop energetic quantum advantage and build quantum technologies in a sustainable and responsible manner.

On July 5, 2023, the Company established a strategic research partnership with South Korea's International Research Institute for Cyber Security (IRCS). The partnership aims to enhance the development of post-quantum cryptography, specifically focusing on SOLMAE signature scheme and other lattice-based cryptosystems, thereby expanding BTQ's influence in the Asia-Pacific region.

On July 24, 2023, the Company announced the addition of Brandt Pasco, an accomplished legal and private equity professional, to its advisory board. Mr. Pasco, currently the Managing Member of Pasco & Associates, is renowned for his expertise in building high-value companies and his deep understanding of technological regulatory law.

On August 21, 2023, BTQ announced the launch of "The Quantum State" podcast led by renowned researcher Anastasia Marchenkova. The series, further bolstered by experts Professor Gavin Brennen and Peter Rohde, serves as BTQ's dedicated platform for exploring the latest insights, trends, and groundbreaking advancements in the world of quantum computing.

On September 18, 2023, the Company announced it had been selected for the 2023 Canada Quantum Technology R&D Mission to South Korea, marking a significant stride in international quantum collaborations. From October 31st to November 2nd, the Canadian delegation, which includes 11 leading companies and institutions in the realms of quantum sensing, quantum computing, and quantum communication, participated in a series of collaborative events. Various meetings are arranged with South Korean companies, research institutes, academia, and other key players in the quantum technology sector.

On October 1, 2023, the Company entered into a revised lease agreement for a larger office space in the Bentall II building located in downtown Vancouver where the Company's headquarters were already located. This additional space will accommodate the company's growing technical research team in Canada.

On October 16, 2023, BTQ announced its ecosystem partnership with Cysic for Keelung, a zero-knowledge domain-specific language for fast, private and secure applications. Keelung provides developers with the ability to create secure and reliable post-quantum zero-knowledge proofs without requiring specialized cryptography skills. BTQ's partnership with Cysic will explore the integration of Keelung with Cysic's hardware acceleration solutions, offering end-users access to faster, more efficient, and more secure zero-knowledge proof generation.

On October 19, 2023, BTQ announced the addition of Peter Rohde, an accomplished theoretical quantum computer scientist, to its world-class technical team. Dr. Rohde, currently an Honorary Senior Lecturer at Macquarie University, and Associate Investigator at the ARC Centre of Excellence for Engineered Quantum Systems, is renowned for his deep understanding of optical quantum computing, quantum networking and the economics of quantum technology. Based at the Quantum Terminal in Sydney, Mr. Rohde will help drive research, as well as expand BTQ's technical team in Australia.

On November 29, 2023, BTQ and Hon Hai Research Institute announced a Research and Collaboration Agreement aiming to support the academic community by promoting the standardization of post-quantum cryptography. BTQ and Hon Hai first in their submission of Preon, a post-quantum signature scheme submitted as part of the NIST "Call for Additional Digital Signature Schemes for the Post-Quantum Cryptography Standardization Process".



On December 29, 2023, the Company announced its participation and sponsorship at CfC St. Moritz, a premier digital assets and blockchain conference for investors and decision-makers in the Swiss Alps. Christopher Tam, BTQ's Head of Partnerships, led a workshop titled "Future-Proofing Digital Assets: Exploring the Sustainability of Digital Assets in the Quantum Era," focusing on the challenges and opportunities stemming from post-quantum cryptography.

On February 20, 2024, BTQ announced its participation in the Commonwealth Scientific and Industrial Research Organisation's Next Generation Emerging Technologies Graduates Program ("NGETGP"). This initiative aims to cultivate the next wave of tech talent and advance the field of emerging technologies. As part of this agreement, BTQ Technologies joined forces with the Commonwealth Scientific and Industrial Research Organisation ("CSIRO"), top Australian universities, Sydney Quantum Academy, and Diraq Pty Ltd to create the next generation of quantum technology specialists.

On March 13, 2024, BTQ announced its sponsorship with the Cybersecurity and Privacy Institute ("CPI") at the University of Waterloo and the establishment of a multi-year relationship for R&D collaboration. CPI's mission is to be internationally recognized as a leading interdisciplinary research institute making significant impacts in improving information security and human privacy. Earlier this year, CPI secured over \$3.3 million in funding from the National Cybersecurity Consortium (NCC) under the Cyber Security Innovation Network (CSIN) program.

On March 21, 2024, BTQ announced that Christopher Tam, Head of Partnerships, will be a featured speaker at ETHTaipei. During his talk, Chris discussed transitioning Ethereum towards quantum resistance, addressing the impacts and challenges posed by quantum technologies on digital currencies.

On May 3, 2024, the Company entered into a Software Consulting Agreement with ZKP Corp., a Delaware corporation, for which the Company will receive \$1,000,000 for the use of its proprietary software and the provision of related services.

### Media Coverage

On April 17, 2023, the Company was covered by CoinDesk for its innovative approach to quantum-safe encryption technology, which has the potential to revolutionize data security in blockchain applications and adjacent industries, including finance, healthcare, and government. With over 10 million website visits and 1.6 million podcast downloads each month, CoinDesk is the leading source of news on cryptocurrency and blockchain, covering breaking news and providing in-depth analyses on the next generation of investing and the future of money.

On June 21, 2023, BTQ announced it had been featured in the New Scientist magazine for its collaborative research paper, "Proof-of-Work Consensus by Quantum Sampling". The paper, which features a collaboration with leading researchers from universities in Australia and the United States, introduces a groundbreaking Quantum Proof-of-Work scheme for blockchain consensus. The article discusses the potential of the team's approach which uses coarse-grained boson-sampling (CGBS), to reduce the energy consumption of cryptocurrencies, such as Bitcoin, by an order of magnitude.

#### Corporate

On August 31, 2023, BTQ announced that, at the annual general and special meeting (the "Meeting") of shareholders of the Company ("Shareholders") that was held on Wednesday, August 30, 2023, all five nominees for the board of directors of the Company were elected. At the Meeting, Shareholders also approved (i) the appointment of BDO LLP as auditors of the Company until the close of the next annual general meeting of shareholders and the directors were authorized to determine their remuneration (ii) the



Company's omnibus equity incentive plan (the "Omnibus Plan"); and (iii) the ratification of certain historically granted RSUs pursuant to the Omnibus Plan.

#### **Trends**

### **Quantum Computing**

According to McKinsey & Company, the quantum technology market will be valued at over \$106 billion by 2040¹, with the bulk of the value projected to come from quantum computing as opposed to quantum sensing and quantum communications. The quantum security industry sits within quantum computing and is a rapidly growing field that focuses on developing secure cryptographic solutions for the age of quantum computing. As quantum computers become more powerful, they will become increasingly capable of breaking traditional cryptographic systems, creating a need for even more robust and advanced quantum-resistant solutions. Traditional cryptographic methods are at risk of being broken, which will have serious implications for national security, financial institutions, and other industries that rely on secure communication and data storage. Estimates of when a commercial quantum computer will hit the market vary, however, last year, IBM unveiled the Osprey (433 qubits) and updated its road map to develop a 4,000+ qubit processor in 2025², indicating that these super computers will be available in the near future. In addition to private sector funding, Government bodies around the world are also investing large sums of capital into quantum technologies. At \$15.3 billion, China leads the way in publicly announced quantum funding initiatives, followed by the EU at \$8.4 billion, USA at \$3.7 billion, Japan at \$1.8 billion, UK at \$1.3 billion, Canada at \$1.1 billion, and several others between \$0.1 billion and \$1.0 billion³.

Overall, the quantum security industry is a rapidly evolving field that will continue to see significant growth and development in the coming years. As businesses and organizations seek to protect their data from the threat of quantum computing, the need for effective and innovative quantum-resistant security solutions will only continue to increase. Investors are recognizing this with about two-thirds, or 68 percent, of all Quantum Technology startup investments since 2001 having occurred in 2021 and 2022<sup>4</sup>.

### Post-Quantum Cryptography

One of the main trends in the quantum security industry is the development of post-quantum cryptography ("PQC") algorithms. PQC algorithms are designed to be resistant to attacks from quantum computers, making them a crucial component of quantum-resistant security systems. Many organizations, including government agencies and financial institutions, are already investing in PQC research and development to ensure the security of their sensitive data.

A key driver in the development of the PQC industry is The National Institute of Standards and Technology ("NIST"), a U.S. Department of Commerce agency which sets the standards for businesses and other organizations to secure sensitive data and protect critical infrastructure<sup>5</sup>. NIST compliance standards must be met by anyone who processes, stores, or transmits sensitive information for the Department of Defense,

<sup>&</sup>lt;sup>1</sup> https://www.mckinsey.com/featured-insights/the-rise-of-quantum-computing

<sup>&</sup>lt;sup>2</sup> https://newsroom.ibm.com/2022-11-09-IBM-Unveils-400-Qubit-Plus-Quantum-Processor-and-Next-Generation-IBM-Quantum-System-Two

<sup>3</sup> https://www.mckinsey.com/~/media/mckinsey/business%20functions/mckinsey%20digital/our%20insights/quantum%20technology%20sees%20record%20investments%20progress%20on%20talent%20gap/quantum-technology-monitor-april-2023.pdf

<sup>&</sup>lt;sup>4</sup> https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/quantum-technology-sees-record-investmentsprogress-on-talent-gap

<sup>&</sup>lt;sup>5</sup> https://www.btq.com/en/blog/blockchain-security



General Services Administration, NASA, and other government agencies, and is largely seen as the de facto standard body to make cryptographic standards for the entire world.

In 2016, NIST initiated a process to solicit, evaluate, and standardize one or more quantum-resistant public-key cryptographic algorithms. These new cryptography standards will specify additional digital signature and public-key encryption algorithm(s) which are capable of protecting sensitive information well into the foreseeable future, including after the advent of quantum computers. In 2022, NIST officially announced the standardized algorithms from Round 3 of this PQC competition. This was a landmark milestone as government agencies and businesses had been waiting nearly six years for a clear direction as to which algorithms are trustworthy. PQC algorithms are much larger than their classical counterparts. For example, even the smallest NIST-approved digital signature algorithm is over 10x larger than the current Elliptic Curve Digital Signature Algorithm<sup>6</sup>. This is particularly problematic for distributed ledgers where each full node keeps an entire record of all activities on the ledger. If a blockchain like Bitcoin and Ethereum were to adopt the newly standardized PQC algorithms today, the size of both chains would have to be increased to an unmanageable extent.

### **Competition and Market Participants**

Generally, BTQ differentiates itself from its competitors with its work at the intersection of post-quantum cryptography and blockchain. The Company works on developing next-generation cryptographic primitives like zero-knowledge cryptography to achieve advanced security and efficiency, which is novel in the industry.

Large publicly traded quantum companies exist in the space, including: D-Wave Systems (NYSE: QBTS), IONQ (NYSE: IONQ), Arqit Quantum (NASDAQ: ARQQ). However, these companies are not direct competitors as their main goal is to build a commercial quantum computer with real-world useability. These companies are capital intensive and well-funded by both institutional investors and governments and their valuations range from approximately US\$50 million to over US\$1 billion.

With a surge in funding and general investor interest and excitement in the industry, several companies are emerging in the post-quantum security space. There are various companies that try to tackle the same global problem as BTQ: getting today's infrastructure secured for the quantum revolution, however, the approaches vary widely based on cryptographic techniques, as well as end uses served and therefore is not a winner takes all market. In fact, other companies operating directly in the space may offer potential collaboration opportunities. Below is a non-exhaustive list of indirect competitors to BTQ:

PQ Shield, for example, describes itself as a PQC company contributing to the global standards and core technologies to power the future security layer of the world's leading organizations. Its quantum-secure cryptographic solutions work with companies' legacy systems to protect sensitive data now and for years to come. The company mainly serves the defense & infrastructure, IoT and OEM markets. PQ Shield raised \$20 million as part of their Series A round in January 2022<sup>7</sup>.

Additionally, Isara provides security solutions specializing in cryptographic risk management and in creating crypto-agile and quantum-safe security solutions for today's information technology ecosystems. The company broadly targets enterprises and governments. Isara raised over \$10 million in 2018 to fund its R&D efforts<sup>8</sup>.

<sup>&</sup>lt;sup>6</sup> https://falcon-sign.info/

<sup>&</sup>lt;sup>7</sup> https://www.prnewswire.com/news-releases/pqshield-collaborates-with-nccoe-and-industry-to-ease-the-real-world-implementation-of-quantum-resistant-cryptography-301794688.html

<sup>&</sup>lt;sup>8</sup> https://www.isara.com/company/newsroom/shasta-ventures-investment.html



In the blockchain space, large technology companies are building their own secured blockchains. For example, IBM offers blockchain services that help secure multiple aspects of critical industries like supply chains, banking, healthcare, and government. The goal of these blockchains is usually to streamline and scale processes in a secure manner<sup>9</sup>.

SandboxAQ, an enterprise SaaS company stemming from Alphabet (previously Google), is another key player in the space. Sandbox provides solutions at the nexus of Al and Quantum technology to address some of the world's most challenging problems. The company's core team and inspiration formed at Alphabet Inc., emerging as an independent, growth-capital-backed company in 2022. The company aims to protect the public sector, life sciences & healthcare, financial services, cybersecurity, material science & manufacturing, and global navigation<sup>10</sup>.

#### **Investor Awareness**

Effective April 11, 2023, the Company retained Venture North Capital Inc. ("Venture North") for strategic marketing, investor relations, and capital markets communications services. Venture North arranges and attends meetings with professional investors, maintains ongoing contacts and broadens relationships with the professional investment community on the Company's behalf.

The agreement with Venture North had an initial trial term of 4 months and has been automatically renewed monthly until such time it is terminated on 30 days' notice. Pursuant to the terms of the consulting agreement, the Company pays a monthly fee of \$8,500 and granted 500,000 stock options exercisable at \$0.40 per common share expiring on October 1, 2024. Of the options issued to Venture North, 125,000 shall vest immediately following the 4-month trial and an additional 125,000 options guarterly.

#### Reverse Takeover

In accordance with IFRS 3, business combinations, the substance of the Acquisition is a reverse takeover as the shareholders of BTQ AG held 75.88% of the resulting issuer shares and SOC's shareholders held 24.12% of the resulting issuer shares. Accordingly, for accounting purposes, BTQ AG was treated as the accounting parent company (legal subsidiary) and the Company has been treated as the accounting subsidiary (legal parent) in these consolidated financial statements. As BTQ AG was deemed to be the acquirer for accounting purposes, its assets, liabilities and operations since incorporation are included in these consolidated financial statements at their historical carrying values. The Company's results of operations have been included from February 17, 2023.

As the Acquisition did not constitute a business combination, the reverse takeover transaction was accounted for in accordance with IFRS 2, share-based payments, whereby equity instruments issued were recognized at fair value and allocated to the net assets acquired (liabilities assumed). Any difference is the value of the listing which was expensed on completion of the Acquisition.

The Transaction was measured at the fair value of the common shares that BTQ AG would have had to issue to the shareholders of the Company, being 8,747,629 common shares with a fair value of \$3,499,051, and the fair value of 350,000 stock options of the Company with a fair value of \$97,532, to give the shareholders of the Company the same percentage of equity interest in the combined entity that results from the reverse acquisition had it taken the legal form of BTQ AG acquiring the Company. The fair value of the 8,747,629 common shares was determined based on the pricing of the Offering with a value of \$0.40 being allocated to each Share. The purchase price was allocated to the net assets acquired as follows:

<sup>&</sup>lt;sup>9</sup> https://www.ibm.com/blockchain

<sup>&</sup>lt;sup>10</sup> https://www.sandboxaq.com/solutions/security-suite



	\$
Fair value of the Company's shares (8,747,629 common shares)	3,499,051
Fair value of 350,000 stock options of the Company outstanding	97,532
Total consideration	3,596,583
Less: fair value of identifiable assets acquired and liabilities assumed:	
Cash	16,562
Cash held in escrow	7,200,500
Prepaid expenses	25,308
Restricted cash	2,875
Accounts payable and accrued liabilities	(455,077)
Subscription receipts liabilities	(7,200,500)
Net liabilities assumed	(410,332)
Listing costs	4,006,915

The Company issued 2,500,000 common shares with a fair value of \$1,000,000 as a finder's fee for the Transaction.

### **RESULTS OF OPERATIONS**

### For the six months ended June 30, 2024

The net loss for the six months ended June 30, 2024 was \$3,529,564 (2023: \$10,005,970). The main categories are listed below:

### General and administrative of \$460,434 (2023: \$372,326)

The increase is due to the Company's growth and higher overall activity during the six months ended June 30, 2024 as compared to the six months ended June 30, 2023.

### Marketing and promotion of \$462,355 (2023: \$388,121)

The increase is due to the Company closing the Transaction on February 17, 2023.



#### Professional fees of \$615,259 (2023: \$238,088)

The increase is mainly due to the increase in the audit fees incurred to the Company's auditor for the year ended December 31, 2023, accounting costs incurred to the outsourced accounting consulting firm and the CFO's firm after becoming a publicly listed entity on February 17, 2023.

### Research and development of \$1,435,628 (2023: \$1,092,004)

The Company had increased research and development activities, including research and development being conducted in Canada during the six months ended June 30, 2024 as compared to the three months ended June 30, 2023.

### Share-based compensation of \$133,550 (2023: \$1,906,058)

For the six months ended June 30, 2024, the Company granted 800,000 (2023: 6,610,000) stock options.

### Transfer agent and regulatory fees of \$46,112 (2023: \$202,646)

During the three months ended March 31, 2023, the Company incurred significant transfer agent, regulatory, and listing fees relating to the Transaction.

### Wages and benefits of \$325,023 (2023: \$365,812)

The Company incurred various signing bonuses during the six months ended June 30, 2023 as compared to no such costs during the six months ended June 30, 2024.

#### Listing and transaction costs of \$nil (2023: \$5,059,669)

Listing and transaction costs relate to the Transaction. See Reverse Takeover section above.

#### **USE OF AVAILABLE FUNDS**

In connection with the Acquisition and the listing of the Shares on the NEO, the Company filed a listing statement dated February 17, 2023 under its SEDAR profile at www.sedar.com. Below is a reconciliation of the expected use of available funds against the actual use of such funds as at June 30, 2024:

ltem	Use of Available Funds \$	Actual Use of Available Proceeds as at June 30, 2024 \$
Transaction costs related to the Acquisition	700,000	705,078
Research contracts	750,000	_
Software and hardware development	4,215,770	3,988,993
Sales and business development	1,500,000	1,804,167
General and administrative costs estimated for 12-months	1,830,759	2,698,291
Unallocated working capital	200,000	<del>-</del>
Total	9,196,529	9,196,529



#### SUMMARY OF QUARTERLY RESULTS

The following table sets out financial information for the past eight quarters:

	Three Months Ended (\$)			
	June 30, 2024	March 31, 2024	December 31, 2023	September 30, 2023
Total revenues Net loss Net loss per share, basic and diluted	90,573 (1,695,192) (0.01)	(1,834,372) (0.01)	(3,015,009) (0.02)	(2,553,373) (0.02)
		Three Mon	ths Ended (\$)	
	June 30, 2023	March 31, 2023	December 31, 2022	September 30, 2022
Total revenues Net loss Net loss per share, basic and diluted	(2,901,977) (0.02)	(6,985,690) (0.07)	_ (1,425,672) (0.02)	(767,160) (0.01)

The net loss for the quarter ended December 31, 2023 includes share-based compensation of \$1,259,207 related to the issuance of stock options and restricted stock units.

The net loss for the quarter ended September 30, 2023 includes share-based compensation of \$755,390 related to the issuance of stock options and restricted stock units.

The net loss for the quarter ended June 30, 2023 includes share-based compensation of \$1,623,513 related to the issuance of stock options and restricted stock units.

The net loss for the quarter ended March 31, 2023 includes costs of \$5,059,669 relating to the Transaction, share-based compensation of \$282,545 related to the issuance of stock options and increased level of activity as BTQ became public as a subsidiary of the Company with a concurrent financing effective February 17, 2023.

#### LIQUIDITY AND CAPITAL RESOURCES

As at June 30, 2024, the Company had cash of \$591,979 and a working capital deficit of \$537,300 compared to cash of \$2,862,023 and working capital of \$2,806,924 as at December 31, 2023.

The Company's operations used cash of \$2,319,813 during the six months ended June 30, 2024 (2023: \$3,630,387). The Company's investing activities provided net cash of \$2,875 (2023: used cash of \$6,578). The cash requirements during the six months ended June 30, 2024 were funded from the net proceeds from share issuances of \$104,000 (2023: \$7,107,326), partially offset by \$51,106 for the repayment of the lease obligation.



The Company's aggregate operating, investing, and financing activities during the six months ended June 30, 2024 resulted in an decrease in its cash balance of \$2,264,044 (2023: increase of \$3,440,019).

The Company's accounts payable and accrued liabilities are due in the short term. While the Company has been successful in obtaining the necessary financing through the issuance of common shares and loans from related parties in the past, there is no assurance it will be able to raise funds in this manner in the future and there remain material uncertainties that may cast significant doubt as to the Company's ability to continue as a going concern.

The directors regularly review cash flow forecasts to determine whether the Company has sufficient cash reserves to meet future working capital requirements and discretionary business development opportunities.

The consolidated financial statements have been prepared on the going concern basis, which assumes that the Company will be able to realize its assets and discharge its liabilities in the normal course of business. During the six months ended June 30, 2024, the Company has not generated significant revenues from operations and has negative cash flow from operations. As at June 30, 2024, the Company has a working capital deficit of \$537,300 and an accumulated deficit of \$38,097,917. The Company's ability to continue its operations and to realize its assets at their carrying values is dependent upon obtaining additional financing and generating revenues sufficient to cover its operating costs. Management is of the opinion that sufficient working capital will be obtained from external financing to meet the Company's liabilities and commitments as they become due, although there is a risk that additional financing will not be available on a timely basis or on terms acceptable to the Company. These factors indicate a material uncertainty that may cast significant doubt on the ability of the Company to continue as a going concern. These consolidated financial statements do not reflect any adjustments that may be necessary if the Company is unable to continue as a going concern. Such adjustments could be material.

### **OFF BALANCE SHEET ARRANGEMENTS**

There are no off-balance sheet arrangements to which the Company is committed.

#### **RELATED PARTY TRANSACTIONS**

Parties are considered to be related if one party has the ability, directly or indirectly, to control the other party or exercise significant influence over the other party in making financial and operating decisions. Related parties may be individuals or corporate entities. A transaction is considered to be a related party transaction when there is a transfer of resources or obligations between related parties.

Key management personnel are persons responsible for planning, directing, and controlling the activities of an entity, and include all officers and directors of the Company. Key management personnel compensation during the six months ended June 30, 2024 and 2023 was comprised of the following:



	Six months ended June 30, 2024 \$	Six months ended June 30, 2023 \$
Consulting fees incurred to Ming-Yang Chih, former Chief Strategic Officer	40,758	48,517
Marketing and promotion incurred to Mathieu Gauthier, Head of Corporate Development	58,910	48,517
Professional fees incurred to Saturna Group Chartered Professional Accountants LLP, a firm where the CFO, Lonny Wong, is a partner	42,000	10,161
Research and development incurred to Po-Chun Ko (former Chief Technology Officer) and Chen-Mou Cheng (Chief Cryptographer)	140,257	180,397
Wages and benefits incurred to Nicolas Roussy Newton (COO) and Peter Lavelle (Chief Legal Officer)	146,901	142,165
Total short-term benefits	418,826	429,757
Share-based payments	155,101	396,221
	573,927	825,978

During the year ended June 30, 2024, the Company earned license and consulting services revenue of \$90,573 (2023 - \$nil) from ZKP Corp., a company controlled by Nicolas Roussy Newton, the Chief Operating Officer ("COO") of the Company. As at June 30, 2024, the Company has deferred revenue of \$456,233 (December 31, 2023 - \$nil) for this company.

As at June 30, 2024, the Company owed \$118,106 (December 31, 2023 - \$114,223) to Olivier Roussy Newton, the Chief Executive Officer of the Company ("CEO"), of which \$92,259 (December 31, 2023 - \$89,247) is included in accounts payable and accrued liabilities. The amounts owed are non-interest bearing, unsecured, and due on demand.

As at June 30, 2024, the Company was owed \$123,944 (December 31, 2023 - \$49,888) from Nicolas Roussy Newton, the COO of the Company, which is included in other receivables.

As at June 30, 2024, the Company owed \$3,133 (December 31, 2023 - \$3,027) to Novus Paradigm Technologies Corporation, a company controlled CEO and COO of the Company, which is non-interest bearing, unsecured, and due on demand.

As at June 30, 2024, the Company owed \$22,050 (December 31, 2023 - \$7,350) to Saturna Group Chartered Accountants LLP, a firm where the Chief Financial Officer of the Company ("CFO") is a partner, which is included in accounts payable and accrued liabilities.

As at June 30, 2024, the Company owed \$136,870 (December 31, 2023 - \$132,260) to Chen-Mou Cheng, the Chief Cryptographer of the Company, which is included in accounts payable and accrued liabilities.

As at June 30, 2024, the Company owed \$8,220 (December 31, 2023 - \$7,936) to Mathieu Gauthier, the Head of Corporate Development of the Company, which is included in accounts payable and accrued liabilities.



#### **ACCOUNTING POLICIES**

A number of new standards, and amendments to standards and interpretations, are not yet effective for the period ended June 30, 2024, and have not been early adopted in preparing the consolidated financial statements. These new standards, and amendments to standards and interpretations are either not applicable or are not expected to have a significant impact on the Company's consolidated financial statements.

### **CRITICAL ACCOUNTING ESTIMATES AND JUDGMENTS**

#### Use of estimates

The preparation of consolidated financial statements in accordance with IFRS requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses in the reporting period. The Company bases its estimates and assumptions on current facts, historical experience and various other factors that it believes to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities and the accrual of costs and expenses that are not readily apparent from other sources. The actual results experienced by the Company may differ materially and adversely from our company's estimates. To the extent there are material differences between the estimates and the actual results, future results of operations will be affected.

#### Reverse Takeover

The reverse takeover transaction was measured at the fair value of the common shares and stock options that BTQ would have had to issue to the shareholders of the Company. The fair value of common shares and stock options issued were estimated based on the Company's financing event which took place concurrently with the reverse takeover transaction. The fair values of identifiable assets acquired and liabilities assumed approximated their carrying values.

#### Research and development costs

Research costs are recognized as an expense when incurred but development costs may be capitalized as intangible assets if certain conditions are met as described in IAS 38 *Intangible Assets*. Management has determined that development costs do not meet the conditions for capitalization under IAS 38 and all research and development costs have been expensed.

#### Fair value of stock options

Fair values of stock options are determined using the Black-Scholes option pricing model. Estimating fair value requires determining the most appropriate valuation model for a grant of equity instruments, which is dependent on the terms and conditions of the grant. Option-pricing models require the use of highly subjective estimates and assumptions including the expected stock price volatility. Changes in the underlying assumptions can materially affect the fair value estimates and, therefore, existing models do not necessarily provide reliable measurement of the fair value of the Company's stock options and performance warrants.



#### Deferred income taxes

The determination of income tax expense and the composition of deferred income tax assets and liabilities involves judgment and estimates as to the future taxable earnings, expected timing of reversals of deferred income tax assets and liabilities, and interpretations of tax laws. The Company is subject to assessments by tax authorities who may interpret the tax law differently. Changes in these interpretations, judgments, and estimates may materially affect the final amount of current and deferred income tax provisions, deferred income tax assets and liabilities, and results of operations.

### Going concern presentation

The consolidated financial statements have been prepared on a going concern basis, which assumes that the Company will be able to realize its assets and discharge its liabilities in the normal course of business for the foreseeable future. The assessment of the Company's ability to source future operations and continue as a going concern involves judgement. Estimates and assumptions are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. If the going concern assumption is not appropriate for the financial statements, then adjustments would be necessary in the carrying value of the assets and liabilities, the reported revenue and the expenses and the statement of financial position classifications used.

#### FINANCIAL INSTRUMENTS AND RISK MANAGEMENT

#### **Fair Values**

The following provides a description of financial instruments that are measured subsequent to initial recognition at fair value, grouped into Levels 1 to 3 based on the degree to which the fair value is observable:

- Level 1 fair value measurements are those derived from quoted prices (unadjusted) in active markets for identical assets or liabilities;
- Level 2 fair value measurements are those derived from inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices); and
- Level 3 fair value measurements are those derived from valuation techniques that include inputs for the asset or liability that are not based on observable market data (unobservable inputs).

Assets and liabilities measured at fair value on a recurring basis were presented on the Company's statement of financial position as at June 30, 2024 and December 31, 2023 as follows:

	Fair value measurements using			
		Quoted prices in active markets Significant other Significant		
	for identical instruments	observable inputs	unobservable inputs	Balance, June 30,
	(Level 1)	(Level 2)	(Level 3)	2024
	φ	ъ	<u> </u>	<u></u>
Investments	<del>-</del>	_	77,229	77,229



	Fair val	lue measurements	using	
	Quoted prices in active markets for identical	Balance,		
	instruments (Level 1) \$	inputs (Level 2) \$	inputs (Level 3) \$	December 31, 2023 \$
Investments		_	77,229	77,229

The fair values of the Company's other financial instruments, which include cash, short-term investment, other receivables, and accounts payable and accrued liabilities, lease obligation, and due to related parties, approximate their carrying values due to the relatively short-term maturity of these instruments.

#### **Credit Risk**

Financial instruments that potentially subject the Company to a concentration of credit risk consist primarily of cash and cash equivalents. The Company limits its exposure to credit loss by placing its cash and cash equivalents with high credit quality financial institutions. The carrying amount of financial assets represents the maximum credit exposure.

### Foreign Exchange Rate Risk

Foreign currency risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate due to changes in foreign exchange rates. The Company is exposed to foreign currency risk to the extent that monetary assets and liabilities are denominated in a foreign currency.

The following table indicates the impact of foreign currency exchange risk on net working capital as at June 30, 2024 and December 31, 2023. The table below also provides a sensitivity analysis of a 10% strengthening of the foreign currency against functional currencies identified which would have increased (decreased) the Company's net loss by the amounts shown in the table below. A 10% weakening of the foreign currency against the functional currencies would have had the equal but opposite effect as at June 30, 2024 and December 31, 2023.

June 30,2024	TWD	US\$
Cash	50,541	414,263
Accounts payable and accrued liabilities	(53,103)	(272,461)
Lease obligation	(3,896,297)	
Total foreign currency financial assets and liabilities	(3,898,859)	141,802
Impact of a 10% strengthening or weakening of foreign exchange rate	38,989	14,180



December 31, 2023	TWD	US\$
Cash Accounts payable and accrued liabilities Lease obligation	9,201,660 - (778,794)	296,479 (190,659) —
Total foreign currency financial assets and liabilities	8,422,866	105,820
Impact of a 10% strengthening or weakening of foreign exchange rate	842,287	10,582

#### **Interest Rate Risk**

Interest rate risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The Company is not exposed to significant interest rate risk as it does not have any liabilities with variable rates.

### **Liquidity Risk**

Total

Liquidity risk is the risk that the Company will not be able to meet its financial obligations as they fall due. The Company's objective to managing liquidity risk is to ensure that it has sufficient liquidity available to meet its liabilities when due. The Company relies on raising debt or equity financing in a timely manner. Refer to going concern disclosure under Liquidity and Capital Resources.

The following amounts are the contractual maturities of financial liabilities as at June 30, 2024 and December 31, 2023:

June 30, 2024		Within	Within
	Total	1 year	2-5 years
	\$	\$	\$
Accounts payable and accrued liabilities	1,144,700	1,144,700	_
Other payable	373,401	373,401	_
Lease obligation	163,977	84,561	79,416
Due to related parties	23,720	23,720	
Total	1,705,798	1,626,382	79,416
December 31, 2023		Within	Within
	Total	1 year	2-5 years
	\$	\$	\$
Accounts payable and accrued liabilities	856,682	856,682	_
Lease obligation	33,554	33,554	_
Due to related parties	28,003	28,003	_

918,239

918,239



#### **DISCLOSURE OF OUTSTANDING SHARE DATA**

The authorized capital of the Company consists of an unlimited number of common shares without par value.

As of the date of this report, the Company had 124,203,879 common shares, 232,936 share purchase warrants outstanding, 8,070,000 stock options outstanding and 1,235,000 RSUs outstanding.

#### DISCLOSURE CONTROLS AND PROCEDURES

The CEO and the CFO have designed, or caused to be designed under their supervision, the Company's disclosure controls and procedures ("DCP") to provide reasonable assurance that material information relating to the Company and its consolidated subsidiaries has been recorded, processed, summarized and disclosed in a timely manner in accordance with regulatory requirements and good business practices and that the Company's DCP will enable the Company to meet its ongoing disclosure requirements.

The CEO and CFO have evaluated the effectiveness of the Company's disclosure controls and procedures and have concluded that based on this evaluation, our disclosure controls and procedures are not effective at a reasonable assurance level due to the material weakness described below in Internal Control over Financial Reporting.

#### INTERNAL CONTROL OVER FINANCIAL REPORTING

The CEO and the CFO have designed, or caused to be designed under their supervision, the Company's internal controls over financial reporting ("ICFR") in order to provide reasonable assurance regarding the reliability of the Company's financial reporting and the preparation of financial statements for external purposes in accordance with International Financial Reporting Standards ("IFRS").

A material weakness is a control deficiency, or combination of control deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement in the annual or interim financial statements will not be prevented or detected on a timely basis.

The CEO and CFO conducted an evaluation the effectiveness of the Company's ICFR as at March 31, 2024 based on *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") for the Company as a whole. Based on this evaluation, management concluded that material weaknesses existed as at June 30, 2024.

The following material weaknesses were identified in the design and operation of its internal controls:

- 1. Lack of cash controls The Company does not have sufficient internal controls over financial reporting for the cash process, including having an employee and a third party professional consultant with signing authority over certain of the Company's foreign bank accounts.
- 2. Lack of segregation of duties There is a lack of segregation of duties among individuals with administrative access to various systems and applications used by the Company. In addition, there is no evidence of a review process over control activities such as, but not limited to, financial statements and disclosures, purchase authorization, cut-off of transactions posted by the accounting team, cash controls over Company credit cards, and review of contracts. This increases the risk of error and fraud due to the ability to override controls.
- 3. Accounting for complex transactions During the course of our audit, some auditor proposed adjustments were made to correct certain complex transactions, including, but not limited to, share-based compensation and international tax implications. In addition, a number of adjustments were made to correct and restate the prior year information which was not addressed prior to the year end



audit. There still exists a lack of review and approval on the accounting treatment of these transactions in accordance with the relevant IFRS.

#### LIMITATION OF CONTROLS AND PROCEDURES

The Company's management, including its CEO and CFO, believe that any DCP and ICFR, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, they cannot provide absolute assurance that all control issues and instances of fraud, if any, within the Company have been prevented or detected. These inherent limitations include the realities that judgments in decision making can be faulty, and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by unauthorized override to the control. The design of any control system also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any control system will succeed in achieving its stated goals under all potential future conditions. Accordingly, because of the inherent limitations in a cost effective, control system, misstatements due to error or fraud may occur and not be detected.

#### CHANGES IN INTERNAL CONTROL OVER FINANCIAL REPORTING

There have been no changes to our internal control over financial reporting for the three months ended June 30, 2024, that could have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

#### **RISK FACTORS**

The current business of BTQ AG has been the business of the Company since February 17, 2023. The following is a summary of certain risk factors relating to the business. The risks presented below should not be considered exhaustive and may not be all of that the Company may face.

### General Risks

The Company has a limited operating history

The Company has a limited history of operations and is in the early stage of development. As such, the Company will be subject to many risks common to early-stage enterprises, including undercapitalization, cash shortages, limitations with respect to personnel, financial and other resources, and lack of revenue. There is no assurance that the Company will achieve its operating goals. There is no assurance that the Company will be successful in achieving a return on shareholders' investment and the likelihood of success must be considered in light of its early stage of operations. There can be no assurance that the Company will be able to earn material revenue or that any of its activities will generate positive cash flow.

The Company may require additional funds to finance its operations

Additional funds raised through debt or equity offerings may be needed to finance the Company's ongoing and future activities. 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. Failure to obtain additional financing could cause the Company to reduce or terminate its operations.

If additional funds are raised through further issuances of equity or securities convertible into equity, existing shareholders could suffer significant dilution, and any new equity securities issued could have rights,



preferences and privileges superior to those of holders of securities of the Company. Any debt financing secured in the future could involve restrictive covenants relating to capital raising activities and other financial and operational matters, which may make it more difficult for the Company to obtain additional capital and to pursue business opportunities.

Refer to going concern disclosure under Liquidity and Capital Resources.

The Company is subject to competition from other post-quantum encryption companies

The Company will compete with other post-quantum cryptography and technology businesses, including other businesses focused on applying post-quantum cryptography to blockchain.

The Company's compliance and risk management programs may not be effective

The Company's ability to comply with applicable laws and rules will be largely dependent on the establishment and maintenance of compliance, review, and reporting systems, as well as the ability to attract and retain qualified compliance and other risk-management personnel, as needed. The Company cannot provide any assurance that its compliance policies and procedures will be effective or that it will be successful in monitoring or evaluating its risks. If there is any alleged non-compliance with applicable laws or regulations, The Company could be subject to investigations and judicial or administrative proceedings that may result in substantial penalties or civil lawsuits for damages, restitution or other remedies, which could be significant. Any of these outcomes, individually or together, may materially and adversely affect the Company's reputation, financial condition and valuation, and the value of its shares.

Unexpected market disruptions may cause major losses for the Company

The Company may incur major losses in the event of disrupted markets and other extraordinary events in which market behavior diverges significantly from historically recognized patterns. The risk of loss in such events may be compounded by the fact that, in disrupted markets, many positions may become illiquid, making it difficult or impossible to close out positions against which markets are moving. Market disruptions caused by unexpected political, military and terrorist events, or other factors, may from time to time cause dramatic losses for the Company.

The Company will be reliant on attracting and retaining skilled management and directors

The success of the Company will, in part, be dependent upon the skill, judgment, industry relationships and expertise of the Board and management. The loss of a director or key management personnel may materially and adversely affect the business of the Company. There can be no assurance that these individuals will continue to be employed by, or remain involved with, the Company for a particular period of time.

#### Market risk for securities

There can be no assurance that an active trading market for the Company's shares will be sustained. The market price for the Company's Shares may be subject to wide fluctuations. Factors such as government regulation, price fluctuations, share price movements of peer companies and competitors, as well as overall market movements, may have a significant impact on the market price of the Company's securities. The stock market has from time to time experienced extreme price and volume fluctuations, which have often been unrelated to the operating performance of particular companies. Market forces may render it difficult or impossible for the Company to secure purchasers to purchase its securities at a price which will not lead to severe dilution to existing shareholders, or at all. In addition, shareholders may realize less than the



original amount invested on dispositions of their shares during periods of such market price decline.

#### Foreign exchange risk

The Company is a Canadian company, and most of its expenses and fundraising is done in Canadian dollars, however, its operations are predominantly denominated in U.S. dollars and Taiwan dollars. As a result, the Company is subject to foreign exchange risks relating to the relative value of the U.S. dollar and Taiwan dollar as compared to the Canadian dollar. A decline in the U.S. dollar or Taiwan dollar could result in a decrease in the real value of the Company's revenues and adversely impact financial performance.

#### Tax

No assurance can be given that new taxation rules will not be enacted or existing rules will not be applied in a manner which could result in the Company being subject to additional taxation or which could otherwise have a material adverse effect on the Company's results from operations and financial condition.

### The Company may be subject to litigation

The Company may be subject to litigation arising out of, or related to, its operations. Damages claimed under such litigation may be material, and the outcome of such litigation may materially impact the Company's operations and the value of its shares. While the Company expects to assess the merits of any lawsuits and defend such lawsuits accordingly, it may be required to incur significant expense or devote significant financial resources to such defenses. In addition, the adverse publicity surrounding such claims may have a material adverse effect on the Company's operations.

#### Investment Risk

There is no assurance that the Company will achieve its investment objective. An investment may not earn any positive return and may result in the loss of some or all of the capital invested.

#### Ability to generate profits

There can be no assurance that the Company will generate net profits in future periods. Further, there can be no assurance that the Company will be cash flow positive in future periods. In the event that the Company fails to achieve profitability in future periods, the value of the Company's shares may decline. In addition, if the Company is unable to achieve or maintain positive cash flows, the Company would be required to seek additional funding, which may not be available on favorable terms, if at all.

### Management of growth

The Company has recently experienced, and may continue to experience, growth in the scope of its operations. This growth has resulted in increased responsibilities for the Company's existing personnel, the hiring of additional personnel and, in general, higher levels of operating expenses. In order to manage its current operations and any future growth effectively, the Company will need to continue to implement and improve its operational, financial and management information systems, as well as hire, manage and retain its employees and maintain its corporate culture including technical and customer service standards. There can be no assurance that the Resulting Issuer will be able to manage such growth effectively or that its management, personnel or systems will be adequate to support the Company's operations.

#### Reliance on key personnel



The Company's future growth and its ability to develop depend, to a significant extent, on its ability to attract and retain highly qualified personnel. The Company will rely on a limited number of key employees, consultants and members of senior management and there is no assurance that the Company will be able to retain such key employees, consultants and senior management. The loss of one or more of such key employees, consultants or members of senior management, if not replaced, could have a material adverse effect on the Company's business, financial condition and prospects.

The Company has no immediate plans to pay regular dividends on the Company, so shareholders of the Company may not receive funds without selling their Company Shares.

The Company does not currently have plans to pay regular dividends on Company Shares. Any declaration and payment of future dividends to holders of Company Shares will be at the sole discretion of the Board and will depend on many factors, including the financial condition, earnings, capital requirements, level of indebtedness, statutory and contractual restrictions applying to the payment of dividends and other considerations of the Company that the Company's Board deems relevant.

### **Business and Industry Risks**

Regulatory changes or actions may alter the nature of an investment in the Company or restrict the use of digital assets in a manner that adversely affects the Company's operations

Due to their global nature, blockchain-related technologies and encryption-related technologies are subject to regulatory fragmentation due to different treatment depending on jurisdiction. Certain governments have categorized certain blockchain technologies as illegal, while others have embraced their utility and have approved them for trade. Ongoing and/or future regulatory actions may have a substantial impact on the Company's business operations.

The Company relies upon the use of internally/externally built proprietary software, data and intellectual property that may be subject to substantial risk

The Company's liquidity contribution strategy is dependent on internally and externally developed software, data and intellectual property. Its operations may be severely and adversely affected by the malfunction of technology.

Banks may not provide banking services, or may cut off banking services, to businesses that provide services related to blockchain-based technologies

A number of companies that provide blockchain-related services have been unable to find banks that are willing to provide them with bank accounts and banking services. Similarly, a number of such companies have had their existing bank accounts closed by their banks. Banks may refuse to provide bank accounts and other banking services to blockchain-related companies, or companies that accept digital assets, for a number of reasons, such as perceived compliance risks or costs.



The Company may be unable to obtain adequate insurance to insure its operations

The Company intends to insure its operations in accordance with technology industry practice. However, given the novelty of digital assets and associated businesses, such insurance may not be available, may be uneconomical for the Company, or the nature or level may be insufficient to provide adequate insurance cover. The occurrence of an event that is not covered or fully covered by insurance could have a material adverse effect on the Company.

The business of the Company will be exposed to cybersecurity risks

Cyber incidents can result from deliberate attacks or unintentional events, and may arise from internal sources (e.g., employees, contractors, service providers, suppliers and operational risks) or external sources (e.g., nation states, terrorists, hacktivists, competitors and acts of nature). Cyber incidents include unauthorized access to information systems and data (e.g., through hacking or malicious software) for purposes of misappropriating or corrupting data or causing operational disruption. Cyber incidents also may be caused in a manner that does not require unauthorized access, such as causing denial-of-service attacks on websites (e.g., efforts to make network services unavailable to intended users). A cyber incident that affects the Company might cause disruptions and adversely affect its business operations, and might also result in violations of applicable law (e.g., personal information protection laws), each of which might result in potentially significant financial losses and liabilities, regulatory fines and penalties, reputational harm, and reimbursement and other compensation costs. In addition, substantial costs might be incurred to investigate, remediate and prevent cyber incidents.

#### FORWARD-LOOKING STATEMENTS

This MD&A includes certain statements that may be deemed "forward-looking statements" concerning the future performance of the Company's business, its operations, its financial performance and condition, as well as management's objectives, strategies, beliefs and intentions. Forward-looking statements are frequently identified by such words as "may", "will", "plan", "expect", "anticipate", "estimate", "intend" and similar words referring to future events and results. Forward-looking statements are based on the current opinions and expectations of management. All statements in this report that do not directly and exclusively relate to historical facts, constitute forward-looking statements. These statements represent the Company's intentions, plans, expectations and beliefs, and are subject to risks, uncertainties and other factors of which many are beyond the control of the Company. These factors could cause actual results to differ materially from such forward-looking statements. The Company disclaims any intention or obligation to update or revise such forward-looking statements, as a result of new information, future events or otherwise. Factors that may cause actual results to vary from forward looking statements include, but are not limited to, the Company's ability to access capital, competitive risks and reliance on key personnel, as described in more detail in this document under "Risk Factors". Investors are cautioned that any such statements are not guarantees of future performance and actual results or developments may differ materially from those projected in the forward-looking statements.