BIO-key®

2024
Annual Report

BIO-key

BIO-key International

Message from
Chairman & CEO
Michael W. DePasquale

Dear BIO-key Stockholders,

We substantially strengthened our business in 2024, growing our high-margin software license fee revenue by 20% while exiting our low-margin services relationship with Swivel Secure, to focus solely on BIO-key solutions. The transition away from Swivel Secure resulted in an 11% decline in 2024 revenue but allowed us to significantly improve our margins. Moreover, we have been actively redeploying our team, resources, and partner relationships to focus solely on BIO-key's core technology and solutions such as PortalGuard IAM and our Identity-Bound Biometric software and hardware offerings.

Built and refined over more than two decades, BIO-key's unique suite of solutions is well positioned to solve today's most pressing identity and access management vulnerabilities with true passwordless, phoneless, and tokenless authentication. As a result, we have been seeing growing interest in our unique capabilities and strong value proposition, particularly for our biometric solutions, which have gained solid traction in international markets for the most rigorous use cases in national defense and financial services.

For example, in Q4'24 we secured a $910K contract with a long-time financial services client to upgrade to our top-tier "fingerprint-only," one-to-many identification system. The customer had previously deployed our one-to-one fingerprint biometric solution, enrolling over 25M end-users across its branch network. This upgrade will allow our financial services client to authenticate each customer with just a fingerprint swipe that is compared to a centralized, encrypted cloud database. In addition to providing greater security, our solution should trim approximately 30 seconds from each customer interaction, yielding a far better customer experience and substantial long-term savings for our client.

Our longstanding relationship with one of the world's most esteemed defense ministries continued to expand during 2024 and into 2025. We now provide authentication and digital security services for over 47,000 ministry personnel utilizing over 40,000 BIO-key fingerprint scanners. To date, the ministry has generated over $4M in total hardware and license revenue, which we expect to increase materially as we continue to work with them under a multi-year procurement agreement.

In December, we entered into a strategic collaboration with Fiber Food Systems to explore IAM use cases across the food industry. As part of this agreement, we acquired shares of Boumarang, Inc. from Fiber in exchange for BIO-key stock. Boumarang is a pioneering force in sustainable, AI-driven, hydrogen-powered, long-range drone technology, a developing market with a clear need for a state-of-the-art IAM solutions for drone operators. The equity exchange strengthened our balance sheet and paved the way for a strategic collaboration with Guinn Partners to integrate our biometric technology with Guinn's expertise in IoT and autonomous systems, targeting applications across aerospace, defense, healthcare, logistics, and smart cities. These initiatives will take time to develop, but they offer exciting potential for BIO-key to participate in attractive new commercial opportunities.

BIO-key has also established a strong and growing presence in education across over 100 institutions serving over 4M end users. Building on this base, in March 2025 we executed a strategic partnership and Joint Purchase Agreement with California's Education Technology Joint Powers Authority to make PortalGuard an approved Identity Access Management (IAM) solution for the alliance's 195 K-12 schools and districts serving over 2.6M students. Importantly, our solutions offer schools an ideal path for compliance with emerging restrictions on the use of personal mobile devices in schools.

BIO-key continues to prioritize ongoing investments in innovation to both enhance and expand our suite of solutions. In June 2024 we launched Passkey:YOU, a unique biometric FIDO passkey authentication solution targeting underserved workplace scenarios in manufacturing, retail, healthcare, call centers, and other facilities, to secure access to sensitive information. Passkey:YOU eliminates passwords while streamlining the process to identify users with the highest level of certainty. We believe this solution is ideal for the growing number of enterprises globally that are struggling to deliver strong, passwordless authentication with their existing IAM platforms.

From an operational and financial management standpoint, during 2024 we reduced our operating expenses an additional 6%. We also reduced cash used in operations by 23% to $2.91M in 2024 and we expect to make further progress in 2025. Early in 2025, we substantially strengthened our balance sheet, raising $3.8M in gross proceeds from the exercise of BIO-key warrants. Given our strategic and financial actions, BIO-key is now in a much stronger position to grow its revenue base and deliver improved bottom-line results in 2025 and moving forward.

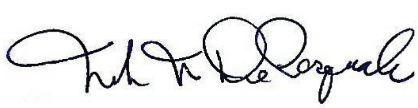
Outlook

Today, BIO-key has over 500 customers worldwide, and we have built a base of approximately $6M in annually recuring license and services revenues (ARR) with a blended gross margin of 70% or more. Our business is now predominately subscription or Software-as-a-Service (SaaS) and new engagements are sold through our network of Channel Alliance Partners and our internal sales team that focuses on large enterprise opportunities. Our differentiated solutions and asset light model put BIO-key in an excellent position to build on our ARR base and to drive improved bottom-line performance.

Recent wins with sophisticated defense agency, banking and financial services customers confirm the strength, value, and ROI of our biometric-enabled authentications solutions. We believe these deployments provide influential validation of our technology with customer prospects. In addition to continued momentum in traditional education or SLED (State, Local government and Education) markets and highly regulated industries, we are excited by the opportunities we see, particularly in Europe, the Middle East, and Africa (EMEA). We are seeing strong new customer interest through our partner network, which is providing high-value access to meaningful opportunities that we could not pursue on our own.

In addition to growth, we continue to prioritize efficiency and expense reduction to accelerate our path to positive cash flow and profitability. We also seek additional strategic opportunities to leverage our technology and solution capabilities for shareholder value creation. Given our growing base of customers, ARR, and the improvements we have made in our cost structure and balance sheet, we are excited about our prospects for this year.

The Board and I are extremely grateful for the contributions made by BIO-key's employees, management, and partners to our progress. We also extend our sincere appreciation to our stockholders for your continued support and patience, and thank you for enabling us to position BIO-key to successfully pursue the substantial and increasingly mission-critical identity and access management needs around the world. Based on the growing appreciation and adoption of our differentiated IAM solutions, I am confident we can extend our progress in 2025.



Michael DePasquale
Chairman & CEO
June 27, 2025

Forward Looking Statements

All statements in this Annual Report other than statements of historical facts are forward-looking statements which contain our current expectations of our future results. For additional information regarding forward forward-looking statements, please see the section captioned "Private Securities Litigation Reform Act" on page ii of the Form 10-K included herein.

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

FOR THE FISCAL YEAR ENDED DECEMBER 31, 2024

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934**

FOR THE TRANSITION PERIOD FROM ___ TO ___

COMMISSION FILE NUMBER: 1-13463

BIO-KEY INTERNATIONAL, INC.

(Exact name of registrant as specified in its charter)

Delaware	**41-1741861**
(State or other jurisdiction of incorporation or organization)	(IRS Employer Identification Number)

101 CRAWFORDS CORNER ROAD, SUITE 4116, HOLMDEL, NJ 07753
(Address of principal executive offices) (Zip Code)
(732) 359-1100
Registrant's telephone number, including area code.

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, $0.0001 par value per share	BKYI	Nasdaq Capital Market

Securities registered pursuant to Section 12(g) of the Act: **None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☒

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of “large accelerated filer,” “accelerated filer,” “smaller reporting company,” and “emerging growth company” in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☐	Accelerated filer ☐
Non-accelerated filer ☒	Smaller reporting company ☒
	Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management’s assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☐

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant’s executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No ☒

As of June 30, 2024 (the last business day of the registrant’s most recently completed second fiscal quarter), the aggregate market value of the registrant’s common stock held by non-affiliates was $2,834,159 based upon the closing price for shares of the registrant’s post-split common stock of $1.64 as reported by the Nasdaq Stock Market on that date.

As of April 21, 2025 the registrant had 5,814,041 shares of common stock outstanding.

Documents Incorporated by Reference

None.

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PRIVATE SECURITIES LITIGATION REFORM ACT

All statements other than statements of historical facts contained in this Annual Report on Form 10-K, including statements regarding our future financial position, business strategy and plans and objectives of management for future operations, are forward-looking statements. The words “anticipate,” “believe,” “should,” “estimate,” “will,” “may,” “future,” “plan,” “intend” and “expect” and similar expressions generally identify forward-looking statements. These statements are not guarantees of future performance or events and are subject to risks and uncertainties that may cause actual results to differ materially from those included within or implied by such forward-looking statements. These risks and uncertainties include, without limitation, our history of losses and limited revenue; our ability to raise additional capital; our ability to continue as a going concern; our ability to protect our intellectual property; changes in business conditions; changes in our sales strategy and product development plans; changes in the marketplace; continued services of our executive management team; security breaches; competition in the biometric technology and identity access management industries; market acceptance of biometric products generally and our products under development; our ability to convert sales opportunities to customer contracts; our ability to expand into Asia, Africa and other foreign markets; our ability to migrate Swivel Secure customers to BIO-key and Portal Guard offerings; our ability to execute definitive agreements with Fiber Food Systems and/or its customers to utilize our access management solutions; our ability to integrate our solutions into any of Fiber Food System’s offerings; fluctuations in foreign currency exchange rates; the duration and extent of continued hostilities in Ukraine and its impact on our European customers; delays in the development of products, the commercial, reputational and regulatory risks to our business that may arise as a consequence of the restatement of our financial statements, including any consequences of non-compliance with Securities and Exchange Commission (“SEC”) and Nasdaq periodic reporting requirements; our temporary loss of the use of a Registration Statement on Form S-3 to register securities in the future; any disruption to our business that may occur on a longer-term basis should we be unable to maintain effective internal controls over financial reporting, statements of assumption underlying any of the foregoing, and numerous other matters of national, regional and global scale, including those set forth under the caption “Risk Factors” in Item 1A of this Annual Report and other filings with the SEC. These factors are not intended to represent a complete list of the general or specific factors that may affect us. It should be recognized that other factors, including general economic factors and business strategies, may be significant, presently or in the future. Except as required by law, we undertake no obligation to update any forward-looking statement, whether as a result of new information, future events or otherwise.

PART I

ITEM 1. BUSINESS

Solely for convenience, trademarks and tradenames referred to in this Annual Report on Form 10-K appear (after the first usage) without the ® and ™ symbols, but those references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or that the applicable owner will not assert its rights, to these trademarks and tradenames.

Overview

BIO-key International, Inc. (the "Company," "BIO-key," "we," or "us") is a leading identity and access management (IAM) platform provider enabling secure work-from-anywhere for enterprise, education, and government customers using secure multi-factor authentication (MFA). Our vision is to enable any organization to secure streamlined and passwordless workforce, customer, citizen and student access to any online service, workstation, or mobile application, without a requirement to use tokens or phones for roving users and shared workstations. Our products include PortalGuard® and PortalGuard Identity-as-a-Service (IDaaS) enterprise IAM, WEB-key® biometric civil and large-scale ID infrastructure, MobileAuth® mobile phone authentication application for iOS and Android, and high-quality, low-cost accessory fingerprint scanner and FIDO-compliant hardware to provide a full and complete solution for identity-innovating customers.

BIO-key PortalGuard empowers organizations to maximize the power of cloud, mobile and web technologies by securing users' identities and connecting them with the applications they rely on, while keeping cyber-intruders and unauthorized delegates (proxy users) out. Competing MFA solutions require a phone or token for every user authentication use case, but this is expensive and ineffective for workforce users who cannot use a phone in their workplace, who rove among workstations or share kiosks for access to information systems. BIO-key's exclusive Identity-Bound Biometrics (IBB) authentication methods address this by making biometric identification based available at any end point device, making the user, not their phone or a token, their own credential.

Our customers trust BIO-key® to secure access to a variety of cloud, mobile and web applications, on-premise and cloud-based hypervisor servers from all of their devices. Employees and contractors sign into BIO-key PortalGuard to seamlessly and securely access the applications needed to do their work, and customers sign into BIO-key PortalGuard to access online services. Organizations use PortalGuard to securely collaborate and communicate with their partners and to provide their customers with flexible, resilient user experiences online and while using mobile devices. PortalGuard can operate standalone as a comprehensive MFA, Single Sign On, and Self-Service Password Reset solution, directly authenticating for Windows sign in and application access, or as an upgraded MFA user experience within an enterprise IAM framework such as Microsoft, Okta, Ping or ForgeRock.

BIO-key's WEB-key is a scalable biometric service management platform, incorporating key functions for regulatory compliance, enrollment, authentication or identification, and integrity in a multi-tenant private or public cloud delivery platform. Government agencies use BIO-key for their large-scale civil ID projects, because WEB-key underpins a biometric identity ecosystem, is cloud-ready, and provides a scalable, high-integrity trust platform which can be operated anywhere and supports over 30 fingerprint scanners interchangeably.

We also deliver biometric software integration application programming interfaces, or APIs, allowing software developers to leverage our platform to securely and efficiently embed biometric multi-factor authentication, or MFA, into their own products. This allows software developers to focus on their core functionality while BIO-key ensures users enter the application without requiring them to carry their phone or any token.

Even the most security-focused organizations are suffering breaches as a result of human error or improper conduct. As enterprises scale the number of software as a service, or SaaS applications, and multi-cloud services they rely on and the interconnections between them increase, assured identity has emerged as a critical component of an organization's security framework, directly affecting each triad of cybersecurity – confidentiality, integrity, and availability. As access perimeters dissolve, organizations must evolve from network-based security models to Zero Trust and Continuous Authentication and Risk Trust Assessment (CARTA) security models, focusing on adaptive and context-aware controls. True server-secured biometric verification removes the human nature vulnerability at the root of many security compromises creating a more reliable means to manage user access and protect digital assets against rogue users willing to hand over their credentials to a proxy. Our global identity as a service, or IDaaS, hosting capability allows our customers to simplify and efficiently scale their security infrastructures across internal IT systems and external customer facing applications without installation overhead, security or uptime management efforts.

We designed BIO-key PortalGuard IDaaS and WEB-key to provide organizations an integrated approach to managing and securing all of their identities using the technologies they already use while providing capacity for future needs through the strategic use of biometrics to limit vulnerability and contain authentication costs. Our platform allows users to authenticate their customers, employees, contractors, and partners. It enables any user to connect to any device, cloud or application, all with a simple, customizable, intuitive and consumer-friendly user experience. We utilize server-secured Identity-Bound Biometrics to support roving users without requiring them to carry their phone or a token. As of December 31, 2024, more than 600 customers across multiple industries use BIO-key to secure and manage access for users around the world.

Development of Business

BIO-key was founded in 1993 to develop and market advanced fingerprint biometric technology and related security software solutions. First incorporated as BBG Engineering, the company was renamed SAC Technologies in 1994 and renamed BIO-key International, Inc. in 2002. Our principal executive office is located at 101 Crawfords Corner Road, Suite 4116, Holmdel, NJ, 07733.

BIO-key was a pioneer in developing automated finger identification technology that supplements or compliments other methods of identification and verification, such as personal inspection identification, passwords, tokens, smart cards, ID cards, credit card, passports, driver's licenses, or other form of possession or knowledge-based credentialing. Our advanced technology and is used to improve both the accuracy and speed of fingerprint biometrics in some of the largest biometric systems in the world.

On June 30, 2020, we enhanced our product offering by acquiring PistolStar, Inc. ("PistolStar"). PistolStar provides enterprise-ready identity access management solutions to commercial, government and education customers throughout the United States and internationally. PistolStar develops and markets our PortalGuard line of software and services.

On March 8, 2022, we expanded our sales and support operation into Europe, Africa and the Middle East ("EMEA") by acquiring Swivel Secure Europe, SA. Swivel Secure Europe is a Madrid, Spain based provider of IAM solutions serving over 300 customers through a network of dozens of channel partners throughout EMEA. Until the fourth quarter of 2024, Swivel Secure Europe was the exclusive distributer of the AuthControl® Sentry, AuthControl Enterprise, and AuthControl MSP product line in Europe, Middle East, and Africa, excluding the United Kingdom. Swivel Secure, now operates under the name BIO-key EMEA, maintains a direct sales force with offices in Madrid, Spain and Lisbon, Portugal, and sells only BIO-key hardware, software and services.

On November 27, 2024, we commenced a collaboration with Fiber Food Systems, Inc., an early-stage company engaged in developing global food security solutions. Under this arrangement, we are working to explore IAM use cases across the food industry. As part of this agreement, we acquired shares of Boumarang, Inc. from Fiber. Boumarang is developing sustainable, AI-driven, hydrogen-powered, long-range drone technology. We are working with Boumarang and its partners to integrate our biometric technology into autonomous systems, targeting applications across aerospace and other industries. We expect that these initiatives have the potential to create new commercial opportunities in future periods.

Our Products

BIO-key PortalGuard and PortalGuard IDaaS

BIO-key PortalGuard is an independent, customer-controlled and neutral-by-design cloud-based identity platform that allows our customers to integrate with any cloud or on-premise SaaS application, service or cloud host, as well as Windows device authentication through a single secure, reliable and scalable IAM platform. It provides identical capabilities in both a SaaS (PortalGuard IDaaS) or on-premise (PortalGuard) delivery model. PortalGuard integrates BIO-key's Identity Bound Biometric (IBB) authentication as what-you-are authentication options that are not tied to a device or "what you have" authentication, allowing our customers to positively identify who is accessing their systems, not the device they might have handed off to another user. Our three-way IAM neutrality consists of:

- seventeen MFA authentication factor choices, including our server-secured IBB via fingerprint scanners, or using a palm scan, facial selfie, or voice biometric via our MobileAuth app on a mobile phone;
- open user directory choices including on premise, hybrid or full-Azure Active Directory, LDAP, IBM Domino, or custom SQL user directory; and
- multiple single sign on, or SSO, federation options, including SAML, Open ID Connect (OIDC), OAUTH, CAS and WS-Fed.

These capabilities allow our customers to combine and authenticate legacy and future technologies and to securely connect users to the technology that they choose. We design transparent compatibility of the BIO-key PortalGuard IDaaS with on-premise infrastructures and public and hybrid clouds.

Our customers use the BIO-key PortalGuard IDaaS to secure their workforces and student populations and make their partner networks more collaborative. PortalGuard IDaaS provides more and secure experiences for their customers and end users, which enables our customers to future-proof their environments. PortalGuard IDaaS can be used as the central system for an organization's connectivity, access, authentication and identity lifecycle management needs across all of its users, technology and applications. We enable our customers to easily deploy, manage and secure applications and devices, and offer provisioning services using open source tools.

Developers can leverage an extensive suite of API and modular SDK tools to build custom cloud, mobile and web application enrollment and authentication experiences that leverage BIO-key PortalGuard and WEB-key as the underlying identity management platform. Once deployed, PortalGuard allows administrators to enforce contextual access management decisions based on conditions such as user identity, device, geolocation, application destination identity, IP range, and time of day.

Our customers use BIO-key to (i) manage and secure work-related IT access of their employees, contractors and supply chain partners, which we call workforce identity; and (ii) manage and secure the identities of users of their web properties, which we call customer identity.

BIO-key PortalGuard and PortalGuard IDaaS for Workforce Identity. PortalGuard streamlines the way an organization's employees, contractors and supply chain partners connect to its applications and data from any device, while increasing user efficiency, preventing unauthorized delegation, credential sharing, and keeping digital environments secure through our MFA capabilities. We enable organizations to provide their workforces with immediate and secure access to every application from any device they use, without maintaining multiple credentials. Our multi-directory support interfaces with the directories in place at an organization, while allowing SQL-based custom directories where none presently exist. BIO-key PortalGuard Desktop allows customers to extend the BIO-key PortalGuard IDaaS to their existing on-premises and remote workstation Windows sign in.

BIO-key PortalGuard and PortalGuard IDaaS for Customer Identity. BIO-key PortalGuard allows organizations to secure access to their online properties, while upgrading their customers' user experience by delivering self-enrollment and management for customer-facing cloud, mobile or web applications. We enable an organization's product team to layer BIO-key's MFA, SSO and self-service password reset, or SSPR, functionality into their cloud, web and mobile applications through federation standards or using our APIs. Our customers are able to centrally manage policies, audit and log access across their properties, leading to more seamless customer experiences.

BIO-key VST and WEB-key; Products; Civil and Large-Scale ID Infrastructure

We have developed what we believe is the most discriminating and effective commercially available finger-based biometric technology. This technology is embedded in our PortalGuard product for enterprise security, providing customers with a unique capability to authenticate users without a phone or token, where appropriate, such as manufacturing, retail, call centers, and health care workers. Other markets for scalable biometric engines include government markets, large scale identity projects such as voter's registration, driver's license, national ID programs, and SIM card registration.

We also offer a full line of easy to use finger scanners for both enterprise and consumer markets. Our PIV Pro, SidePass®, EcoID II® and SideSwipes® finger readers can be used on any laptop, tablet or other device which contains a USB A or C port. We market and sell these fingerprint scanners through distributors and directly to end users via Amazon.

Fingerprint Readers

Our series of compact fingerprint readers, we find commercial companies use SidePass®, SideSwipe® or EcoID II® to replace their Windows passwords and enable Windows Hello for Business without replacing or upgrading laptops or tablets.

Identity and Access Management, User Multi-Factor Authentication, Single Sign On, Privilege Entitlement and Access Control

Our products simplify the authentication process for enterprise users and consumers, while raising security levels. This allows our customers to meet new, stronger authentication requirements and security best practices across many industries, while delivering a superior end-user experience. Customers use our products to reduce risk of theft, fraud, loss, account takeover attacks, and unauthorized account sharing by limiting access to valuable assets, privileges, data, services, networks and places to only authorized individuals. Our products provide stronger identity binding and a superior user experience versus traditional credentialing systems, which utilize a physical or knowledge-based electronic credential to authenticate the holder but fail to authenticate the actual user in addition to the token. Both commercial enterprises and the public sector have seen a shift in the requirement for stronger authentication, and the FBI, NIST and industry thought leaders such as SalesForce and Microsoft have encouraged entities to enhance their security posture by implementing stronger 2-factor authentication (2FA) or MFA. We believe the market for advanced user MFA, including fingerprint biometrics, extends to nearly every industry segment and the market opportunity for our products is massive, global and growing.

Our Markets

Historically, our largest market has been identity and access management for highly regulated industries like government and healthcare. However, we are witnessing a change in the landscape as organizations within all industries and of all sizes are embracing biometric technology and MFA as a security and workflow solution. Millions of users have been successfully using biometrics in phones from Apple and Samsung and they welcome the same user experience to access applications without passwords or tokens.

Our acquisition of PistolStar added a large customer base in the state and local government and higher education (SLED) vertical. Colleges and universities throughout the United States use our PortalGuard MFA and SSO platform. As governments, colleges and universities continue to operate in remote environments, we have seen additional demand for our solutions.

We believe there is potential for significant market growth in the following key areas:

- Enterprise MFA for access to computer networks, and applications.
- Large scale identification projects.
- Government funded initiatives, including the state board of elections.
- International law enforcement applications where we are viewed as a global leader in the biometric technology and serve customers such as the Israeli Defense Force and the Singapore Police departments.
- Consumer mobile credentialing, including mobile payments, credit and payment card programs, data and application access, and commercial loyalty programs.
- Demand for BIO-key hardware products from Windows Hello for Business users and Fortune 2000 companies.
- Government services and highly regulated industries including, Medicare, Medicaid, Social Security, drivers' licenses, campus and school ID, passports/visas.
- Remote authentication challenges, including those created by the remote work shift resulting from the pandemic.

Business Model

Our business model is focused on the following key areas:

Market Drivers	Enterprise needs are not being met by mainstream MFA’s phone app or token approach. Supply chain breaches, ransomware attacks, and administrative access compromises highlight the shortcomings of mainstream MFA and security approaches, which leave far too much responsibility on end-users to comply with cyber-hygiene policies. BIO-key’s biometric authentication process prevents human error and human nature from undermining secure authentication, while making the end user’s access easier than ever. The current climate of broad enterprise adoption of MFA to replace passwords presents opportunities for us to leverage our unique differentiators and exploit the gaps in existing IAM technology approaches. One of those gaps is the challenge of authenticating users that “rove” among workstations. A second gap is preventing unauthorized account sharing and delegation.
OEM Customers	We continue to prioritize securing agreements with OEM customers. The history of success supporting NCR, Omnicell, and Idemia provides an established footprint that we intend to build upon. As OEM customers embed our solutions within their products, the customer benefits from the enhanced security and workflow, and frees them from investing in R&D to manage an IAM infrastructure of their own. OEM customers’ ordering patterns are more predictable and OEM customers generally require lower service and support resourcing.
Highly Regulated Industries	Government ID projects and healthcare organizations, including hospitals, clinics, and small private practices present a strong opportunity for us. Additionally, the financial services industry, including banks and credit unions has grown substantially.
Partner Model	In 2024, we continued to grow our Channel Alliance Partner program focused on partnering with select value added resellers, integrators, and distributors.

Microsoft Partnership	We are a Microsoft Partner and our line of compact fingerprint scanners has been tested and qualified by Microsoft to support Windows Hello and Windows Hello for Business.
Hardware	Hardware products generated 9% and 15% of our revenue in 2024 and 2023, respectively. EcoID II® has emerged as one of our most popular scanner for enterprise deployments. For customers that require the highest level of security, PIV-Pro is a FIPS compliant fingerprint scanner, suitable for highly regulated industries and organizations that want a best-in-class solution.

We have grown our business through a combination of organic growth and the strategic acquisitions of PistolStar and Swivel Secure Europe. We expect to continue to pursue strategic acquisitions of select businesses and assets in the IAM space. In furtherance of this strategy, we are active in the industry and regularly evaluate businesses that we believe will either provide an entry into new market verticals or be synergistic with our existing operations and in either case, be accretive to earnings. We cannot provide any assurance as to whether we will be able to complete any acquisition and if completed, successfully integrate any business we acquire into our operations. Please see the section captioned "**RISK FACTORS**" for additional information regarding acquisition risks.

Marketing and Distribution

We sell our products directly through our field and inside sales teams, as well as indirectly through our network of channel partners. Through our Channel Alliance Program, we have partnered with more than 85 resellers, system integrators and other distribution partners. We are committed to continue to aggressively grow this program in 2025.

We partner with leading application, managed service and infrastructure vendors, such as Intelisys, Insight, NGEN, Amazon Web Services, Pathify (formerly UCROO Campus), Software House International (SHI), Atlassian, and ProCirrus.

We offer our software under a SaaS term license and generate annual recurring revenue (ARR) primarily by selling multi-year subscriptions to our software. We employ a customer success team, focused on customer satisfaction and early remediation.

Intellectual Property Rights

We develop and own significant intellectual property and believe that our intellectual property is fundamental to our biometric and IAM product operation: We own patented technologies and trade secrets developed or acquired by us.

Patents

On November 18, 2008, we were issued US patent No. 7,454,624 for our "Match Template Protection within a Biometric Security System" method. The solution protected under this patent limits the scope of enrollment templates usage and also eliminates the need for revocation or encryption processes, which can be expensive and time consuming. With the payment of all maintenance fees, this patent will expire on May 17, 2025.

On March 10, 2009, we were issued US patent No. 7,502,938 for our "Trusted Biometric Device" which covers a simple, yet secure method of protecting a user's biometric information. It covers the transmission of information from the point the information is collected at the biometric reader until the data reaches the computer or device that is authenticating the user's identity. With the payment of all maintenance fees, this patent will expire on October 25, 2025.

On November 8, 2011, we were issued US Patent No. 8,055,027 for our "Generation of Directional Information in the Context of Image Processing" method for image enhancement and processing. With the payment of all maintenance fees, this patent will expire on October 10, 2027.

On June 5, 2012, PistolStar was issued US Patent No. 8,196,193 for "Method For Retrofitting Password Enabled Computer Software with a Redirectional User Authentication Method", where a device, method, and system may be used to integrate and control authentication and passwords among various applications and platforms. With the payment of all maintenance fees, this patent will expire on November 1, 2030.

On March 12, 2013, PistolStar was issued US Patent No. 8,397,077 for "Client Side Authentication Redirection", where user specific attributes may be accessed and used to produce a generated password, using an algorithm and the user attributes. With the payment of all maintenance fees, this patent will expire on August 7, 2030.

On May 3, 2017, we were issued US Patent No. 9,646,146 for our "Utilization of Biometric Data", a method enables existing small area sensors to capture substantially more fingerprint surface area, leading to a higher degree of accuracy when performing a match. With the payment of all maintenance fees, this patent will expire on March 6, 2035.

On June 19, 2018, we were issued U.S. Patent No. 10,002,244 for our “Utilization of Biometric Data” to allow continuous, passive user authentication on a mobile device. With the payment of all maintenance fees, this patent will expire on March 6, 2035.

On July 27, 2018, we were issued U.S. Patent No. 10,025,831 for “Adaptive Short Lists and Acceleration of Biometric Database Search”, a method to quickly and iteratively search a database of biometric data. With the payment of all maintenance fees, this patent will expire on August 10, 2036.

On September 3, 2019, we were issued U.S. Patent No. 10,400,481 for “Fingerprint Lock”, a lock design method of the shackle and spring integration to electronics. With the payment of all maintenance fees, this patent will expire on June 27, 2037.

On September 10, 2019, we were issued U.S Patent No. 10,410,040 for “Fingerprint Lock Control method and Fingerprint Lock System”, a lock design method of the control process of scanning, and server communications for user profile management. With the payment of all maintenance fees, this patent will expire on July 26, 2037.

On April 20, 2021, we were issued U.S. Patent No. 10,984,085 for “Biometric Recognition for Uncontrolled Acquisition Environments”, expected to be deployed in mobile devices, the patent provides a method of continuous capture of the users biometric data before the need of the authentication or enrollment, as well as during an active session with a user, to assure the user has not changed. With the payment of all maintenance fees, this patent will expire on March 13, 2039.

We have also been granted parallel patents to the US Patent portfolio to certain of our patents in many foreign countries offering protection of our intellectual property rights around the world.

Trademarks

We have registered our trademarks “BIO-key”, “True User Identification”, “Intelligent Image Indexing”, “WEB-key”, “SideSwipe”, “SidePass”, “EcoID”, “PistolStar®”, “PortalGuard”, “MobileAuth”, “PASSIVEKEY®” and “PISTOLSTAR®” with the U.S. Patent & Trademark Office, as well as many foreign countries, protecting the names of our companies and our key technology offerings.

We also own the following unregistered trademarks: “PortalGuard Nebula™”, “Password Power™” and “Scooch™”.

Copyrights and trade secrets

We take measures to ensure copyright and license protection for our software releases prior to distribution. When possible, the software is licensed in an attempt to ensure that only licensed and activated software functions to its full potential. We also take measures to protect the confidentiality of our trade secrets.

Research and Development

Our PortalGuard IAM product line is mature, with hundreds of active customers, and we are adding additional factors and capabilities to the product, as well as enhancing the self-management for the functionally equivalent PortalGuard IDaaS offering. A significant new authentication factor set will come via our MobileAuth application for users to experience multiple biometric secure authentication via their mobile phone devices. Our VST and WEB-key biometric platforms are mature, stable, and widely-deployed. We concentrate our research and development efforts on enhancing the functionality, reliability and integration of our current products as well as acquiring and developing new and innovative products and solutions for providing broader access to the BIO-key user experience.

Although we believe that our identification technology is one of the most advanced and discriminating fingerprint technologies available today, the markets in which we compete are characterized by rapid technological change and evolving standards and use-cases. In order to maintain our position in the market, we will need to continue to upgrade and refine our existing technologies as new standards become relevant to our customers and markets.

During the years ended December 31, 2024 and 2023, we incurred expenses of $2,511,080 and $2,394,926, respectively, for research and development.

In future periods our R&D efforts will remain focused on updating and advancing our core software products including PortalGuard and PortalGuard IDaaS, MobileAuth, WEB-key and VST. These products are critical to support the anticipated growth in enterprise IAM.

Competition

The IAM, MFA and SSO market is characterized by multiple solution providers of solutions in either standalone or IAM suite delivery models. We believe that our unique differentiator in this market is the incorporation of an unparalleled server-secured biometric authentication capability among our seventeen authentication factors. There are numerous companies involved in the development, manufacturing and marketing of fingerprint biometrics products to commercial, government, law enforcement and prison markets. These companies include, but are not limited to, IDEMIA, Thales, NEC, Neurotechnology, and Innovatrics.

The majority of sales for automated fingerprint identification products in the market to date have been deployed for government agencies, healthcare facilities, and law enforcement applications. The consumer and commercial markets represent areas of growth potential for biometrics, led by the use of mobile devices.

The epidemic of security and data breaches reported over the past few years is one of the driving factors for identifying new methods of protecting valuable data. After attempting to create a more sophisticated password, or more efficient token or PIN, it has become apparent that each of these methods are easily compromised, and the downside risks are significant.

We have also seen FIDO-compliant keys enter the market, led by Yubico's YubiKey, a hardware token device that acts as a credential for access. FIDO officially recommends enterprises purchase two or more keys for every user, to prevent lockout in the event of a lost or misplaced FIDO token. These hardware tokens alone do not meet the needs of large organizations for which key sharing and lost keys are concerns, establishing the opportunity for our Identity Bound Biometric differentiation. Where FIDO is needed, we offer a line of equivalent function and quality, but lower-cost FIDO 2.0 keys.

With respect to competing biometrics technologies, each has its strengths and weaknesses and none has emerged as a market leader:

- *Fingerprint identification* is generally viewed as very accurate, inexpensive and non-intrusive and is the dominant biometric in use today and will be for the foreseeable future;
- *Palm Vein scanning* is expensive, technique-sensitive, and offers mobility challenges;
- *Iris scanning* is viewed as accurate, but the hardware is significantly more expensive; and
- *Facial recognition* can have privacy concerns with work-from-home use, and is typically highly dependent on ambient lighting conditions, angle of view, and other factors.

Government Regulations

Various state, federal and EU privacy laws govern the collection, storage, use and any sale of biometric-related data. To the extent that our IDaaS offerings include the collection and storage of customer users' personal or biometric data, we operate as a processor of such data. Our WEB-key platform includes compliance features to ensure automated compliance with these laws including collection of informed written consent during enrollment workflows and robust auditing to control and report on the retention of biometric data and removal requests. Additionally, our customers have access to these tools to maintain their own compliance, including deletion of user data when business relationships terminate.

We believe in biometric privacy rights, and that both users and their organizations benefit from a responsibly operated biometric identity infrastructure. We actively participate in industry privacy workgroups as recognized biometric subject matter experts in order to influence and keep abreast of any proposed changes to these regulations. Beyond these regulations, we are not currently subject to direct regulation by any government agency, other than regulations generally applicable to businesses or related to specific project requirements. In the event of any international sales, we would be subject to various domestic and foreign laws regulating such exports and export activities.

Environmental Regulations

As of the date of this report, we have not incurred any material expenses relating to our compliance with federal, state, or local environmental laws and do not expect to incur any material expenses in the foreseeable future.

Seasonality

Generally, our revenues do not exhibit a seasonal pattern, however, revenue is affected by customer budgeting, government fiscal year planning, and capital budgets.

Human Capital Resources

As of the date of this report, we have forty-two employees consisting of forty-one individuals on a full-time basis and one part-time employee as follows: (i) nineteen in engineering, customer support, and research and development; (ii) nine in finance and administration; and (iii) fourteen in sales and marketing. We also have two factory contractors in China. None of our employees are represented by a labor union and we believe that our relationship with our employees is good.

ITEM 1A. RISK FACTORS

Set forth below are the risks that we believe are material to our investors. This section contains forward-looking statements. You should refer to the explanation of the qualifications and limitations on forward-looking statements appearing just before the section captioned “**BUSINESS**” in Item 1 above.

BUSINESS AND FINANCIAL RISKS

We identified a material weakness in our internal control over financial reporting related to the recording and processing of revenue transactions which required the restatement of our quarterly financial statements for the interim periods in 2023. Such material weaknesses could materially and adversely affect our operations, financial condition, reputation and stock price.

In connection with the audit of our financial statements for the year ended December 31,2023, management concluded that the Company’s previously issued consolidated financial statements should be restated due to inadvertently including certain revenue from our European subsidiary, Swivel Secure Europe, Ltd., in the first quarter of 2023. In addition, certain allowances for accounts receivable and certain reserves for inventory were understated. Therefore, the Company misstated gross revenues, accounts receivable, and inventory during the first three quarters of 2023. The restatement related to the Company’s material weakness in internal control over financial reporting over the recording of revenue, accounts receivable, and inventory transactions. A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of a company’s annual or interim financial statements will not be prevented or detected on a timely basis. We completed the restatement and have now corrected and continue to monitor the applied corrective actions to remediate the material weakness and continue to strengthen our internal controls over the recording of revenue transactions.

It is possible that we may discover significant deficiencies or material weaknesses in our internal control over financial reporting in the future. For example, internal control over financial reporting may not achieve their intended objectives. Control processes that involve human diligence and compliance, such as our disclosure controls and procedures and internal control over financial reporting, are subject to lapses in judgment and breakdowns resulting from human failures. Controls can also be circumvented by collusion or improper management-override of such controls. Because of such limitations, there are risks that material misstatements due to error or fraud may not be prevented or detected, and that information may not be reported on a timely basis.

Based on our limited cash resources, history of significant losses, negative cash flow, and dependence on debt and equity financing to fund operations, our independent registered public accounting firm has included an explanatory paragraph in their opinion as to the substantial doubt about our ability to continue as a going concern.

Due to, among other factors, our history of significant losses, limited cash resources, negative cash flow, and dependence on debt and equity financing to fund operations, our independent registered public accounting firm has included an explanatory paragraph in their opinion for the year ended December 31, 2024 as to the substantial doubt about our ability to continue as a going concern. Our financial statements have been prepared in accordance with accounting principles generally accepted in the United States, which contemplate that we will continue to operate as a going concern. Our financial statements do not contain any adjustments that might result if we are unable to continue as a going concern.

We have historically not generated significant revenue and have sustained substantial operating losses.

In order to increase revenue, we have developed a direct sales force and anticipate the need to retain additional sales, marketing and technical support personnel and may need to incur substantial expenses. We cannot assure you that we will be able to secure these necessary resources, that a significant market for our technologies will develop, or that we will be able to achieve our targeted revenue. If we are unable to achieve revenue or raise capital sufficient to cover our ongoing operating expenses, we will be required to scale back operations, including marketing and research initiatives, or in the extreme case, discontinue operations.

We may need to obtain additional financing to execute our business plan, which may not be available. If we are unable to raise additional capital or generate significant revenue, we may not be able to continue operations.

We have historically financed our operations through access to the capital markets by issuing secured and convertible debt securities, convertible preferred stock, common stock, and through factoring receivables. We currently require approximately $812,000 per month to conduct our operations, a monthly amount that we have been unable to consistently achieve through revenue generation. During 2024, we generated approximately $7.0 million of revenue, which is below our average monthly requirements. If we are unable to generate sufficient revenue to cover operating expenses and fund our business plan, we will need to obtain additional third-party financing. We may, therefore, need to obtain additional financing through the issuance of debt or equity securities. We cannot assure you that we will be able to secure any such additional financing on terms acceptable to us or at all. If we cannot obtain such financing, we will not be able to execute our business plan, will be required to reduce operating expenses, and in the extreme case, discontinue operations.

Our failure to timely our annual report on Form 10-K for the year ended December 31, 2023 and our quarterly report on Form 10-Q for the period ended March 31, 2024 has made us ineligible to use a Form S-3 to register the offer and sale of securities, which could adversely affect our ability to raise future capital.

As a result of our failure to timely file our annual report on Form 10-K for the year ended December 31, 2023 and our Quarterly Report on SEC Form 10-Q for the period ended March 31, 2024, we are not eligible to register the offer and sale of our securities using a registration statement on Form S-3 until one year from the date we regain and maintain status as a current filer. Should we wish to register the offer and sale of our securities to the public prior to the time we are eligible to use Form S-3, both our transaction costs and the amount of time required to complete the transaction could increase, making it more difficult to execute any such transaction successfully and potentially harming our financial condition.

Our biometric technology has yet to gain widespread market acceptance and we do not know how large of a market will develop for our technology.

Biometric technology has received only limited market acceptance, particularly in the private sector. Our technology represents a novel security solution and we have not yet generated significant sales. Although recent security concerns relating to identification of individuals and appearance of biometric readers on popular consumer products, including the Apple iPhone, have increased interest in biometrics generally, it remains an evolving market. Biometric based solutions compete with more traditional security methods including keys, cards, personal identification numbers and security personnel. Acceptance of biometrics as an alternative to such traditional methods depends upon a number of factors including:

- national or international events which may affect the need for or interest in biometric solutions;
- the performance and reliability of biometric solutions;
- marketing efforts and publicity regarding these solutions;
- public perception regarding privacy concerns;
- costs involved in adopting and integrating biometric solutions;
- proposed or enacted legislation related to privacy of information; and
- competition from non-biometric technologies that provide more affordable, but less robust, authentication (such as tokens and smart cards).

For these reasons, we are uncertain whether our biometric technology will gain widespread acceptance in any commercial markets or that demand will be sufficient to create a market large enough to produce significant revenue or earnings. Our future success depends, in part, upon business customers adopting biometrics generally, and our solution specifically.

Biometric technology is a relatively new approach to Internet security, which must be accepted in order for our WEB-key solution to generate significant revenue.

Our WEB-key authentication initiative represents a relatively new approach to Internet security, which has been adopted on a limited basis by companies that distribute goods, content or software applications over the Internet. The implementation of our WEB-key solution requires the distribution and use of a finger scanning device and integration of database and server side software. Although we believe our solutions provide a higher level of security for information transmitted over the Internet than existing traditional methods, unless business and consumer markets embrace the use of a scanning device and believe the benefits of increased accuracy outweigh implementation costs, our solution will not gain market acceptance.

The market for our solutions is still developing and if the biometrics industry adopts standards or a platform different from our standards or platform, our competitive position would be negatively affected.

The market for identity solutions is still developing. The evolution of this market may result in the development of different technologies and industry standards that are not compatible with our current solutions, products or technologies. Several organizations set standards for biometrics to be used in identification and documentation. Although we believe that our biometric technologies comply with existing standards, these standards may change and any standards adopted could prove disadvantageous to or incompatible with our business model and current or future solutions, products and services.

Our software products may contain defects which will make it more difficult for us to establish and maintain customers.

Although we have completed the development of our core biometric technology, it has only been used by a limited number of business customers. Despite extensive testing during development, our software may contain undetected design faults and software errors, or “bugs” that are discovered only after it has been installed and used by a greater number of customers. Any such defect or error in new or existing software or applications could cause delays in delivering our technology or require design modifications. These could adversely affect our competitive position and cause us to lose potential customers or opportunities. Since our technologies are intended to be utilized to secure physical and electronic access, the effect of any such bugs or delays will likely have a detrimental impact on us. In addition, given that biometric technology generally, and our biometric technology specifically, has yet to gain widespread acceptance in the market, any delays would likely have a more detrimental impact on our business than if we were a more established company.

In order to generate revenue from our biometric products, we are dependent upon independent original equipment manufacturers, system integrators and application developers, which we do not control. As a result, it may be more difficult to generate sales.

We market our technology through licensing arrangements with:

- original equipment manufacturers (OEMs), system integrators and application developers which develop and market products and applications which can then be sold to end users; and

- companies which distribute goods, services or software applications over the Internet.

As a technology licensing company, our success will depend upon the ability of these manufacturers and developers to effectively integrate our technology into products and services which they market and sell. We have no control over these licensees and cannot assure you that they have the financial, marketing or technical resources to successfully develop and distribute products or applications acceptable to end users or generate any meaningful revenue for us. These third parties may also offer the products of our competitors to end users. While we have commenced a significant sales and marketing effort, we have only begun to develop a significant distribution channel and may not have the resources or ability to sustain these efforts or generate any meaningful sales.

We face intense competition and may not have the financial and human resources necessary to keep up with rapid technological changes, which may result in our technology becoming obsolete.

The Internet, facility access control, and information security markets are subject to rapid technological change and intense competition. We compete with both established biometric companies and a significant number of startup enterprises as well as providers of more traditional methods of access control. Most of our competitors have substantially greater financial and marketing resources than we do and may independently develop superior technologies, which may result in our technology becoming less competitive or obsolete. We may not be able to keep pace with this change. If we are unable to develop new applications or enhance our existing technology in a timely manner in response to technological changes, we will be unable to compete in our chosen markets. In addition, if one or more other biometric technologies such as voice, face, iris, hand geometry or blood vessel recognition are widely adopted, it would significantly reduce the potential market for our fingerprint identification technology.

We recognized revenues from Africa and the European Union in 2023 and 2024 and expect continued revenues from these regions in future periods. Our financial performance will be subject to risks associated with changes in the value of the U.S. dollar versus local currencies.

Owing to the international scope of our operations, including our recent acquisition of Swivel Secure Europe, SA, we are exposed to foreign exchange risk. Our primary exposure to movements in foreign currency exchange rates relates to non-U.S. dollar-denominated sales and operating expenses worldwide. Weakening of foreign currencies relative to the U.S. dollar will adversely affect the U.S. dollar value of our foreign currency-denominated sales and earnings, if any, and could lead to us raising international pricing, potentially reducing the demand for our products. In addition, margins on sales of our products in foreign countries and on sales of products that include components obtained from foreign suppliers could be materially adversely affected by foreign currency exchange rate fluctuations. As a result, our business and the price of our common stock may be affected by fluctuations in foreign exchange rates, which may have a significant impact on our results of operations and cash flows from period to period. Currently, we do not have any exchange rate hedging arrangements in place.

Although we have made significant sales of our products throughout Asia and Africa in prior years, we have not been able to consistently enforce our contract rights and collect all receivables which has resulted in material write-offs.

Our ability to enforce our international contracts is contingent on our relationships with foreign resellers, and their financial viability. Although we are making efforts to better enforce our contract rights, there can be no assurance that we will be able to fully collect all receivables originating in Asia and Africa or that will not have to write-off future receivables which may be material in amount. Any such write-offs have negatively impacted our financial position and results of operation.

We depend on key employees and members of our management team, including our Chairman of the Board and Chief Executive Officer, Chief Financial Officer, and our Chief Legal Officer, in order to achieve our goals. We cannot assure you that we will be able to retain or attract such persons.

Our employment contracts with Michael W. DePasquale, our Chairman of the Board and Chief Executive Officer, Cecilia C. Welch, our Chief Financial Officer, and James D. Sullivan, our Chief Legal Officer, each have one-year terms and renew automatically for successive one-year periods unless notice of non-renewal is provided by the Company. Although the contracts do not prevent them from resigning, they do contain confidentiality and non-compete clauses, which are intended to prevent them from working for a competitor within one year after leaving our Company. Our success depends on our ability to attract, train and retain employees with expertise in developing, marketing and selling software solutions. In order to successfully market our technology, we will need to retain additional engineering, technical support and marketing personnel. The market for such persons remains highly competitive and our limited financial resources will make it more difficult for us to recruit and retain qualified persons.

We cannot assure you that the intellectual property protection for our core technology provides a sustainable competitive advantage or barrier to entry against our competitors.

Our success and ability to compete is dependent in part upon proprietary rights to our technology. We rely primarily on a combination of patent, copyright and trademark laws, trade secrets and technical measures to protect our propriety rights. We have filed a patent application relating to both the optic technology and biometrics solution components of our technology wherein several claims have been allowed. The U.S. Patent and Trademark Office has issued us a series of patents for our Vector Segment fingerprint technology (VST), and our other core biometric analysis and identification technologies. However, we cannot assure you that we will be able to adequately protect our technology or other intellectual property from misappropriation in the U.S. and abroad. Any patent issued to us could be challenged, invalidated or circumvented or rights granted thereunder may not provide a competitive advantage to us. Furthermore, patent applications that we file may not result in issuance of a patent or, if a patent is issued, the patent may not be issued in a form that is advantageous to us. Despite our efforts to protect our intellectual property rights, others may independently develop similar products, duplicate our products or design around our patents and other rights. In addition, it is difficult to monitor compliance with, and enforce, our intellectual property rights on a worldwide basis in a cost-effective manner. In jurisdictions where foreign laws provide less intellectual property protection than afforded in the U.S. and abroad, our technology or other intellectual property may be compromised, and our business would be materially adversely affected.

If any of our proprietary rights are misappropriated or we are forced to defend our intellectual property rights, we will have to incur substantial costs. Such litigation could result in substantial costs and diversion of our resources, including diverting the time and effort of our senior management, and could disrupt our business, as well as have a material adverse effect on our business, prospects, financial condition and results of operations. We can provide no assurance that we will have the financial resources to oppose any actual or threatened infringement by any third party. Furthermore, any patent or copyrights that we may be granted may be held by a court to infringe on the intellectual property rights of others and subject us to the payment of damage awards.

We may be subject to claims with respect to the infringement of intellectual property rights of others, which could result in substantial costs and diversion of our financial and management resources.

Third parties may claim that we are infringing on their intellectual property rights. We may violate the rights of others without our knowledge. We may expose ourselves to additional liability if we agree to indemnify our customers against third party infringement claims. While we know of no basis for any claims of this type, the existence of and ownership of intellectual property can be difficult to verify, and we have not made an exhaustive search of all patent filings. Additionally, most patent applications are kept confidential for twelve to eighteen months, or longer, and we would not be aware of potentially conflicting claims that they make. We may become subject to legal proceedings and claims from time to time relating to the intellectual property of others in the ordinary course of our business. If we are found to have violated the intellectual property rights of others, we may be enjoined from using such intellectual property, and we may incur licensing fees or be forced to develop alternative technology or obtain other licenses. In addition, we may incur substantial expenses in defending against these third-party infringement claims and be diverted from devoting time to our business and operational issues, regardless of the merits of any such claim.

In addition, in the event that we recruit employees from other technology companies, including certain potential competitors, and these employees are engaged in the development of portions of products which are similar to the development in which they were involved at their former employers, we may become subject to claims that such employees have improperly used or disclosed trade secrets or other proprietary information. If any such claims were to arise in the future, litigation or other dispute resolution procedures might be necessary to retain our ability to offer our current and future services, which could result in substantial costs and diversion of our financial and management resources. Successful infringement or licensing claims against us may result in substantial monetary damages, which may materially disrupt the conduct of our business and have a material adverse effect on our reputation, business, financial condition and results of operations. Even if intellectual property claims brought against us are without merit, they could result in costly and time consuming litigation and may divert our management and key personnel from operating our business.

If we are unable to effectively protect our intellectual property rights on a worldwide basis, we may not be successful in the international expansion of our business.

Access to worldwide markets depends in part on the strength of our intellectual property portfolio. There can be no assurance that, as our business expands into new areas, we will be able to independently develop the technology, software or know-how necessary to conduct our business or that we can do so without infringing the intellectual property rights of others. To the extent that we have to rely on licensed technology from others, there can be no assurance that we will be able to obtain licenses at all or on terms we consider reasonable. The lack of a necessary license could expose us to claims for damages and/or injunction from third parties, as well as claims for indemnification by our customers in instances where we have a contractual or other legal obligation to indemnify them against damages resulting from infringement claims. With regard to our own intellectual property, we actively enforce and protect our rights. However, there can be no assurance that our efforts will be adequate to prevent the misappropriation or improper use of our protected technology in international markets.

We may not achieve profitability if we are unable to maintain, improve our offerings.

We believe that our future business prospects depend in part on our ability to maintain and improve our current services and to develop new ones on a timely basis. Our services will have to achieve market acceptance, maintain technological competitiveness, and meet an expanding range of customer requirements. We may experience difficulties that could delay or prevent the successful development, introduction or marketing of new services and service enhancements. Additionally, our new services and service enhancements may not achieve market acceptance. If we cannot effectively develop and improve services, we may not be able to recover our fixed costs or otherwise become profitable.

We are subject to risks and uncertainties associated with the continued growth of our international operations, which may harm our business.

We have international operations and continue to expand our international operations when we acquired Swivel Secure Europe SA. Accordingly, our business is subject to risks and uncertainties associated with doing business outside of the United States and could be adversely affected by a variety of factors, including:

- multiple, conflicting and changing laws and regulations such as privacy, security, and data use regulations, tax laws, export and import restrictions, economic and trade sanctions and embargoes, employment laws, anticorruption laws, regulatory requirements, reimbursement or payer regimes and other governmental approvals, permits and licenses;
- failure by us, our collaborators or our distributors to obtain regulatory clearance, authorization or approval for the use of our product candidates in various countries;
- additional potentially relevant third-party patent rights;
- complexities and difficulties in obtaining intellectual property protection and enforcing our intellectual property;
- difficulties in staffing and managing foreign operations;
- financial risks, such as longer payment cycles, difficulty collecting accounts receivable, the impact of local and regional financial crises on demand and payment for our product candidates and exposure to foreign currency exchange rate fluctuations;
- natural disasters, political and economic instability, including wars, terrorism and political unrest, outbreak of disease, boycotts, curtailment of trade and other business restrictions;
- regulatory and compliance risks that relate to maintaining accurate information and control over sales and distributors' activities that may fall within the purview of the U.S. Foreign Corrupt Practices Act (FCPA), its books and records provisions, or its anti-bribery provisions, or laws similar to the FCPA in other jurisdictions in which we may now or in the future operate; and
- anti-bribery requirements of several Member States in the European Union and other countries that may change and require disclosure of information to which U.S. legal privilege may not extend.

Any of these factors could significantly harm our business, operating results, financial condition or prospects.

Our business could be negatively impacted by security threats, including cybersecurity threats, ransomware, and other disruptions.

Our customers use our solutions to access their business systems and store data related to their employees, contractors, partners and customers. Our systems' integrity is essential to their use of our platform, which stores, transmits and processes customers' proprietary information and users' personal data. If the confidentiality, integrity or availability of our customers' data or systems is disrupted, we could incur significant liability to our customers and to individuals or businesses whose information was being stored by our customers, and our platform may be perceived as less desirable, which could negatively affect our business and damage our reputation. We, our third-party service providers, and our customers may be unable to anticipate these techniques or to implement adequate preventive measures. Further, because we do not control our third-party service providers, or the processing of data by our third-party service providers, we cannot ensure the integrity or security of measures they take to protect customer information and prevent data loss beyond evaluating and relying on their representations as to their security methods and posture. Although we utilize various procedures and controls to monitor these threats and mitigate our exposure to such threats, there can be no assurance that these procedures and controls will be sufficient in preventing security threats from materializing. If any of these events were to materialize, they could lead to losses of sensitive information, critical infrastructure, personnel or capabilities, essential to our operations and could have a material adverse effect on our reputation, financial position, results of operations, or cash flows. As a technology company, we face various security threats, including cybersecurity threats to gain unauthorized access to sensitive information. on an ongoing basis.

In addition to threats from traditional computer "hackers," malicious code (such as malware, viruses, worms and ransomware), employee or contractor theft or misuse, password spraying, phishing and denial-of-service attacks, we and our third-party service providers now also face threats from sophisticated nation-state and nation-state-supported actors who engage in attacks (including advanced persistent threat intrusions) that add to the risks to our systems (including those hosted on AWS' systems), internal networks, our customers' systems and the information that they store and process. Cybersecurity attacks in particular are evolving, we expect that they will continue, and we expect the scope and sophistication of these efforts may increase in future periods. As a result, we and our third-party service providers may be unable to anticipate these techniques or implement adequate preventative measures quickly enough to prevent either an electronic intrusion into our systems or services or a compromise of customer data, employee data or other protected information.

Although we have implemented systems and procedures that are designed to protect customer, employee, vendor and Company information, prevent data loss and other security breaches, and otherwise identify, assess, and analyze cybersecurity risks, these measures may not function as expected or may not be sufficient to protect our internal networks and platform against certain attacks. Development and maintenance of these systems is costly and requires ongoing monitoring and updating as technologies change and efforts to overcome security measures increase and become more sophisticated. We face an evolving threat landscape in which cybercriminals, among others, employ a complex array of techniques designed to access personal data and other information, including, for example, the use of fraudulent or stolen access credentials, malware, ransomware, phishing, denial of service and other types of attacks. While, to the best of our knowledge, we have not experienced any material misappropriation, loss or other unauthorized disclosure of confidential or personally identifiable information as a result of a security breach or cyberattack that could materially increase financial risk to the Company or our customers, such a security breach or cyberattack could adversely affect our business and operations, including by damaging our reputation and our relationships with our customers, employees and investors, exposing us to litigation, fines, penalties or remediation costs.

We maintain cybersecurity insurance, but our insurance may be insufficient to cover all liabilities incurred in any such incident, and any incident may result in loss of, or increased costs of, that cybersecurity insurance. Any breach, or any perceived breach, of our systems, our customers' systems, or other systems or networks secured by our products, without regard to whether any breach is due to a vulnerability in our platform, may also undermine confidence in our platform or the identity as a service industry and could result in damage to our reputation and brand, negative publicity, loss of partners, customers and sales, increased costs to correct any problem, costly litigation and other liabilities. In addition, a breach of the security measures of one of our partners could result in the disclosure of confidential information or other data that may provide additional avenues of attack, and if a high profile security breach occurs with respect to a comparable cloud technology provider, our customers and potential customers may lose trust in the security of the cloud business model generally, which could adversely impact our ability to retain existing customers or attract new ones. Any of these negative outcomes could adversely impact market acceptance of our products and could harm our business, results of operations, and financial condition.

Our failure to comply with applicable privacy, data protection and information security laws or related contractual obligations could subject us to significant liability and negatively impact our financial position and results of operation.

There are numerous laws and regulations in various jurisdictions regarding privacy, data protection, information security, and the storing, sharing, use, processing, transfer, disclosure and protection of personal data. In light of the increasing pace of new technology development, including with respect to biometric data, the scope of these data protection and privacy-related laws and regulations are expanding, subject to differing interpretations, and may be inconsistent among jurisdictions, or conflict with other rules that we are subject to. These evolving laws and regulations may result in increasing regulatory and public scrutiny and escalating levels of enforcement and sanctions. We are also subject to the terms of our privacy policies and contractual obligations to third parties related to privacy, data protection and information security.

Any failure or perceived failure by us to comply with our privacy policies, our privacy-related obligations to customers or other third parties, or applicable laws or regulations relating to privacy, data protection, or information security may result in governmental investigations or enforcement actions, litigation, claims or public statements against us by consumer advocacy groups or others, and could result in significant liability or cause our customers to lose trust in us, which could cause them to cease or reduce use of our products and services and otherwise have an adverse effect on our reputation and business. Any similar failure or perceived failure by users of our products or services may also have an adverse effect on our reputation and business. In addition, legal, regulatory, contractual and other obligations as well as public concerns relating to privacy, data protection or information security could restrict our ability to store and process data as part of our solutions or otherwise impact our ability to provide our solutions in certain jurisdictions and may result in the loss of business opportunities from customers operating in, or seeking to expand into, those jurisdictions. Additionally, in 2023, the SEC adopted new rules related to cybersecurity risk management, which may further increase our regulatory burden and the cost of compliance in such events.

Our business could be adversely affected by trade tariffs or other trade barriers.

Our business is subject to the imposition of tariffs and other trade barriers, which may make it more costly for us to import inventory from China and Hong Kong and certain product components from South Korea. The new presidential administration recently imposed new tariffs on imports to the United States from China, Mexico, Canada, and Europe and is expected to impose new tariffs on imports from other countries. In addition, these countries have, and in the future other countries may, impose retaliatory tariffs. The resulting environment of retaliatory trade or other practices or additional trade restrictions or barriers could harm our ability to obtain inventory and product components or sell our products and services at prices customers are willing to pay, which could have a material adverse effect on our business, prospects, results of operations, and cash flows. Relatedly, trade policies could lead to an increasing number of competitors entering the United States, thereby creating more competition. If we experience cost increases as a result of existing or future tariffs and are unable to pass on such additional costs to our customers, or otherwise mitigate the costs, our business, prospects, financial condition, results of operations, and cash flows could be materially and adversely affected.

Scrutiny and evolving expectations from customers, regulators, investors, and other stakeholders with respect to our environmental, social and governance practices may impose additional costs on us or expose us to new or additional risks.

Public companies are facing scrutiny from customers, regulators, investors, and other stakeholders related to their environmental, social and governance ("ESG") practices and disclosure. Investor advocacy groups, investment funds and influential investors are also focused on these practices, especially as they relate to the environment, climate change, health and safety, supply chain management, diversity, labor conditions and human rights, both in our own operations and in our supply chain. Increased ESG-related compliance costs could result in material increases to our overall operational costs. Our ESG practices may not meet the standards of all of our stakeholders and advocacy groups may campaign for further changes. Additionally, different stakeholder groups have divergent views on ESG matters, which increases the risk that any action or lack thereof with respect to ESG matters may be perceived negatively by at least some stakeholders and adversely impact our reputation and business. Anti-ESG sentiment has gained some momentum across the United States, with several states having enacted or proposed "anti-ESG" policies or legislation or issued related legal opinions. The federal government has similarly taken action to curtail ESG initiatives. A failure, or perceived failure, to adapt to or comply with regulatory requirements or to respond to investor or stakeholder expectations and standards could negatively impact our business and reputation and have a negative impact on the trading price of our common stock.

Legal, regulatory or market measures to address climate change may materially and adversely affect our future results of operations and financial condition.

In March 2024, the SEC adopted climate disclosure rules, which would require new disclosure in certain SEC filings about material climate-related risks, activities to mitigate or adapt to such risks, board oversight of climate-related risks and management's role in managing material climate-related risks, and climate-related targets and goals. These climate disclosure rules have been the subject of multiple legal challenges, and the SEC recently dropped its defense of the rules, so the extent to which the rules will go into effect remains uncertain. Inconsistency of regulations at the federal and state level may affect the costs of compliance with such legal or regulatory requirements. We may incur increased costs relating to the assessment and disclosure of climate-related risks and increased litigation risks related to such disclosures, either of which could materially and adversely affect our future results of operations and financial condition. Adverse publicity or climate-related litigation that impacts us could have a negative impact on our business.

The war in Ukraine and the international community's response have created substantial political and economic disruption, uncertainty, and risk.

Russia's military intervention in Ukraine in late February 2022, Ukraine's widespread resistance, and the NATO led and United States coordinated economic, financial, communications, and other sanctions imposed by other countries have created significant political and economic world uncertainty. It is not possible to predict the broader consequences of the conflict, including related geopolitical tensions, and the measures and retaliatory actions taken by the U.S. and other countries in respect thereof, as well as any counter measures or retaliatory actions by Russia in response. At a minimum, the continuing conflict is likely to cause regional instability, geopolitical shifts and could materially adversely affect global trade, currency exchange rates, regional economies and the global economy, which could materially adversely affect our financial condition or results of operations. Current and likely additional international sanctions against Russia may contribute to higher costs, particularly for petroleum-based products. These and related actions, responses, and consequences that cannot now be predicted or controlled may contribute to world-wide economic reversals.

There is a scarcity of and competition for acquisition opportunities.

A component of our business plan is to acquire businesses and assets in the biometric and identity access management industry and other industries which we believe would complement our current offerings. There are a limited number of operating companies available for acquisition that we deem to be desirable targets. In addition, there is a very high level of competition among companies seeking to acquire these operating companies. Many established and well-financed entities are active in acquiring interests in companies that we may find to be desirable acquisition candidates. Many of these entities have significantly greater financial resources, technical expertise and managerial capabilities than us. Consequently, we will be at a competitive disadvantage in negotiating and executing possible acquisitions of these businesses. Even if we are able to successfully compete with these entities, this competition may affect the terms of completed transactions and, as a result, we may pay more or receive less favorable terms than we expected for potential acquisitions. We may not be able to identify operating companies that complement our strategy, and even if we identify a company that complements our strategy, we may be unable to complete an acquisition of such a company for many reasons, including:

- failure to agree on the terms necessary for a transaction, such as the purchase price;
- incompatibility between our operational strategies or management philosophies with those of the potential acquiree;
- competition from other acquirers of operating companies;
- lack of sufficient capital to acquire a profitable company; and
- unwillingness of a potential acquiree to work with our management.

Risks related to acquisition financing.

We have limited financial resources and our ability to make additional acquisitions without securing additional financing from outside sources is also limited. In order to continue to pursue our acquisition strategy, we may be required to obtain additional financing. We may obtain such financing through a combination of debt financing or the placement of debt and equity securities. We may finance some portion of our future acquisitions by either issuing equity or by using shares of our common stock for all or a portion of the purchase price for such businesses. In the event that our common stock does not attain or maintain a sufficient market value, or potential acquisition candidates are otherwise unwilling to accept our common stock as part of the purchase price for the sale of their businesses, we may be required to use more of our cash resources, if available, in order to maintain our acquisition program. If we do not have sufficient cash resources, we will not be able to complete acquisitions and our growth could be limited unless we are able to obtain additional capital through debt or equity financings.

We may experience difficulties in integrating the operations, personnel and assets of any business we acquire which may disrupt our business, dilute stockholder value, and adversely affect our operating results.

There can be no assurance that we will be able to identify, acquire or profitably manage any businesses or successfully integrate acquired businesses into the Company without substantial costs, delays or other operational or financial problems. Such acquisitions also involve numerous operational risks, including:

- difficulties in integrating operations, technologies, services and personnel;
- the diversion of financial and management resources from existing operations;
- the risk of entering new markets;
- difficulties in retaining the existing customers;

- the potential loss of existing or acquired strategic operating partners following an acquisition;

- the potential loss of key employees following an acquisition and the associated risk of competitive efforts from departures;

- assumed or unforeseen liabilities that arise in connection with the acquired business;

- possible legal disputes with the acquired company following an acquisition; and

- the inability to generate sufficient revenue to offset acquisition or investment costs.

As a result, if we fail to properly evaluate and execute any acquisitions or investments, our business and prospects may be seriously harmed.

To the extent we make any material acquisitions, our earnings may be adversely affected by non-cash charges relating to the amortization of intangible assets.

Under applicable accounting standards, purchasers are required to allocate the total consideration paid in a business combination to the identified acquired assets and liabilities based on their fair values at the time of acquisition. The excess of the consideration paid to acquire a business over the fair value of the identifiable tangible assets acquired must be allocated among identifiable intangible assets including goodwill. The amount allocated to goodwill is not subject to amortization. However, it is tested at least annually for impairment. The amount allocated to identifiable intangible assets, such as customer relationships and the like, is amortized over the life of these intangible assets. We expect that this will subject us to periodic charges against our earnings to the extent of the amortization incurred for that period. Because our business strategy focuses, in part, on growth through acquisitions, our future earnings may be subject to greater non-cash amortization charges than a company whose earnings are derived solely from organic growth. As a result, we may experience an increase in non-cash charges related to the amortization of intangible assets acquired in our acquisitions. Our financial statements will show that our intangible assets are diminishing in value, even if the acquired businesses are increasing (or not diminishing) in value.

RISKS RELATED TO OUR COMMON STOCK

We have issued a substantial number of warrants exercisable into shares of our common stock which could result in substantial dilution to the ownership interests of our existing stockholders.

As of the date of this report, approximately 4,275,056 shares of our common stock (as adjusted to reflect our 1-for-18 reverse stock split, which was effective December 21, 2023) were reserved for issuance upon exercise or conversion of outstanding stock options and warrants. The exercise or conversion of these securities will result in a significant increase in the number of outstanding shares and substantially dilute the ownership interests of our existing stockholders.

An active trading market for our common stock may not be sustained.

Although our common stock is listed on the Nasdaq Capital Market, an active trading market for our shares may not be developed and if developed, sustained. If an active market for our common stock is not developed or sustained, it may be difficult for you to sell your shares without depressing the market price for the shares or sell your shares at all. Any inactive trading market for our common stock may also impair our ability to raise capital to continue to fund our operations by selling shares and may impair our ability to acquire other companies or technologies by using our shares as consideration.

If we fail to comply with the continued listing requirements of The Nasdaq Stock Market, our Common Stock may be delisted and the price of our Common Stock and our ability to access the capital markets could be negatively impacted.

Our common stock is listed for trading on Nasdaq. In order to maintain our listing, we must satisfy Nasdaq's continued listing requirements. In 2024, we received multiple notices from Nasdaq indicating that we were not in compliance with Nasdaq continued listing requirements. These notices referenced failures to timely file our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, to timely file our Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2024, and failure to maintain minimum stockholders' equity of at least $2.5 million. We have timely cured each of these deficiencies and are currently in compliance with Nasdaq's continued listing standards. The value of the shares of common stock of Boumarang Inc. that we purchased from Fiber Food Systems, Inc. in connection with our collaboration with Fiber Food Systems increased our stockholders' equity to a level which satisfied the Nasdaq minimum requirement. As a privately held pre-revenue company, Boumarang is subject to all of the risks and uncertainties inherent in an early-stage enterprise and the value of its shares are subject to fluctuation which could be material. Any material decrease in the value of these shares could cause us our stockholders' equity to fall below the Nasdaq minimum requirement resulting in the potential delisting of our shares from the Nasdaq stock market. In addition, in recent weeks the trading price of our common stock has fallen below the $1.00 minimum bid required to maintain our listing on Nasdaq. Continued trading below $1.00 per share could subject us to delisting from the Nasdaq stock market. The delisting of our common stock from Nasdaq could materially reduce the liquidity of our common stock and result in a corresponding material reduction in the price of our common stock. Delisting could also harm our ability to raise capital through alternative financing sources on terms acceptable to us, or at all, and may result in the potential loss of confidence by investors, employees and fewer business development opportunities

We may need to raise additional funds in the future through issuances of securities and such additional funding may be dilutive to stockholders or impose operational restrictions.

We may need to raise additional capital in the future to help fund our operations through sales of shares of our common stock or securities convertible into shares of our common stock, as well as issuances of debt. Such additional financing may be dilutive to our stockholders, and debt financing, if available, and may involve restrictive covenants which may limit our operating flexibility. If additional capital is raised through the issuance of shares of our common stock or securities convertible into shares of our common stock, the percentage ownership of existing stockholders will be reduced. These stockholders may experience additional dilution in net book value per share and any additional equity securities may have rights, preferences and privileges senior to those of the holders of our common stock.

Because we do not expect to pay dividends for the foreseeable future, investors seeking cash dividends should not purchase our shares of common stock.

We have never declared or paid any cash dividends on our common stock, and we do not anticipate paying any cash dividends on our common stock in the foreseeable future. Payment of any future dividends will be at the discretion of our board of directors after taking into account various factors, including but not limited to our financial condition, operating results, cash needs, growth plans and the terms of any credit agreements that we may be a party to at the time. Accordingly, investors seeking cash dividends should not purchase shares of our common stock.

Provisions of our certificate of incorporation, bylaws and Delaware law may make a contested takeover of our Company more difficult.

Certain provisions of our certificate of incorporation, bylaws and the General Corporation Law of the State of Delaware ("DGCL") could deter a change in our management or render more difficult an attempt to obtain control of us, even if such a proposal is favored by a majority of our stockholders. For example, we are subject to the provisions of the DGCL that prohibit a public Delaware corporation from engaging in a broad range of business combinations with a person who, together with affiliates and associates, owns 15% or more of the corporation's outstanding voting shares (an "interested stockholder") for three years after the person became an interested stockholder, unless the business combination is approved in a prescribed manner. Our certificate of incorporation also includes undesignated preferred stock, which may enable our board of directors to discourage an attempt to obtain control of us by means of a tender offer, proxy contest, merger or otherwise. Finally, our bylaws include an advance notice procedure for stockholders to nominate directors or submit proposals at a stockholders meeting. Delaware law and our charter may, therefore, inhibit a takeover.

The trading price of our common stock may be volatile.

The trading price of our shares has from time to time fluctuated widely and, in the future, may be subject to similar fluctuations. The trading price may be affected by a number of factors including the risk factors set forth in this Annual Report on Form 10-K as well as our operating results, financial condition, announcements of innovations or new products by us or our competitors, general conditions in the biometrics and access control industries, and other events or factors. We cannot assure you that any of the broker-dealers that currently make a market in our common stock will continue to serve as market makers or have the financial capability to stabilize or support our common stock. A reduction in the number of market makers or the financial capability of any of these market makers could also result in a decrease in the trading volume of and price of our shares. In recent years broad stock market indices, in general, and the securities of technology companies, in particular, have experienced substantial price fluctuations. Such broad market fluctuations may adversely affect the future-trading price of our common stock.

ITEM 1B. UNRESOLVED STAFF COMMENTS

Not applicable.

ITEM 1C. CYBERSECURITY

We take a defense-in-depth approach, leveraging multiple, layered security measures, to protect our data, our customers' data, our infrastructure, and our employees. We embed data protection throughout our operations and information technology programs, relying on multiple and various controls to prevent and detect threats, with the goal of safeguarding our assets, data and personnel.

We evaluate cybersecurity risks as part of our overall enterprise risk management. A steering committee of senior executives meets quarterly to evaluate any changes to the Company's exposure to cybersecurity risks, discuss potential mitigation plans, and provide updates on mitigation efforts already underway. Our cybersecurity team keeps up to date on the latest threats and risks through multiple channels and is also involved in evaluating risks associated with any new proposed service providers. We employ a Cybersecurity Engineer, reporting directly to our Chief Technology Officer, who manages our cybersecurity team that is comprised entirely of security professionals with industry recognized certifications. The cybersecurity team within BIO-key is responsible for assessing and managing risks associated with both our internal operations and our use of third-party service providers and informing/gaining feedback from the cybersecurity steering committee.

Additionally, our cybersecurity team maintains a comprehensive set of cybersecurity policies and standards, including a security incident response framework. The framework is a set of coordinated procedures and tasks that our incident response team executes to ensure timely and accurate reporting and resolution of computer security incidents. The framework details who, how and when appropriate persons or committees, including the Board of Directors and Audit Committee are kept informed on the status of potential cybersecurity incidents. A summary of recent incidents is also presented by the Chief Law Officer ("CLO") at each regular Audit Committee meeting. Our policies and standards were developed in collaboration with a wide range of disciplines, including information technology, cybersecurity, legal, compliance and business. Our cybersecurity strategy and policies are continually reassessed to ensure they attempt to identify and proactively address the constant changes in the global threats. Decision makers such as the CLO, executive team, and Audit Committee are regularly kept up to date on cybersecurity trends. Ongoing collaboration with stakeholders throughout the business also helps to build continued awareness and visibility of future needs.

We engage external vendors to assess the cybersecurity program as needed. An independent third party will perform annual multi-stage penetration testing of our IT environment.

Our cybersecurity program is governed by the Audit Committee of our Board. The Audit Committee of the Board and the full Board will each receive quarterly updates on cybersecurity risks identified through the enterprise risk management processes described above.

Notwithstanding our processes to oversee and identify risk from cybersecurity threats, we may not be successful in preventing or mitigating a cybersecurity incident that could have a material adverse effect on us. We identify nation state-sponsored threat actors and the rise in sophistication and proliferation of ransomware campaigns as top reasonable material risks to the business. The theft, unauthorized use or publication of our intellectual property and/or confidential business or personal information (whether through a breach of our own systems or the breach of a system of a third party that provides services to us) could harm our competitive or negotiating positions, reduce the value of our investment in research and development and other strategic initiatives, compromise our patent enforcement strategies or outlook, damage our reputation or otherwise adversely affect our business. To date there have not been any risks that have materially affected our operations.

See Item 1A. "**RISK FACTORS**" for a discussion of cybersecurity risks.

ITEM 2. PROPERTY

We do not own any real estate. We conduct operations from leased premises in Eagan, Minnesota (1,994 square feet), Bedford, New Hampshire (3,364 square feet), and Holmdel, New Jersey (150 square feet). Internationally, we conduct operations from leased premises in Tsuen Wan, Hong Kong (1,098 square feet), Jiangmen, China (3,267 square feet), and Madrid, Spain (1,504 square feet). Our Eagan, Minnesota and Bedford, New Hampshire offices provide research and development, and customer support, for BIO-key software and PistolStar software, respectively. Our Holmdel, New Jersey location serves as our corporate headquarters. Our Hong Kong location is a small warehouse for finished goods as well as administrative and sales support. Our Jiangmen, China facility provides our hardware research and development, contract manufacturing and warehousing of raw materials, work-in-process, and finished goods. Our Madrid, Spain office serves as our sales organization for Europe, the Middle East, and parts Africa.

ITEM 3. LEGAL PROCEEDINGS

From time to time, we may be involved in litigation relating to claims arising out of our operations in the normal course of business. As of the date of this report, we are not a party to any pending lawsuit.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Our common stock currently trades on the Nasdaq Capital Market under the symbol "BKYI".

Holders

As of April 21, 2025 the number of stockholders of record of our common stock was 170.

Dividends

We have not paid any cash dividends on our common stock to-date and have no intention of paying any cash dividends on our common stock in the foreseeable future. The declaration and payment of dividends on our common stock is also subject to the discretion of our Board of Directors and certain limitations imposed under the Delaware General Corporation Law. The timing, amount, and form of dividends, if any, will depend on, among other things, our results of operations, financial condition, cash requirements and other factors deemed relevant by our Board of Directors.

Securities Authorized for Issuance under Equity Compensation Plans

For information on securities authorized for issuance under the Company's equity compensation plans, see "Item 12 - Security Ownership of Certain Beneficial Owners and Related Stockholder Matters."

Unregistered Sales of Equity Securities

There were no unregistered sales of the Company's equity securities during 2024 that were not previously disclosed in a Quarterly Report on Form 10-Q or in a Current Report on Form 8-K.

Issuer Purchases of Equity Securities

None.

ITEM 6. RESERVED

Not Applicable.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

This Management's Discussion and Analysis of Financial Condition and Results of Operations, and other parts of this Report contain forward-looking statements that involve risks and uncertainties. All forward-looking statements included in this Report are based on information available to us on the date hereof, and we assume no obligation to update any such forward-looking statements. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of a number of factors, including those set forth in the section captioned "**RISK FACTORS**" in Item 1A and elsewhere in this Report.

The following Management's Discussion and Analysis of Financial Condition and Results of Operations is intended to help you understand our Company. This discussion is provided as a supplement to and should be read in conjunction with our consolidated financial statements for the years ended December 31, 2024 and 2023 and the accompanying notes included elsewhere in this Report.

All share totals reported herein have been adjusted to reflect our 1-for-18 reverse stock split, which was effective December 21, 2023.

Overview

We are a leading identity access management (IAM) platform provider for the enterprise and large-scale customer and civil ID solutions. Built to leverage BIO-key's world-class biometric core platform among seventeen strong authentication factors, BIO-key PortalGuard and hosted PortalGuard IDaaS are platforms that enable our customers to securely and easily assure that only the right people can access the right systems. PortalGuard goes beyond traditional multifactor authentication (MFA) solutions by addressing functional gaps, such as allowing roving users to biometrically authenticate at any workstation without using their phones or tokens, eliminating unauthorized account delegation, detecting duplicate users, and accommodating in-person identification.

Our customers use BIO-key every day to securely access a variety of cloud, mobile and web applications, on-premise and cloud-based servers from all of their devices. Employees, contractors, students and faculty sign in through PortalGuard to seamlessly and securely access the applications they need to do their important work, without relying on personal phone use or per-user tokens. Organizations use our platform to securely collaborate with their supply chain and partners, and to provide their customers with flexible, resilient user experiences online or in-person.

Large-scale customer and civil ID customers use our scalable biometric management platform and FBI-certified scanner hardware to manage enrollment, de-duplication and authentication for millions of users. One large bank has enrolled and identifies over 21.7 million of their customers using BIO-key fingerprint biometrics in branches on a daily basis.

PortalGuard and IBB deliver unique value to enterprises who find that mainstream MFA solutions do not adequately address their workforce use cases. PortalGuard operates as a single MFA user experience, providing a wide set of authentication choices to meet every use case. We sell our branded biometric and FIDO authentication hardware as accessories to our IAM platforms, so that customers can have a single vendor providing all components of their IAM solution. We do not mandate the use of BIO-key hardware with our software and services. Our NIST-certified fingerprint biometric platform is unique in that it supports interoperable mixing and matching combinations of different manufactures' fingerprint scanners in a deployment, so that the right scanner can be selected for the right use case, without mandating the user of a particular scanner.

Security-conscious software developers leverage our platform APIs and federation interfaces to securely and efficiently embed biometric and MFA identity capabilities into their software. Our approach to IDaaS allows our customers to efficiently scale their security and identity infrastructures to protect both internal cloud workforce- and external customer-facing applications.

In 2022, we expanded our product offerings and customer base when we acquired Swivel Secure, a Madrid, Spain based provider of IAM solutions. Until the fourth quarter of 2024, Swivel Secure was the exclusive distributer of AuthControl Sentry, AuthControl Enterprise, and AuthControl MSP product line in Europe, Africa and the Middle East, or EMEA, excluding the United Kingdom and Ireland. Swivel Secure, now operates as BIO-key EMEA maintains a direct sales force with offices in Madrid, Spain and Lisbon, Portugal, and sells only BIO-key products.

We operate a SaaS business model with customers subscribing to term use of our software for annual recurring revenue. We sell our products directly through our field and inside sales teams, as well as indirectly through our network of channel partners including resellers, system integrators, master agents and other distribution partners. Our subscription fees include a term license of hosted or on-premise product and technical support and maintenance of our platform. We base subscription fees primarily on the products used and the number of users enrolled in our platform. We generate subscription fees pursuant to noncancelable contracts with a weighted average duration of approximately one year.

Strategic Outlook

We plan to have a more significant role in the IAM market which continues to expand. We plan to continue to offer customers a suite of authentication options that complement our biometric solutions. The more well-rounded offerings of authentication options will allow customers to customize their approach to authentication all under one umbrella.

We expect to grow our business within government services and highly-regulated industries in which we have historically had a strong presence including financial services, higher education, and healthcare. We believe that continued heightened security and privacy requirements in these industries, and as colleges and universities continue operating in remote environments, we will generate increased demand for security solutions, including biometrics. In addition, we expect that the compatible, yet superior portable biometric user experience offered by our technology for Windows 10 users will accelerate the demand for our computer network log-on solutions and fingerprint readers. Through value add-offerings via direct sales, resellers, and strategic partnerships with leading higher education platform providers, we will continue to grow our installed base.

Our primary sales strategies are focused on (i) increased marketing efforts into the IAM market, (ii) dedicated pursuit of large-scale identification projects across the globe and (iii) growing our channel alliance program which we have grown to more than eighty-five participants and continues to generate incremental revenues.

A second component of our growth strategy is to pursue strategic acquisitions of select businesses and assets in the IAM space. In furtherance of this strategy, we are active in the industry and regularly evaluate businesses that we believe will either provide an entry into new market verticals or be synergistic with our existing operations and in either case, be accretive to earnings. We cannot provide any assurance as to whether we will be able to complete any acquisition and if completed, successfully integrate any business we acquire into our operations.

Recent Developments

As discussed under "Item 1A. Risk Factors", given the uncertainty the current economic and political environment and their effects on our business operations, sales cycles, personnel, and the geographic markets in which we operate, and numerous other matters of national, regional and global scale, including those of a political, economic, business and competitive nature, the related financial impact cannot be reasonably estimated at this time.

The current trend of continued remote work environments increases the risk of unauthorized users, phishing attacks, and hackers who are eager to take advantage of the challenges of securing remote workers. A growing trend of security incidents that highlight potential cybersecurity vulnerabilities, additional regulatory requirements, and increasingly stringent Cyber Insurance underwriting standards that mandate enhanced security solutions has resulted in many businesses requiring MFA for their employees, partners and customers to access their business systems and data. We believe that biometrics should continue to play a key role in remote user authentication.

RESULTS OF OPERATIONS

Consolidated Results of Operations

Two Year % trend

	Years ended December 31,	
	2024	**2023**
Revenues		
Services	16%	29%
License fees	75%	56%
Hardware	9%	15%
	100%	100%
Costs and other expenses		
Cost of services	6%	11%
Cost of license fees	9%	15%
Cost of hardware	7%	9%
Cost of hardware reserve	-3%	46%
Total cost of goods sold	19%	82%
Gross Profit	81%	18%
Operating expenses		
Selling, general and administrative	103%	101%
Research, development and engineering	36%	31%
Total operating expenses	139%	132%
Operating loss	-58%	-114%
Other income (expense)		
Total other income (expense)	-4%	2%
Loss before provision for income tax benefit	-62%	-112%
Provision for income tax benefit	0%	2%
Net loss	-62%	-110%

Revenues and Costs and other expenses

	2024	2023	2024-2023 $ Chg	2024-2023 % Chg
Revenues				
Services	$ 1,108,506	$ 2,218,885	$ (1,110,379)	-50%
License fees	5,189,370	4,342,010	847,360	20%
Hardware	631,695	1,194,010	(562,315)	-47%
Total Revenue	$ 6,929,571	$ 7,754,905	$ (825,334)	-11%
Costs and other expenses				
Services	$ 396,274	$ 861,936	$ (465,662)	-54%
License fees	589,505	1,174,919	(585,414)	-50%
Hardware	516,611	700,231	(183,620)	-26%
Hardware reserves	(213,005)	3,586,500	(3,799,505)	-106%
Total Costs and other expenses	$ 1,289,385	$ 6,323,586	$ (5,034,201)	-80%

Revenues

Revenue decreased $825,334 or 11% to $6,929,571 in 2024 as compared to $7,754,905 in 2023. This reduction was due largely to our exit from our distribution agreement with Swivel Secure Limited (SLL) and transition to selling BIO-key branded solutions in the EMEA market and to the factors discussed below.

For the years ended December 31, 2024, and 2023, service revenues included approximately $1,017.000 and $1,193,000, respectively, of recurring maintenance and support revenue, and approximately $91,000 and $1,026,000, respectively, of non-recurring custom services revenue. Recurring service revenue decreased 15% in 2024 due to the loss of one large customer service agreement. Non-recurring custom services decreased 91% in 2024 due to a large product customization and upgrade for a Swivel Secure customer without a similar customization in 2024. We expect the service fees to increase from the current levels as we expand our deployments worldwide.

For the year ended December 31, 2024 and 2023 license revenue increased $847,360 or 20% to $5,189,370, as several long-term customers expanded their license deployments in addition to several new customer deployments. We expect this trend to continue into 2025.

Hardware sales decreased by $562,315, or 47%, to $631,695 in 2024 from $1,194,010 in 2023. The decrease was attributable largely to fourth quarter 2023 sales to an international defense agency that did not reoccur in 2024.

Costs of goods sold

For the year ended December 31, 2024, cost of services decreased approximately 54% to $396,274, due primarily to the decreased costs to support Swivel Secure deployments.

License fees for the year ended December 31, 2024 decreased $585,414, or approximately 50%, to 589,505 from $1,174,919 due primarily to decreased license revenue and related license fees payable for third-party software distributed by Swivel Secure.

Hardware costs for the year ended December 31, 2024 decreased $183,620, or approximately 26%, to $516,611 from $700,231 in 2023. The decrease was associated with the decreased hardware sales and hardware mix. Hardware reserve costs for the year ended December 31, 2024 decreased $3,799,505 due to sales of slow-moving inventory after a complete reserve of slow-moving inventory purchased for projects in Nigeria, and for other older inventory in 2023. We are continuing to explore other markets and opportunities to sell the slow-moving inventory.

Gross Profit

Gross profit increased to $5,640,186 in 2024 from $1,431,319 in 2023, due to a $3,000,000 hardware reserve taken in 2023, the impact of growth in higher-margin license sales, and a reduction in lower-margin services and hardware revenue.

Our strategic decision to exit the SSL agreement and offer only BIO-key branded solutions in the EMEA market contributed to lower costs to support deployments, including software license fees incurred in connection with sales of Swivel Secure offerings using SLL solutions rather than BIO-key's internally developed software solutions. 2024 gross profit also benefited from the sale of $213,005 of fully reserved hardware inventory.

Selling, general and administrative

2024	2023	2024-2023 $ Chg	2024-2023 % Chg
$ 7,140,147	$ 7,862,710	$ (722,563)	-9%

Selling, general and administrative costs for year ended December 31, 2024 were $7,140,147 in 2024 compared to $7,862,710 representing a 9% decrease from 2023. The decrease was due to proactive cost reductions including reductions in headquarters expenses, sales personnel costs, marketing show expenses, and audit fees which were partially offset by an increase in professional services, principally related to financing activities in 2024.

Research, development and engineering

2024	2023	2024-2023 $ Chg	2024-2023 % Chg
$ 2,511,080	$ 2,394,926	$ 116,154	5%

For the year ended December 31, 2024, research, development and engineering costs were $2,511,080 compared with $2,394,926 representing a 5% increase from 2023. Included in the increase were higher personnel costs associated with wages and benefits for engineering employees to support new product development.

Other income (expense)

	2024	2023	2024-2023 $ Chg	2024-2023 % Chg
Interest income	$ 110	$ 11,533	$ (11,423)	-99%
Gain from sale of asset	-	20,000	(20,000)	100%
Foreign currency loss	(13,004)	(39,000)	25,996	-67%
Loan transaction costs	(124,000)	-	(124,000)	100%
Change in fair value of convertible note	-	396,203	(396,203)	-100%
Interest expense	(175,755)	(218,270)	42,515	-19%
	$ (312,649)	$ 170,466	$ (483,115)	-283%

The amounts for other income (expense) for the year ended December 31, 2024 consisted of interest income of $110, interest expense of $175,755 on the note payable and the government loan through the BBVA bank, and a loan fee amortization amount of $124,000. The amounts for the year ended December 31, 2023, consisted of interest income of $11,533, a gain from the sale of a PistolStar domain asset, change in loan transactions costs for payment of the convertible note payable as we elected to value the convertible note under the fair value option, and interest expense of $218,270 on the convertible note payable and the government loan through the BBVA bank.

Net Loss

Reflecting increased gross profit and lower operating expenses, net loss improved to $(4,300,692) in 2024 from a net loss of $(8,521,837) in 2023.

LIQUIDITY AND CAPITAL RESOURCES

Operating activities overview

Net cash used for operations during the year ended December 31, 2024 was $2,914,072. Items of note included:

- Net positive cash flows related to non-cash expenses of approximately $1,219,000.
- Net negative cash flows related to changes in lease liabilities, accounts payable, deposits and accrued liabilities in the aggregate amount of approximately $605,000 and our net loss for the period.

Investing activities overview

Net cash used in investing activities during the year December 31, 2024 was $13,047 for capital expenditures.

Fi***nancing activities overview***

Approximately $3,908,000 was provided by financing activities during the year ended December 31, 2024 consisting of the proceeds advanced under a secured note, proceeds from the exercise of warrants, and $3,740 from sales of common stock under our employee stock purchase plan. These amounts were offset by a partial repayment of note payable, repayment of a government loan, and costs associated with the issuance of our securities.

Sources of Liquidity

Since our inception, our capital needs have been principally met through proceeds from the sale of equity and debt securities. We expect capital expenditures to be less than $100,000 during the next twelve months.

The following sets forth our primary sources of capital during the previous two years:

On January 15, 2025, we entered into a warrant exercise agreement with an existing institutional investor (the "Investor") to exercise certain outstanding warrants to purchase an aggregate of 2,061,112 shares of common stock at an exercise price of $1.85 per share which were originally issued to the Investor on September 13, 2024. In consideration for the exercise of these warrants, we issued new warrants to the Investor to purchase an aggregate 3,091,668 shares of common stock at an exercise price of $2.15 per share. We realized gross proceeds of approximately $3.8 million, prior to deducting placement agent fees and estimated offering expenses.

On September 12, 2024, we entered into a warrant exercise agreement with the Investor to exercise certain outstanding warrants to purchase an aggregate of 1,030,556 shares of common stock. The warrants were originally issued to the Investor on October 31, 2023 and had an original exercise price of $3.15 per share. In consideration for the immediate exercise of these warrants, we reduced the exercise price of the warrants to $1.85 per share and issued to the Investor additional warrants to purchase an aggregate of 2,061,112 shares of common stock at an exercise price of $1.85 per share. The forgoing transaction resulted in gross proceeds of approximately $1.9 million prior to deducting placement agent fees and estimated offering expenses.

On June 24, 2024, we entered into and closed a note purchase agreement which provided for the issuance of a $2,360,000 principal amount senior secured promissory note (the "2024 Note"). This resulted in gross proceeds of approximately $1,826,000 after deducting placement agent fees, estimated offering expenses, and the original issue discount. The 2024 Note is due eighteen months (18) following the date of issuance, accrues interest at a rate of nine percent (9%) per annum, and commencing six months after the date of issuance of, the lender shall have the right to redeem up to $270,000 of principal amount each month. In connection with the warrant exercise agreements described above, we prepaid approximately $762,600 of the amount due under the 2024 Note. Pursuant to a series of exchange agreements in January 2025, the lender exchanged $859,000 principal amount due under the 2024 Note for 504,605 shares of common stock. As of the date of this report, the outstanding principal amount due under the 2024 Note is $738,400. For a more complete description of the 2024 Note, please see Note J to Our Consolidated Financial Statements included in Part II Item 8 of this report.

On November 20, 2023, we completed a private placement of shares of common stock and warrants resulting in net proceeds of approximately $435,000, after deducting placement agent fees and estimated offering expenses.

On October 30, 2023, we completed a public offering of shares of common stock and warrants resulting in net proceeds of approximately $3.3 million, after deducting placement agent fees and estimated offering expenses. We used approximately $2.2 million of the net proceeds to repay the outstanding amount due under outstanding convertible note payable.

We entered into an accounts receivable factoring arrangement with a financial institution (the "Factor") which has been extended to October 2025 and may be discontinued at that time. Pursuant to the terms of the arrangement, from time to time, we sell to the Factor a minimum of $150,000 per quarter of certain of our accounts receivable balances on a non-recourse basis for credit approved accounts. The Factor remits 35% of the foreign and 75% of the domestic accounts receivable balance to us (the "Advance Amount"), with the remaining balance, less fees, forwarded to us once the Factor collects the full accounts receivable balance from the customer. In addition, from time to time, we receive over advances from the Factor. Factoring fees range from 2.75% to 15% of the face value of the invoice factored and are determined by the number of days required for collection of the invoice. We expect to continue to use this factoring arrangement periodically to assist with our general working capital requirements due to contractual requirements.

Liquidity Outlook

At December 31, 2024, our total cash and cash equivalents were approximately $438,000, as compared to $511.000 at December 31, 2023. As of the date of this report, our total cash and cash equivalents are approximately $3,000,000.

As discussed above, we have historically financed our operations through access to the capital markets by issuing secured and convertible debt securities, convertible preferred stock, common stock, and through factoring receivables. We currently require approximately $812,000 per month to conduct our operations, a monthly amount that we have been unable to consistently achieve through revenue generation. During 2024, we generated approximately $6,930,000 of revenue, which did not generate enough cash to fully fund our average monthly cash requirements. The 2024 Note is due on or about December 24, 2025 and we are subject to monthly redemptions request at the option of the lender. We also have approximately $3.4 million of inventory (currently reserved) purchased for projects in Nigeria. We continue to explore other markets and opportunities to sell or return the product to generate additional cash.

If we are unable to generate sufficient revenue and positive cash flow from operations or liquidation of existing inventory to fund current operations and execute our business plan, we will need to obtain additional third-party financing during the next twelve months. Our long-term viability and growth will depend upon the successful commercialization of our technologies and our ability to obtain adequate financing. To the extent that we require such additional financing, no assurance can be given that any form of additional financing will be available on terms acceptable to us, if at all, that adequate financing will be obtained to meet our needs, or that such financing would not be dilutive to existing stockholders. If available financing is insufficient or unavailable or we fail to continue to generate sufficient revenue, we may be required to further reduce operating expenses, delay the expansion of operations, be unable to pursue merger or acquisition candidates, or in the extreme case, not continue as a going concern.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

Our financial statements are prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires that we make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting periods. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances. We evaluate our estimates and assumptions on an ongoing basis. Our actual results may differ significantly from these estimates under different assumptions or conditions.

We believe that of our significant accounting policies, which are described in Note A of the notes to our consolidated financial statements included in this Annual Report on Form 10-K, the following accounting policies involve a greater degree of judgment and complexity. Accordingly, these are the policies we believe are the most critical to aid in fully understanding and evaluating our financial condition and results of operations, as listed below:

1. *Revenue Recognition*

2. *Allowances for Accounts Receivable*

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

Not Applicable.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

See financial statements appearing at pages 43-70 of this Annual Report on Form 10-K.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

During the last two fiscal years, we have had no disagreements with our accountants on accounting and financial disclosure. On April 24, 2024, our Audit Committee appointed Bush & Associates CPA as our independent registered public accounting firm. The Company's financial statements had previously been audited by Marcum LLP.

ITEM 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer ("CEO") and Chief Financial Officer ("CFO"), evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2024. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the Company's management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure. Based on the evaluation of our disclosure controls and procedures as of December 31, 2024, our CEO and CFO concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

Management's Annual Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f) and 15d-15(f). Internal control over financial reporting cannot provide absolute assurance of achieving financial reporting objectives because of its inherent limitations. Internal control over financial reporting is a process that involves human diligence and compliance and is subject to lapses in judgment and breakdowns resulting from human failures. Internal control over financial reporting can also be circumvented by collusion or improper management override. Because of such limitations, there is a risk that material misstatements may not be prevented or detected on a timely basis. However, these inherent limitations are known features of the financial reporting process. Therefore, it is possible to design into the process safeguards to reduce, though not eliminate, the risk. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Under the supervision and with the participation of our management, including our CEO and CFO, we have conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2024, based upon the framework in *Internal Control-Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this evaluation, management has concluded that our internal control over financial reporting was effective as of December 31, 2024.

As we are a smaller reporting company, this annual report does not include an attestation report of our registered public accounting firm regarding internal control over financial reporting. Management's report was not subject to attestation by our registered public accounting firm pursuant to rules of the SEC that permit the Company to provide only management's report in this Annual Report on Form 10-K.

Changes in Internal Control Over Financial Reporting

During the fourth quarter of 2024, we implemented a number of changes to our internal control over financial reporting. We have adopted policies and procedures designed to enhance our review and procedures to thoroughly assess all accounts, including receivables, revenue, and inventory, for potential adjustments required for proper presentation of the value of the accounts. These changes consisted of allocating additional human resources to our finance and accounting functions, implementing additional testing and redundancy, and restructuring financial management personnel at Swivel Secure, including the review and approval of all accounting decisions at both the subsidiary and parent levels.

ITEM 9B. OTHER INFORMATION

During the three months ended December 31, 2024, none of our directors or "officers" (as defined in Rule 16a-1(f) under the Securities Exchange Act of 1934, as amended) adopted or terminated a "Rule 10b5-1 trading arrangement" or "non-Rule 10b5-1 trading arrangement," as each term is defined in Item 408 of Securities and Exchange Commission Regulation S-K.

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not Applicable.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The following sets forth certain information about each director and executive officer of the Company.

NAME	AGE	POSITIONS HELD
Michael W. DePasquale	70	Chairman of the Board of Directors and Chief Executive Officer
Cameron Williams (a)* (b) (c)	78	Director
Robert J. Michel (a) (b)*(c)	68	Director
Wong Kwok Fong (Kelvin)	61	Director and Vice-Chairman of the Board of Directors
Emmanuel Alia (b) (c)*	60	Director
Cecilia C. Welch	65	Chief Financial Officer
Mira K. LaCous	63	Chief Technology Officer
James D. Sullivan	57	Vice President of Strategy and Compliance, Chief Legal Officer

(a) Compensation Committee Member

(b) Audit Committee Member

(c) Nominating Committee Member

* Indicates chair of committee

Set forth below is a brief description of the background and business experience of our directors and executive officers for the past five years.

Directors

Michael W. DePasquale has served as our Chief Executive Officer and a Director since January 3, 2003, and Chairman of the Board since January 29, 2014. He served as Co-Chief Executive Officer of the Company from July 2005 to August 2006. Mr. DePasquale brings more than 30 years of executive management, sales and marketing experience to the Company. Mr. DePasquale has held executive management positions with McGraw-Hill, Digital Equipment Corporation, and other companies in the software and professional services industries. Mr. DePasquale earned a Bachelor of Science degree from the New Jersey Institute of Technology. He serves as the Vice Chairman on the Board of Directors of the International Biometrics and Identification Industry Association. We believe Mr. DePasquale's qualifications to sit on the board of directors include his extensive executive management experience in the technology sector and biometric industry expertise which strengthen the board's collective qualifications, skills and experience.

Cameron E. Williams was appointed Director of the Company on June 2, 2023. Mr. Williams has over 40 years of financial and executive management experience. Since 2014, he has served as the principal of CEW Advisory Services, a consulting firm he founded which provides strategic planning and related services to the consumer lending industry. He previously founded CEW Solutions which provided fraud investigation services to insurance companies, law firms, and third-party administrators. From 2007 to 2009, Mr. Williams served as COO of Asta Funding, Inc., a publicly traded diversified financial services company where he was responsible for the sourcing and financial analysis of distressed consumer assets. From 1998 to 2007, Mr. Williams served as President of Popular Financial Holdings, an affiliate of Popular, Inc., a $36 billion banking organization. Mr. Williams began his career in the banking industry holding financial management positions with Security Pacific Financial Services, BankAmerica Financial, Inc., and Security Pacific Financial Services System, Inc. Mr. Williams earned a Bachelor's in Accounting and completed graduate coursework at San Diego State University. We believe Mr. Williams' extensive financial and executive management experience in a variety of industries strengthens the Board's collective qualifications, skills, and experience.

Robert J. Michel has served as a Director of the Company since April 10, 2017. He has over 30 years of accounting and financial management experience. Since September, 2018, he has served as the Chief Financial Officer of Daxor Corporation (Nasdaq: DXR), a medical device manufacturing company specializing in blood volume analysis. Prior to Daxor, from November, 2017 until September 2018, Mr. Michel served as the CFO of Roadway Moving, Inc., a transportation, moving and storage company located in New York City. Mr. Michel spent 15 years at Asta Funding, Inc. (Nasdaq: ASFI), a diversified financial services company, including serving as its Chief Financial Officer from 2009 until 2017 where he was responsible for all financial matters and SEC reporting. Mr. Michel is a certified public accountant, earned an MBA in Taxation from St. John's University, and a BS in Business Administration from Villanova University. We believe Mr. Michel's qualifications to sit on the board of directors include his substantial experience in accounting and financial management for public companies which provide the board with a deep knowledge of financial and SEC reporting and strengthen the board's collective qualifications, skills, and experience.

Wong Kwok Fong (Kelvin) has served as a Director of the Company since December 4, 2015, as Managing Director of our Hong Kong Subsidiary since August 2016, and as Vice-Chairman of the Board of Directors since March 2019. He is the co-founder of China Goldjoy Group (previously World Wide Touch Technology Holdings Limited), a company listed on The Stock Exchange of Hong Kong. From 1997 until August, 2015, Mr. Wong served as the Chairman of China Goldjoy Group and served as its Chief Technology Officer through October 2016. During this time, Kelvin played a significant role in the substantial growth of the business. Kelvin brings over 25 years of senior management experience in manufacturing, supply chain, and marketing functions in the electronics and technology industries, including establishing manufacturing plants in Hong Kong and China, and building an extensive network in the electronics and technology industries. We believe Kelvin's qualifications to sit on the board of directors include his substantial experience in the technology industry, including biometrics and payment systems, and serving the Asian markets, which broaden and strengthen the board's collective qualifications, skills, and experience.

Emmanuel Alia was appointed Director of the Company on April 3, 2020. Since 2018, Mr. Alia has been providing management consulting services as an advisor to businesses seeking market entry strategies to emerging markets such as Africa and the Caribbean. From 2011 to 2018, Mr. Alia served as an Executive Director at the Corporate and Investment division of JPMorgan, and as a Senior Vice-President at CHASE Bank's Consumer and Community Banking specializing in the financial and banking services industry and opportunities in Africa. During Mr. Alia's tenure with JPMorgan, he served as head of Wholesale Operations in the Receivables Operations of the Global banking operations in the US and Canada, head of Retail Banking in the Greater Detroit area, and head of branches in the New York and New Jersey areas. For two years Mr. Alia was co-chair of the Black Organizational Leadership Development, an employee networking group in JPMorgan that works with firm's leadership to strengthen the firm's message, strategies and community outreach globally. Mr. Alia received a Bachelor of Arts in Accounting from Southeastern University and a Master's of Business Administration (MBA) from Cornell University. We believe Mr. Alia's qualifications to sit on the board of directors include his extensive industry experience and connection and networking abilities in the African communities and markets which further broaden and strengthen the board's collective qualifications, skills, and experience.

Executive Officers

Cecilia C. Welch has served as the Chief Financial Officer of the Company since December 21, 2009. Ms. Welch joined the Company in 2007 as Corporate Controller. Prior to joining the Company, Ms. Welch has held senior financial management positions in various industries, including software and manufacturing. Ms. Welch has a bachelor's degree in accounting from Franklin Pierce University.

Mira K. LaCous has served as Chief Technology Officer of the Company since March 13, 2014, as Senior Vice President of Technology & Development since 2012, and as our Vice President of Technology and Development since 2000. Ms. LaCous has over 35 years of product/project management, solution architecture, software development, team leadership and customer relations experience, with a background that includes successfully bringing numerous innovative products and technologies to market, including automated voice response systems, automated building control systems, software piracy protection, internet training materials and testing, WYSIWYG page layout and design software, image scanning / recognition software and systems, biometric security systems and algorithms, automated national ID systems using biometrics, and mobile applications with secure frameworks. Ms. LaCous has been a speaker at multiple events/conferences and has worked with teams around the globe bringing biometric technology deployments to life. Ms. LaCous is the author of eight (8) US patented technologies, multiple international patents and lead the engineering team in developing other patents and inventive technologies. Ms. LaCous earned a bachelor's degree in Computer Science, with mathematics and physics from North Dakota State University.

James D. Sullivan has served as BIO-key's Senior Vice President of Strategy and Compliance and BIO-key's Chief Legal Officer since February 2020, as Senior Vice President of Strategy and Business Development from April 2012 through December 2018, and the dual role as Senior Vice President of Global Sales from August 2015 through December of 2016. Mr. Sullivan is a recognized expert in privacy, cybersecurity, and biometric authentication for workforce and consumer applications. During his twenty years with the Company, Mr. Sullivan has directly worked with dozens of the Company's customers, including AT&T, Israel Defense Forces, LexisNexis, NCR and Omnicell, as well as large-scale biometric-centered identity management projects that interface daily with millions of corporate and consumer users. Mr. Sullivan earned a Juris Doctor with Honors from Georgia State University College of Law, is a member of the Georgia Bar, and enrolled to practice before the IRS. Mr. Sullivan has an undergraduate degree in Computer Science from Brown University and has over 26 years of experience in IT projects and implementation, including directly working with security and identity management solutions at the Company, Computer Associates, Platinum Technology, and Memco Software.

Committees of the Board of Directors

Audit Committee

Our audit committee is comprised of Cameron Williams (Chair), Robert J. Michel, and Emmanuel Alia each of whom meets the independence standards for purposes of serving on an audit committee established by NASDAQ and under the Exchange Act. Our audit committee (i) assists the board of directors in its oversight of the integrity of our financial statements, compliance with legal and regulatory requirements, and corporate policies and controls, (ii) has the sole authority to retain and terminate our independent registered public accounting firm, approve all auditing services and related fees and the terms thereof, and pre-approve any non-audit services to be rendered by our independent registered public accounting firm, and (iii) is responsible for confirming the independence and objectivity of our independent registered public accounting firm. Our independent registered public accounting firm has unrestricted access to our audit committee. Our board of directors has determined that Robert J. Michel qualifies as an "audit committee financial expert," as such term is defined in Item 407 of Regulation S-K.

Our audit committee operates under a written charter that is reviewed annually. The charter is available on our website at *www.bio-key.com*.

Compensation Committee

Our compensation committee is comprised of Cameron Williams (Chair) and Robert Michel, both of whom meet the independence standards established by NASDAQ and under the Exchange Act. The compensation committee's duties include overseeing our overall compensation philosophy, policies and programs. This includes reviewing and analyzing the design and function of our various compensation components, establishing salaries, incentives and other forms of compensation for officers and non-employee directors, and administering our equity incentive plan. In fulfilling its responsibilities, the compensation committee has the authority to delegate any or all of its responsibilities to a subcommittee of the compensation committee.

Our compensation committee operates under a written charter that is reviewed annually. The charter is available on our website at *www.bio-key.com*.

Code of Ethics

We have adopted a Code of Ethics that applies to our principal executive officer, principal financial officer, principal accounting officer or controller, and persons performing similar functions. Our Code of Ethics is designed to deter wrongdoing and promote: (i) honest and ethical conduct, including the ethical handling of actual or apparent conflicts of interest between personal and professional relationships; (ii) full, fair, accurate, timely and understandable disclosure in reports and documents that we file with, or submit to, the SEC and in our other public communications; (iii) compliance with applicable governmental laws, rules, and regulations; (iv) the prompt internal reporting of violations of the code to an appropriate person or persons identified in the code; and (v) accountability for adherence to the code. We intend to disclose amendments or waivers of the Code of Ethics on our website within four business days. Any person may obtain a copy of our Code of Ethics free of charge by sending a written request for such to the attention of the Chief Financial Officer of the Company, 101 Crawfords Corner Road, Suite 4116, Holmdel, NJ 07733.

Insider Trading Policy

We have adopted an Insider Trading Policy governing the purchase, sale, and/or other dispositions of our securities by directors, officers and employees, among other insiders. We believe our Insider Trading Policy is reasonably designed to promote compliance with applicable insider trading laws, rules and regulations, and the Nasdaq Listing Rules. Our Insider Trading Policy is filed as Exhibit 19.1 to this Annual Report on Form 10-K.

Term of Office

Our directors are elected at the annual meeting of stockholders and hold office until the annual meeting of the stockholders next succeeding his or her election, or until his or her prior death, resignation or removal in accordance with our bylaws. Our officers are appointed by the Board and hold office until the annual meeting of the Board next succeeding his or her election, and until his or her successor shall have been duly elected and qualified, subject to earlier termination by his or her death, resignation or removal.

ITEM 11. EXECUTIVE COMPENSATION

The following table sets forth a summary of the compensation paid to or accrued by our chief executive officer and the two most highly compensated executive officers other than our chief executive officer, for the fiscal years ended December 31, 2024 and 2023:

SUMMARY COMPENSATION TABLE

Name and Principal Position	Year	Salary ($)	Stock Awards ($) (1)	All Other Compensation ($) (2)	Total ($)
Michael W. DePasquale	2024	285,000	24,000	491	309,491
Chief Executive Officer	2023	271,250	19,250	1,027	291,527
Cecilia C. Welch	2024	199,500	22,500		222,000
Chief Financial Officer	2023	189,875	16,500	1,320	207,695
James D. Sullivan	2024	223,250	22,500	79,429 (3)	325,179
Chief Legal Officer	2023	212,479	16,500	6,433 (4)	235,412

(1) The aggregate grant date fair value of the restricted shares is calculated by the multiplying the quantity of shares issued by the closing trading price of the shares on the date of issuance calculated under FASB ASC 718.
(2) Consists of life insurance premiums paid by the Company except as otherwise noted.
(3) Consists of $78,632 of sales commissions and $797 of life insurance premiums paid by the Company.
(4) Consists of $5,102 of sales commissions and $1,331 of life insurance premiums paid by the Company.

Narrative Disclosure to Summary Compensation Table

Compensation for our executives is comprised of three main components: base salary, annual performance-based cash bonus, and long-term equity awards. We do not target a specific weighting of these three components or use a prescribed formula to establish pay levels. Rather, the board of directors and compensation committee considers changes in the business, external market factors and our financial position each year when determining pay levels and allocating between long-term and current compensation for the named executive officers.

Cash compensation is comprised of base salary and an annual performance-based cash bonus opportunity. The compensation committee generally seeks to set a named executive officer's targeted total cash compensation opportunity within a range that is the average of the applicable peer company and/or general industry compensation survey data, adjusted as appropriate for individual performance and internal pay equity and labor market conditions.

In setting cash compensation levels, we favor a balance in which base salaries are generally targeted at slightly below the peer average and a bonus opportunity that is targeted at slightly above the average. Effective July 1, 2024, we restored the 2023 based compensation of Mr. DePasquale, Mr. Sullivan and Ms. Welch. Effective January 16, 2023, we decreased the base compensation of Mr. DePasquale, Mr. Sullivan and Ms. Welch as part of the revised budget for the year.

Performance-based bonuses have historically been based upon the achievement of certain revenue milestones established by the compensation committee. The committee believes that this higher emphasis on performance-based cash bonuses places an appropriate linkage between a named executive officer's pay, his or her individual performance, and the achievement of specific business goals by placing a higher proportion of annual cash compensation at risk, thereby aligning executive opportunity with the interests of stockholders.

We also include an equity component as part of our compensation package because we believe that equity-based compensation aligns the long-term interests of our named executive officers with those of stockholders. In 2024 and 2023, we issued restricted stock awards to each of our named executive officers in recognition of the revenue growth of the Company in 2023 and revenue growth of the Company in 2022 and successful integration of Swivel Secure, respectively.

These cash and equity compensation components of pay are supplemented by various benefit plans that provide health, life, accident, disability and severance benefits, most of which are the same as the benefits provided to all of our US based employees.

Employment Agreements

On March 26, 2010, we entered into an employment agreement, effective as of March 25, 2010, with Michael W. DePasquale to serve as our Chief Executive Officer until March 24, 2011. The agreement automatically renews for subsequent one-year terms, unless the employment relationship is terminated by either party, or modified in accordance with the terms and conditions of the agreement. Since 2018, Mr. DePasquale's annual base salary has been $275,000, subject to adjustment by the compensation committee. In addition to the base salary, a "Performance Bonus" may be awarded to Mr. DePasquale on the basis of the Company achieving certain corporate and strategic performance goals, as determined by the compensation committee in its sole discretion. The employment agreement contains standard and customary confidentiality, non-solicitation and "work made for hire" provisions as well as a covenant not to compete which prohibits Mr. DePasquale from doing business with any current or prospective customer of the Company or engaging in a business competitive with that of the Company during the term of his employment and for the one-year period thereafter. This agreement also contains a number of termination and change in control provisions as described under the captions "***Termination Arrangements***" and "***Change in Control Arrangements***" below.

On April 5, 2017, we entered into an employment agreement with James Sullivan. The agreement automatically renews for subsequent one-year terms, unless terminated by the Company upon at least two months prior written notice which is treated as termination without cause. Since 2021, Mr. Sullivan's annual base salary has been $225,000, subject to adjustment by the compensation committee. The agreement contains standard and customary confidentiality, technical invention provisions as well as non-competition and non-solicitation covenants which prohibit Mr. Sullivan from doing business with any current or prospective customer of the Company or engaging in any business competitive with that of the Company during the term or his employment and for the one-year period thereafter. The agreement also contains a number of termination provisions as described under the caption "***Termination Agreements***" below.

On May 15, 2013, we entered into an employment agreement with Cecilia Welch to serve as the Chief Financial Officer of the Company until May 2014. The agreement automatically renews for subsequent one-year terms, unless the employment relationship is terminated by either party, or modified in accordance with the terms and conditions of the agreement. The employment agreement contains standard and customary confidentiality, technical invention provisions, as well as a covenant not to compete, which prohibits Ms. Welch from doing business with any current or prospective customer of the Company or engaging in a business competitive with that of the Company during the term of her employment and for the one-year period thereafter. This agreement also contains a number of termination provisions as described in "Termination and Change in Control Arrangements" in this Item.

Stock Option Grants and Restricted Stock Awards

In the event of any change in the outstanding shares of our common stock by reason of a stock dividend, stock split, combination of shares, recapitalization, merger, consolidation, transfer of assets, reorganization, conversion or what the board deems to be similar circumstances, the number and kind of shares subject to outstanding options and restricted stock awards, and the exercise price of such options shall be appropriately adjusted. Restricted Furthermore, option agreements and restricted stock award agreements contain change of control provisions as described under the caption "***Change in Control Provisions***" below.

OUTSTANDING EQUITY AWARDS AT FISCAL YEAR END

The following table sets forth for each named executive officer, information regarding outstanding equity awards as at December 31, 2024.

	Option Awards			Stock Awards	
Name	**Number of securities underlying unexercised options exercisable (#)**	**Option exercise price ($)**	**Option expiration date**	**Number of shares or units of stock that have not vested (#)**	**Market value of shares of units of stock that have not vested ($)(1)**
Michael W. DePasquale	232	282.24	3/23/2025	25,946(2)	77,838
	232	169.92	3/21/2026	-	-
Cecilia C. Welch	174	282.24	3/23/2025	24,166(3)	72,498
	174	169.92	3/21/2026	-	-
James D. Sullivan	174	282.24	3/23/2025	24,166(4)	72,498
	174	169.92	3/21/2026	-	-

(1) Calculated based on the closing market price of the Company's common stock on December 31, 2024 of $1.71 per share.

(2) 24,000 shares vest in three equal annual installments commencing July 31, 2025. 1,945 shares vest in two equal annual installments commencing August 29, 2025.

(3) 22,500 shares vest in three equal annual installments commencing July 31, 2025. 1,667 shares vest in two equal annual installments commencing August 29, 2025.

(4) 22,500 shares vest in three equal annual installments commencing July 31, 2025. 1,667 shares vest in two equal annual installments commencing August 29, 2025

Narrative Disclosure to Outstanding Equity Awards at Fiscal Year End Table

The following are the material terms of each agreement, contract, plan or arrangement that provide for payments to one or more of our named executive officers at, following or pursuant to their resignation, retirement or termination, or in connection with a change in control of the Company.

Termination Arrangements

We may terminate our employment agreement with Mr. DePasquale at any time with or without cause. In the event of termination by us without cause, we will continue to pay Mr. DePasquale his then current base salary for the greater of nine months from the date of such termination or the number of months remaining until the end of the term of the agreement.

We may terminate our employment agreement with Mr. Sullivan at any time with or without cause. In the event of termination by us without cause, we will continue to pay Mr. Sullivan his then current base salary, plus earned commissions, for the greater of six months from the date of such termination or the number of months remaining until the end of the term of the agreement.

We may terminate our employment agreement with Ms. Welch at any time with or without cause. In the event of termination by us without cause, we will continue to pay Ms. Welch her then current base salary for the greater of six months from the date of such termination or the number of months remaining until the end of the term of the Agreement.

Change in Control Provisions

Our 2015 Equity Incentive Plan (the "Plan") provides for the acceleration of vesting of unvested options and termination of any restriction or forfeiture provisions applicable to restricted stock awards upon a "Change in Control" of the Company. A Change in Control is defined in the Plans to include (i) a sale or transfer of substantially all of the Company's assets; (ii) the dissolution or liquidation of the Company; (iii) a merger or consolidation to which the Company is a party and after which the prior stockholders of the Company hold less than 50% of the combined voting power of the surviving corporation's outstanding securities; (iv) the incumbent directors cease to constitute at least a majority of the Board of Directors; or (v) a change in control of the Company which would otherwise be reportable under Section 13 or 15(d) of the Exchange Act. In the event of a "Change In Control" the Plan provides for the immediate vesting of all options issued thereunder and termination of all forfeiture provisions applicable to restricted stock award issued thereunder. Options issued to executive officers outside of the Plans contain change in control provisions substantially similar to those contained in the Plans.

Our 2023 Stock Incentive Plan (the "2023 Plan") provides for the Board or the Compensation Committee, as applicable, to accelerate the of vesting of unvested options and termination of any restriction or forfeiture provisions applicable to restricted stock awards upon a "Change in Control" of the Company. A Change in Control is defined in the 2023 Plan to include (i) a sale or transfer of substantially all of the Company's assets; (ii) a merger or consolidation to which the Company is a party and after which the prior stockholders of the Company hold less than 50% of the combined voting power of the surviving corporation's outstanding securities; (iii) the incumbent directors cease to constitute at least a majority of the Board of Directors; (iv) any person becomes directly or indirectly the beneficial owner of 40% of the combined voting power of our outstanding securities; or (v) a change in control of the Company which would otherwise be reportable under Section 13 or 15(d) of the Exchange Act.

Our employment agreement with Mr. DePasquale contains a change in control provision that is triggered if Mr. DePasquale is not offered continued employment with us or any successor, or within five years following such Change of Control, we or any successor terminate Mr. DePasquale's employment without cause. If this occurs, then we will pay Mr. DePasquale his base salary and benefits earned but unpaid through the date of termination, and any prorated bonus earned during the then current bonus year, plus two times his then current base salary.

Action to Recover Erroneously Awarded Compensation

In preparing our year-end 2023 consolidated financial statements, we determined that certain errors were made which required the restatement of our previously issued financial statements for the interim periods occurring within the year ended December 31, 2023. These errors resulted in the overstatement of accounts receivable and revenue, understatements of certain allowances for accounts receivable and certain reserves for inventory, and an understatement of net loss and total stockholders' equity. This restatement is reflected in our Annual Report on Form 10-K for the year ended December 31, 2023, filed with the SEC on June 5, 2024 and amended on June 20, 2024.

Our executive officers did not receive any incentive-based compensation in 2023 that was subject to recovery. Accordingly, no recovery was required or sought from any of our executive officers under our Clawback Policy, which is filed as Exhibit 97.1 to this Annual Report on Form 10-K.

Policies and Practices Related to the Grant of Certain Equity Awards Close in Time to the Release of Material Nonpublic Information

During 2024, we did not grant any stock options as part of our equity compensation program. If stock options are granted in the future, we intend to not grant stock options or similar awards in anticipation of the release of material nonpublic information that is likely to result in changes to the price of our common stock, such as a significant positive or negative earnings announcement, and not time the public release of such information based on stock option grant dates.

DIRECTOR COMPENSATION

The following table sets forth for each director, information regarding their compensation for the year ended December 31, 2024:

Name (1)	Stock Awards ($) (2)	Total ($)
Robert J. Michel (3)	6,002	13,002
Emmanuel Alia (4)	6,002	12,002
Cameron Williams (5)	6,002	13,002

(1) Mr. DePasquale and Kelvin Wong have been omitted from the above table because they do not receive any additional compensation for serving on our Board of Directors.

(2) The aggregate fair value of the common stock issued was calculated based on the closing price of our common stock on the date of issuance in accordance with FASB ASC 718.

(3) At December 31, 2024, Mr. Michel held options to purchase 36 shares of common stock and held 6.365 shares of restricted common stock.

(4) At December 31, 2024, Mr. Alia held options to purchase 18 shares of common stock and held 6,365 shares of restricted common stock.

(5) At December 31, 2024 Mr. Williams held 6,365 shares of restricted common stock.

Narrative Disclosure to Director Compensation Table

During 2024, we had a policy to pay each non-employee director $3,000 per board meeting, and $1,000 per board committee meeting attended. Fees for attendance at regular quarterly board meetings held during the first three quarters of each fiscal year are paid through the issuance of common stock and payments for the last meeting of the year are paid in cash or, at the option of the director, in shares of common stock. All of our directors elected to receive payment in common stock for the first and second board meeting in 2024. All directors will be indemnified by us for actions associated with being a director to the fullest extent permitted under Delaware law. We reimburse each of our non-employee directors for their reasonable expenses incurred in connection with attending meetings of the board of directors and related committees.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The following table sets forth, as of April 21, 2025 information with respect to the securities holdings of all persons that we, pursuant to filings with the SEC and our stock transfer records, have reason to believe may be deemed the beneficial owner of more than 5% of our common stock. The following table also sets forth, as of such date, the beneficial ownership of our common stock by all of our current executive officers and directors, both individually and as a group.

The beneficial owners and number of securities beneficially owned have been determined in accordance with Rule 13d-3 under the Securities Exchange Act of 1934, as awarded, and, in accordance therewith, include all shares of our common stock that may be acquired by such beneficial owners within 60 days of April 21, 2025 upon the exercise or conversion of any options, warrants or other convertible securities. This table has been prepared based on 5,814,041.

Name and Address of Beneficial Owner (1)	Amount and Nature of Beneficial Ownership	Percentage of Class
Directors and Executive Officers		
Michael W. DePasquale	48,918(2)	*
Cecilia C. Welch	24,483(3)	*
Mira K. LaCous	10,706(4)	*
James D. Sullivan	57,727(5)	1.0%
Robert J. Michel	13,442(6)	*
Emmanuel Alia	12,444(7)	*
Cameron E. Williams	11,787(8)	*
Wong Kwok Fong (Kelvin)	33,480(9)	*
All officers and directors as a group (eight (8) persons)	212,987	3.7%
Beneficial Owner		
Fiber Food Systems, Inc. 530 Technology Drive, Suite 100 Irvine, CA 92618	595,000	10.2%
Streeterville Capital LLC 303 East Wacker Drive, Suite 1040 Chicago, IL 60601	340,000(10)	5.8%

* Less than 1%

(1) Unless otherwise indicated, the address of each person listed below is c/o BIO-key International, Inc., 101 Crawfords Corner Rd, Suite 4116, Holmdel, NJ 07733

(2) Includes 232 shares issuable on exercise of options, 9,167 shares issuable upon exercise of warrants, and 28,120 shares of restricted stock of which 25,297 remain subject to vesting.

(3) Includes 174 shares issuable upon exercise of options and 26,064 shares of restricted stock of which 24,166 remain subject to vesting.

(4) Includes 87 shares issuable upon exercise of options and 10,203 shares of restricted stock of which 9,371 remain subject to vesting.

(5) Includes 174 shares issuable on exercise of options, 12,667 shares issuable upon exercise of warrants, and 26,064 shares of restricted stock of which 24,166 remain subject to vesting.

(6) Includes 36 shares issuable on exercise of options and 6,365 shares of restricted stock of which 6,272 remain subject to vesting.

(7) Includes 18 shares issuable on exercise of options and 6,365 shares of restricted stock of which 6,272 remain subject to vesting.

(8) Includes 6,365 shares of restricted stock of which 6,272 remain subject to vesting.

(9) Includes 232 shares issuable on exercise of options and 3,036 shares of restricted stock of which 2,435 remain subject to vesting. The address of Kelvin is Flat C, 27/F, Block 5, Grand Pacific Views, Siu Lam, Hong Kong N7.

(10) Based on information contained in a Schedule 13G filed with the SEC on January 15, 2025 and other information known to the Company. Streeterville Capital LLC (“Streeterville”) is the direct holder of 340,000 shares of common stock. Streeterville Management LLC and John M. Fife indirectly beneficially own these shares. Streeterville has sole voting and dispositive power over the shares.

EQUITY COMPENSATION PLAN INFORMATION

The following table sets forth, as of December 31, 2024, information with respect to securities authorized for issuance under equity compensation plans.

On January 27, 2016, the stockholders approved the 2015 Equity Incentive Plan, which was amended on June 13, 2019, by vote of stockholders, and amended and restated by vote of stockholders on June 18, 2021 (as amended and restated, the "2015 Plan"). The 2015 Plan reserves 43,834 shares of common stock for issuance of options, restricted stock, and other equity-based awards to employees, officers, directors, and consultants of the Company. Options are issued at exercise prices which may not be below 100-110% of fair market value and have terms not to exceed ten years. Options issued under the 2015 Plan vest pursuant to the terms of stock option agreements with the recipients. In the event of a change in control, certain stock awards issued under this plan may be subject to additional acceleration of vesting as may be provided in the participants' written agreement. The 2015 Plan expires in December 2025.

In addition to options issued under the 2015 Plan, we have issued options to purchase common stock to employees, officers, directors and consultants outside of the plan. The terms of these outstanding options are substantially similar to the provisions of the 2015 Plan and options issued thereunder. In the event of change in control, as defined, certain of the non-plan options outstanding vest immediately.

On June 18, 2021, the stockholders approved the 2021 Employee Stock Purchase Plan ("ESPP"). Under the terms of this plan, 43,834 shares of common stock are reserved for issuance and sale to employees and officers of the Company at a purchase price equal to 85% of the lower of the closing price of our common stock as reported on the Nasdaq Capital Market on the first day or the last day of the offering period. Eligible employees are granted an option to purchase shares of common stock funded by payroll deductions. The Board may suspend or terminate the plan at any time, otherwise the plan expires June 17, 2031.

On December 14, 2023, the stockholders approved the 2023 Stock Incentive Plan. The 2023 Plan reserves 333,334 shares of common stock for issuance of options, restricted stock, and other equity-based awards to employees, officers, directors, consultants, advisors and independent contractors of the Company. Options are issued at exercise prices which may not be below 100% of fair market value (or 110% of the fair market value if, at the time the option is granted, the participant owns, directly or indirectly, more than 10% of the total combined voting power of all classes of our stock) and have terms not to exceed ten years. Options issued under the 2023 Plan vest pursuant to the terms of stock option agreements with the recipients. In the event of a change in control, certain awards issued under this plan may be subject to additional acceleration of vesting as may be provided in the participants' written agreement or as determined by the Board or Compensation Committee. The 2023 Plan expires on December 13, 2033, unless terminated earlier. Awards have been granted for 185,194 shares under the 2023 Plan in 2024.

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)		Weighted-average exercise price of outstanding options, warrants and rights (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)	
Equity compensation plans approved by security holders	3,007	(1)(2)	$ 197.31	190,285	(3)
Equity compensation plans not approved by security holders	—		$ -	—	
Total	3,007	(1)(2)	$ 197.31	190,285	(3)

(1) Consists of shares of common stock issuable upon the exercise of options outstanding as of December 31, 2024 under the 2015 Plan and the 2023 Plan.

(2) Excludes employee stock purchase rights accruing under the ESPP.

(3) Amount includes 529 shares of common stock and 155,957 shares of common stock available as of December 31, 2024 for future issuance under the 2015 Plan and the 2023 Plan, respectively, and 33,799 shares of common stock available as of December 31, 2024 for future issuance under the ESPP.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Standstill Agreement with Principal Stockholders

Pursuant to separate securities purchase agreements dated October 29, 2015 and November 11, 2015 with Wong Kwok Fong (Kelvin), we issued and sold shares of series A-1 stock to Kelvin which were subsequently converted into shares of our common stock. The forgoing agreements contain a standstill provision (the "Standstill") which prohibits Kelvin either alone or together with any other person, from acquiring additional shares of our common stock or any of our assets, soliciting proxies, or seeking representation on our board of directors. Kelvin is the Co-Chairman of the board of directors and an executive officer.

2023 Public Securities Offering

On October 31, 2023, we completed a public offering of shares of common stock and warrants resulting in net proceeds of approximately $3.3 million, after deducting placement agent fees and estimated offering expenses. Units comprised of shares of common stock and warrants to purchase common stock were purchased at a per unit price of $3.15, and warrants have an exercise price of $3.15. Michael W. DePasquale, our Chairman of the Board of Directors and Chief Executive Officer, James D. Sullivan, our Vice President of Strategy and Compliance, Chief Legal Officer, and Mr. Sullivan's spouse each participated in the public offering. Mr. DePasquale purchased 9,167 shares of common stock and a warrant to purchase 9,167 shares of common stock for a total purchase price of $28,875. Mr. Sullivan purchased 12,667 shares of common stock and a warrant to purchase 12,667 shares of common stock for a total purchase price of $39,000, and his spouse purchased 3,173 shares of common stock and a warrant to purchase 3,173 shares of common stock for a total purchase price of $9,993.

Collaboration with Fiber Food Systems, Inc.

On November 27, 2024, we entered into a securities purchase agreement with Fiber Food Systems, Inc. ("Fiber Food") pursuant to which we purchased from Fiber Food 5,000,000 shares (the "Boumarang Shares") of common stock of Boumarang, Inc., an early-stage private technology company developing sustainable long-range drone technology for commercial applications, in exchange for 595,000 shares of the Company's common stock. As a result of the forgoing transaction, Fiber Food become the beneficial owner of in excess of 5% of the Company's outstanding shares of common stock. The purchase agreement with Fiber Food contemplates collaboration between the parties regarding potential strategic and commercial transactions, including acquiring assets or equity interests in other operating companies, integrating our identity access management solutions into Fiber Food's offerings, and introducing us to its customers, affiliates and business contacts who are potential users of our solutions, in each case pursuant to future definitive agreements on terms to be negotiated by the parties. In the event that at any time during the nine-month period after the closing of the transaction we value the Boumarang Shares at less than $5,000,000 on our balance sheet, we have the right to cause Fiber Food to repurchase the Boumarang Shares from us in exchange for the return of the shares of Company common stock issued in exchange for the Boumarang Shares. As of the date of this report, we have engaged in discussions with Fiber Food and Boumarang regarding the contemplated collaboration but no definitive agreements have been executed. The purchase agreement also contains a standstill which prohibits the Company, Fiber Food, Boomerang and their respective affiliates and representatives for a period of two years, from, among other things, initiating any business combination, restructuring, tender offer, proposal to seek representation on the board of directors, or any proxy solicitation, instigating, encouraging or assisting any third party from doing any of the forgoing, or acquiring any debt or equity securities of any other party.

Director Independence

As required under the NASDAQ Marketplace Rules, a majority of the members of a listed company's board of directors must qualify as "independent," as affirmatively determined by the board of directors. Our board considered certain relationships between our directors and us when determining each director's status as an "independent director" under Rule 5605(a)(2) of the NASDAQ Marketplace Rules. Based upon such definition and SEC regulations, we have determined that Robert Michel, Emmanuel Alia, and Cameron Williams, are "independent" under NASDAQ standards.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

Change in Independent Registered Public Accounting Firm

As previously disclosed, on April 24, 2024, the Audit Committee approved the engagement of Bush & Associates CPA ("Bush & Associates") as the Company's independent registered public accounting firm and on April 23, 2024, dismissed Marcum LLP ("Marcum"), as the Company's independent registered public accounting firm.

Marcum was retained to serve as the Company's independent registered public accounting firm on July 20, 2022. The audit report of Marcum on the Company's consolidated financial statements as of and for the fiscal year ended December 31, 2022 did not contain an adverse opinion or a disclaimer of opinion, and was not qualified or modified as to uncertainty, audit scope or accounting principles except that the report included an explanatory paragraph raising substantial doubt about the Company's ability to continue as a going concern. Marcum did not audit the Company's consolidated financial statements as of and for the fiscal year ended December 31, 2021.

During the two most recent fiscal years ended December 31, 2023 and 2022, and the subsequent interim period through April 23, 2024, there were (i) no disagreements (as defined in Item 304(a)(1)(iv) of Regulation S-K and the related instructions) between the Company and Marcum on any matter of accounting principles or practices, financial statement disclosure, or auditing scope or procedure, which disagreements, if not resolved to the satisfaction of Marcum, would have caused Marcum to make reference thereto in its report on the Company's consolidated financial statements for the year ended December 31, 2022, and (ii) no "reportable events" as such term is defined in Item 304(a)(1)(v) of Regulation S-K except that: (A) as previously reported in Item 9A of the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2022, the Company reported a material weakness in its internal control over financial reporting for the fiscal year ended December 31, 2022, relating to Company's review and control procedures over the income tax provision in the Company's financial statement which were not operating at a level of precision to prevent or detect a potential material misstatement in the Company's consolidated financial statements and a lack of control over the Company's foreign subsidiaries with respect to the filing of required tax returns on a timely basis; and (B) as previously reported in the Company's Current Report on Form 8-K filed with the U.S. Securities and Exchange Commission on April 22, 2024, the Company concluded on April 16, 2023 that its previously issued consolidated financial statements for the three months ended March 31, 2023, the three and six months ended June 30, 2023, and the three and nine months ended September 30, 2023 included in the Company's previously filed Quarterly Reports on Form 10-Q for such periods should no longer be relied upon. These reportable events were discussed among the Audit Committee and Marcum. Marcum has been authorized by the Company to respond fully to the inquiries of Bush & Associates concerning these reportable events.

The Company previously disclosed this information in its Current Report on Form 8-K filed with the SEC on April 30, 2024, provided Marcum with a copy of the disclosures, and requested that Marcum furnish it with a letter addressed to the SEC stating whether or not it agrees with the Company's statements therein. A copy of the letter dated April 29, 2024 was filed as an exhibit to such Form 8-K.

During the two most recent fiscal years ended December 31, 2023 and 2022, and the subsequent interim period through April 24, 2024, neither the Company, nor anyone on its behalf, consulted Bush & Associates regarding either (i) the application of accounting principles to a specified transaction, either completed or proposed, or the type of audit opinion that might be rendered with respect to the consolidated financial statements of the Company, and no written report or oral advice was provided to the Company by Bush &Associates that Bush & Associates concluded was an important factor considered by the Company in reaching a decision as to any accounting, auditing or financial reporting issue; or (ii) any matter that was the subject of a "disagreement" (as defined in Item 304(a)(1)(iv) of Regulation S-K and the related instructions) or a "reportable event" (as that term is defined in Item 304(a)(1)(v) of Regulation S-K).

Audit and Non-Audit Fees

The following table shows fees for professional services and audit fees billed to us by Bush & Associates for the audit of our annual consolidated financial statements for the years ended December 31, 2024 and 2023 and for review of our financial statements included in our quarterly reports in 2024. The following table also shows fees for professional services and audit fees billed to us by Marcum LLC for review of our financial statements included in our quarterly reports in 2023, services in connection with the audit of our financial statements for the year ended December 31, 2023, and for providing various consents in 2023 and 2024:

	2024	2023
Audit Fees	$ 105,000	$ 280,000
Audit-Related Fees	65,802	73,151
Tax Fees	-	17,000
Other Fees	-	-
Total Fees	$ 170,802	$ 370,151

Audit Fees consist of fees billed for professional services rendered for the audit of our financial statements and review of the interim financial statements included in quarterly reports and services that are normally provided by our auditors in connection with statutory and regulatory filings or engagements.

Audit-Related Fees consist of fees billed for assurance and related services that are reasonably related to the performance of the audit or review of our financial statements and which are not reported under audit fees. These fees relate primarily to services provided in connection with registration of securities and review of documents filed with the SEC.

Tax Fees consist of fees billed for professional services for tax compliance assistance rendered during the fiscal year.

Audit Committee Pre-Approval Procedures

The audit committee approves the engagement of our independent auditors to render audit and non-audit services before they are engaged. All of the fees for 2024 and 2023 shown above were pre-approved by the audit committee.

The audit committee pre-approves all audit and other permitted non-audit services provided by our independent auditors. Pre-approval is generally provided for up to one year, is detailed as to the particular category of services and is subject to a monetary limit. Our independent auditors and senior management periodically report to the audit committee the extent of services provided by the independent auditors in accordance with the pre-approval, and the fees for the services performed to date. The audit committee may also pre-approve particular services on a case-by-case basis.

Our audit committee will not approve engagements of our independent registered public accounting firm to perform non-audit services for us if doing so will cause our independent registered public accounting firm to cease to be independent within the meaning of applicable SEC rules. In addition, our audit committee considers, among other things, whether our independent registered public accounting firm is able to provide the required services in a more or less effective and efficient manner than other available service providers.

PART IV

ITEM 15. – EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) The following documents are filed as part of this Report. Portions of Item 15 are submitted as separate sections of this Report:

(1) Financial statements filed as part of this Report:

Report of Independent Registered Public Accounting Firm (Bush and Associates CPA., PCAOB ID:6797)

Consolidated Balance Sheets as of December 31, 2024 and 2023

Consolidated Statements of Operations—Years ended December 31, 2024 and 2023

Consolidated Statements of Stockholders' Equity—Years ended December 31, 2024 and 2023

Consolidated Statements of Cash Flows—Years ended December 31, 2024 and 2023

Notes to Consolidated Financial Statements—December 31, 2024 and 2023

(b) The exhibits listed in the Exhibits Index immediately preceding such exhibits are filed as part of this Report

ITEM 16. – FORM 10-K SUMMARY

None.

FINANCIAL STATEMENTS

The following financial statements of BIO-key International, Inc. are included herein at the indicated page numbers:

Report of Independent Registered Public Accounting Firm

To the Shareholder and the Board of Directors of
BIO-key International, Inc. Holmdel, NJ

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheet of BIO-key International, Inc. and Subsidiaries (the "Company") as of December 31, 2023 and 2024, and the related consolidated statements of operations and comprehensive loss, stockholders' equity and cash flows for the year then ended, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements and the retrospective adjustments related to the reverse stock split present fairly, in all material respects, the financial position of the Company as of December 31, 2023 and 2024, and results of its operations and its cash flows for the year then ended in conformity with accounting principles generally accepted in the United States of America.

Substantial Doubt about the Company's ability to continue as a Going Concern

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As disclosed in Note A of the financial statements, the Company has suffered substantial net losses and negative cash flows from operations in recent years and is dependent on debt and equity financing to fund its operations, all of which raise substantial doubt about the Company's ability to continue as a going concern. Management's plans regarding these matters are disclosed in Note A. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audit. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audit included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audit provides a reasonable basis for our opinion.

Critical Audit Matters

Critical audit matters are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgements. We determined that there are no critical audit matters.

/s/Bush & Associates CPA LLC

We have served as the Company's auditor since 2024.

Henderson, Nevada

April 23, 2025

BIO-key International, Inc. and Subsidiaries
CONSOLIDATED BALANCE SHEETS

	December 31, 2024	December 31, 2023
ASSETS		
Cash and cash equivalents	$ 437,604	$ 511,400
Accounts receivable, net	718,229	1,201,526
Due from factor	74,170	99,320
Inventory, net of reserve	378,307	445,740
Prepaid expenses and other	278,648	364,171
Total current assets	1,886,958	2,622,157
Equipment and leasehold improvements, net	140,198	220,177
Capitalized contract costs, net	409,426	229,806
Deposits and other assets	7,976	-
Operating lease right-of-use assets	73,372	36,905
Investments	5,000,000	-
Intangible assets, net	1,097,630	1,407,990
Total non-current assets	6,728,602	1,894,878
TOTAL ASSETS	$ 8,615,560	$ 4,517,035
LIABILITIES		
Accounts payable	$ 818,187	$ 1,316,014
Accrued liabilities	1,278,732	1,305,848
Note payable	1,525,977	-
Government loan – BBVA Bank, current portion	132,731	138,730
Deferred revenue - current	773,267	414,968
Operating lease liabilities, current portion	24,642	37,829
Total current liabilities	4,553,536	3,213,389
Deferred revenue, net of current portion	196,237	28,296
Deferred tax liability	-	22,998
Government loan – BBVA Bank, net of current portion	44,762	188,787
Operating lease liabilities, net of current portion	48,994	-
Total non-current liabilities	289,993	240,081
TOTAL LIABILITIES	4,843,529	3,453,470
Commitments (Note O)		
STOCKHOLDERS' EQUITY		
Common stock — authorized, 170,000,000 shares; issued and outstanding; 3,715,483 and 1,032,777 of $.0001 par value at December 31, 2024 and December 31, 2023, respectively	372	103
Additional paid-in capital	133,030,271	126,047,851
Accumulated other comprehensive loss	49,290	22,821
Accumulated deficit	(129,307,902)	(125,007,210)
TOTAL STOCKHOLDERS' EQUITY	3,772,031	1,063,565
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 8,615,560	$ 4,517,035

All BIO-key shares issued and outstanding for all periods reflect BIO-key's 1-for-18 reverse stock split, which was effective December 21, 2023.
The accompanying notes are an integral part of these statements.

BIO-key International, Inc. and Subsidiaries
CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS

	2024	2023
Revenues		
Services	$ 1,108,506	$ 2,218,885
License fees	5,189,370	4,342,010
Hardware	631,695	1,194,010
Total revenues	6,929,571	7,754,905
Costs and other expenses		
Cost of services	396,274	861,936
Cost of license fees	589,505	1,174,919
Cost of hardware	516,611	700,231
Cost of hardware reserve	(213,005)	3,586,500
Total costs and other expenses	1,289,385	6,323,586
Gross Profit	5,640,186	1,431,319
Operating expenses		
Selling, general and administrative	7,140,147	7,862,710
Research, development and engineering	2,511,080	2,394,926
Total operating expenses	9,651,227	10,257,636
Operating loss	(4,011,041)	(8,826,317)
Other income (expense)		
Interest income	110	11,533
Gain from sale of asset		20,000
Loss on foreign currency transactions	(13,004)	(39,000)
Loan fee amortization	(124,000)	-
Change in fair value of convertible note		396,203
Interest expense	(175,755)	(218,270)
Total other income (expense)	(312,649)	170,466
Loss before provision for income tax benefit	(4,323,690)	(8,655,851)
Provision for income tax benefit	22,998	134,014
Net loss	$ (4,300,692)	$ (8,521,837)
Comprehensive loss:		
Net loss	$ (4,300,692)	$ (8,521,837)
Other comprehensive loss- Foreign translation adjustment	26,469	265,423
Comprehensive loss	$ (4,274,223)	$ (8,256,414)
Basic and Diluted Loss per Common Share	$ (2.09)	$ (15.21)
Weighted Average Shares Outstanding:		
Basic and Diluted	2,059,884	560,278

All BIO-key shares issued and outstanding for all periods reflect BIO-key's 1-for-18 reverse stock split, which was effective December 21, 2023.
The accompanying notes are an integral part of these statements.

BIO-key International, Inc. and Subsidiaries
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

	Common Stock		Additional Paid-in	Accumulated Other Comprehensive	Accumulated	
	Shares (1)	**Amount**	**Capital**	**Income (Loss)**	**Deficit**	**Total**
Balance as of December 31, 2022	**552,739**	**$ 55**	**$122,029,476**	**$ (242,602)**	**$(116,485,373)**	**$ 5,301,556**
Issuance of common stock for directors' fees	3,078	-	39,007	-	-	39,007
Issuance of restricted common stock to employees	16,404	1	(1)	-	-	-
Forfeiture of restricted stock	(3,752)	-	(3,105)	-	-	(3,105)
Exercise of warrants	177,889	18	302	-	-	320
Issuance of warrants	-	-	3,403,322	-	-	3,403,322
Issuance of stock for securities purchase agreements	283,472	29	892,909	-	-	892,938
Issuance of common stock for employee stock purchase plan	2,947	-	17,478	-	-	17,478
Share based compensation for employee stock purchase plan	-	-	4,343	-	-	4,343
Foreign currency translation adjustment	-	-	-	265,423	-	265,423
Share-based compensation	-	-	225,487	-	-	225,487
Issuance costs	-	-	(561,367)	-	-	
Net loss	-	-	-	-	(8,521,837)	(8,521,837)
Balance as of December 31, 2023	**1,032,777**	**$ 103**	**$126,047,851**	**$ 22,821**	**$(125,007,210)**	**$ 1,063,565**
Issuance of common stock for directors' fees	12,048	1	18,005	-	-	18,006
Issuance of restricted common stock to employees	178,963	18	(18)	-	-	-
Forfeiture of restricted stock	(9,168)	(1)	-	-	-	(1)
Exercise of warrants	1,903,222	190	1,907,909	-	-	1,908,099
Issuance of warrants	-	-		-	-	-
Issuance of stock for securities purchase agreements	595,000	60	4,999,940	-	-	5,000,000
Issuance of common stock for employee stock purchase plan	2,641	1	3,689	-	-	3,690
Share based compensation for employee stock purchase plan	-	-	775	-	-	775
Foreign currency translation adjustment	-	-	-	26,469	-	26,469
Share-based compensation	-	-	224,470	-	-	224,470
Issuance costs	-	-	(172,350)	-	-	(172,350)
Net loss	-	-	-	-	(4,300,692)	(4,300,692)
Balance as of December 31, 2024	**3,715,483**	**$ 372**	**$133,030,271**	**$ 49,290**	**$(129,307,902)**	**$ 3,772,031**

All BIO-key shares issued and outstanding for all periods reflect BIO-key's 1-for-18 reverse stock split, which was effective December 21, 2023.

The accompanying notes are an integral part of these statements.

BIO-key International, Inc. and Subsidiaries
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Years ended December 31, 2024	2023
CASH FLOW FROM OPERATING ACTIVITIES:		
Net loss	$ (4,300,692)	$ (8,521,837)
Adjustments to reconcile net loss to cash used for operating activities:		
Depreciation	93,026	75,136
Amortization of intangible assets and write-off	304,983	354,558
Interest payable on Note	164,589	-
Loss on foreign currency	13,004	39,000
Reserve for inventory	(213,005)	3,586,500
Allowance for doubtful account	(372,532)	750,000
Amortization of debt discount	124,000	-
Amortization of capitalized contract costs	175,900	171,291
Share based and warrant compensation for employees and consultants	225,245	226,725
Stock based fees to directors	18,006	39,007
Bad debt expense	100,000	100,000
Change in fair value of convertible note	-	(396,203)
Deferred income tax benefit	(22,998)	(134,014)
Amortization of operating lease right-of-use assets	79,521	-
Change in operating assets and liabilities:		
Accounts receivable	855,829	(428,742)
Due from factor	25,150	(49,820)
Capitalized contract costs	(355,520)	(118,028)
Deposits	(7,976)	-
Right of use asset	(115,988)	160,449
Inventory	280,438	402,129
Prepaid expenses and other	85,523	(21,465)
Accounts payable	(502,987)	57,725
Income tax payable	15,000	(121,764)
Accrued liabilities	(42,116)	275,561
Deferred revenue	526,240	(71,288)
Operating lease liabilities	(66,712)	(168,376)
Net cash used for operating activities	(2,914,072)	(3,793,456)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Capital expenditures	(13,047)	(1,000)
Net cash used for investing activities	(13,047)	(1,000)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Proceeds from public offerings		4,296,260
Repayment of convertible notes		(2,200,000)
Proceeds from the exercise of warrants	1,908,099	320
Costs incurred for issuance of common stock	(172,350)	(561,367)
Proceeds from issuance of note payable	2,000,000	-
Repayment of note payable	(762,611)	-
Repayment of government loan	(150,024)	(119,251)
Proceeds from Employee Stock Purchase Plan	3,740	17,478
Net cash (used in) provided by financing activities	2,826,854	1,433,440
Effect of exchange rate changes	26,469	236,894
NET DECREASE IN CASH AND CASH EQUIVALENTS	(73,796)	(2,124,122)
CASH AND CASH EQUIVALENTS, BEGINNING OF YEAR	511,400	2,635,522
CASH AND CASH EQUIVALENTS, END OF YEAR	$ 437,604	$ 511,400

All BIO-key shares issued and outstanding for all periods reflect BIO-key's 1-for-18 reverse stock split, which was effective December 21, 2023.
The accompanying notes are an integral part of these statements.

SUPPLEMENTARY DISCLOSURES OF CASH FLOW INFORMATION

	Years ended December 31,	
	2024	**2023**
Cash paid during the year for:		
Taxes	$ -	$ -
Interest	$ 175,755	$ 218,270
Noncash investing and financing activities:		
Operating lease right-of-use asset and liability for new lease	$ 79,521	$ -

All BIO-key shares issued and outstanding for all periods reflect BIO-key's 1-for-18 reverse stock split, which was effective December 21, 2023.
The accompanying notes are an integral part of these statements.

NOTE A —THE COMPANY AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Nature of Business

The Company, founded in 1993, develops and markets proprietary fingerprint identification biometric technology and software solutions enterprise-ready identity access management solutions to commercial, government and education customers throughout the United States and internationally. The Company was a pioneer in developing automated, finger identification technology that supplements or compliments other methods of identification and verification, such as personal inspection identification, passwords, tokens, smart cards, ID cards, PKI (public key infrastructure), credit cards, passports, driver's licenses, OTP or other form of possession or knowledge-based credentialing. Additionally, advanced BIO-key® technology has been, and is, used to improve both the accuracy and speed of competing finger-based biometrics.

Going Concern and Basis of Presentation

The Company has historically financed operations through access to the capital markets by issuing convertible debt securities, convertible preferred stock, common stock, and through factoring receivables. As of the date of this report, the Company does not have enough cash for twelve months of operations. The history of significant losses, the negative cash flow from operations, the limited cash resources on hand and the dependence by the Company on its ability, to obtain additional financing to fund its operations after the current cash resources are exhausted raises substantial doubt about the Company's ability to continue as a going concern. The Company has lowered expenses through decreasing spending in marketing, and research and development. In addition, the Company has purchased inventory for projects in Nigeria, which have been delayed in deployment, and is, therefore looking into other markets and opportunities to sell or return the product to generate additional cash.

The accompanying financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America ("GAAP"), which contemplate continuation of the Company as a going concern, and assumes continuity of operations, realization of assets and the satisfaction of liabilities and commitments in the normal course of business. The Company has suffered substantial net losses and negative cash flows from operations in recent years and is dependent on debt and equity financing to fund its operations all of which raise substantial doubt about the Company's ability to continue as a going concern. Recoverability of a major portion of the recorded asset amounts shown in the accompanying balance sheet is dependent upon the Company's ability to increase its revenue and meet its financing requirements on a continuing basis and become profitable in its future operations. The accompanying consolidated financial statements do not include any adjustments relating to the recoverability and classification of recorded assets or the amounts and classification of liabilities that might be necessary should the Company be unable to continue in existence.

Reverse Stock Split

All references to issued and outstanding shares for all periods reflect the 1-for-18 reverse stock split, which was effective December 21, 2023. As a result, all share numbers for all periods, including the number of shares underlying warrants, options, and other convertible securities, and all exercise prices applicable to such warrants, options and convertible securities have been adjusted retrospectively to reflect the 1-for-18 reverse stock split.

Foreign Currency

The Company accounts for foreign currency transactions pursuant to ASC 830, *Foreign Currency Matters* ("ASC 830"). The functional currency of the Company is the U.S. dollar, which is the currency of the primary economic environment in which it operates. In accordance with ASC 830, monetary balances denominated in or linked to foreign currency are stated on the basis of the exchange rates prevailing at the applicable balance sheet date. For foreign currency transactions included in the statement of operations, the exchange rates applicable on the relevant transaction dates are used. Gains or losses arising from changes in the exchange rates used in the translation of such transactions and from the remeasurement of the monetary balance sheet items are recorded as gain (loss) on foreign currency transactions.

In order to mitigate the losses and improve cash flow, the Company is working on the following initiatives. Our EMEA subsidiary is now only selling our BIO-key and PortalGuard solutions that does not carry the previous 50% cost of sales. We have agents actively seeking other markets to sell our inventory for the Nigerian projects. We continue to lower expenses if possible and keep our current monthly expenses at the current level of approximately $812,000. We now have an investment that we can liquidate to fund operations (See Note H) and to pay the required Note Payable payments (See Note J).

The functional currency of Swivel Secure Europe, SA is the Euro. Under ASC 830, all assets and liabilities are translated into U. S. dollars using the current exchange rate at the end of each fiscal period. Revenues and expenses are translated using the average exchange rates prevailing throughout the respective periods. All transaction gains and losses from the measurement of monetary balance sheet items denominated in Euros are reflected in the statement of operations as appropriate. Translation adjustments are included in accumulated other comprehensive loss.

Summary of Significant Accounting Policies

A summary of the significant accounting policies consistently applied in the preparation of the accompanying consolidated financial statements follows:

1. *Principles of Consolidation*

The accompanying consolidated financial statements include the accounts of BIO-key International, Inc. and its wholly-owned subsidiaries (collectively, the "Company"). Intercompany accounts and transactions have been eliminated in consolidation.

2. *Use of Estimates*

Our consolidated financial statements are prepared in accordance with accounting principles generally accepted in the United States of America (GAAP) as set forth in the Financial Accounting Standards Board's (FASB) Accounting Standards Codification (ASC) and consider the various staff accounting bulletins and other applicable guidance issued by the U.S. Securities and Exchange Commission (SEC). These accounting principles require us to make certain estimates, judgments and assumptions. The Company believes that the estimates, judgments and assumptions upon which it relies are reasonable based upon information available to us at the time that these estimates, judgments and assumptions are made. These estimates, judgments and assumptions can affect the reported amounts of assets and liabilities as of the date of the financial statements as well as the reported amounts of revenues and expenses during the periods presented. Certain significant accounting policies that contain subjective management estimates and assumptions include those related to accounts receivable, inventory, intangible assets and goodwill, fair value of convertible note payable, and income taxes.

3. *Revenue Recognition*

In accordance with ASC 606, revenue is recognized when a customer obtains control of promised goods or services. The amount of revenue recognized reflects the consideration to which the Company expects to be entitled to receive in exchange for these services. To achieve this core principle, the Company applies the following five steps:

- Identify the contract with a customer
- Identify the performance obligations in the contract
- Determine the transaction price
- Allocate the transaction price to performance obligations in the contract
- Recognize revenue when or as the Company satisfies a performance obligation

All of the Company's performance obligations, and associated revenues, are generally transferred to customers at a point in time, with the exception of support and maintenance, and professional services, which are generally transferred to the customer over time.

Software licenses

Software license revenue consists of fees for perpetual and subscription licenses for one or more of the Company's biometric fingerprint solutions or identity access management solutions. Revenue is recognized at a point in time once the software is available to the customer for download. Software license contracts are generally invoiced in full on execution of the arrangement.

Hardware

Hardware revenue consists of fees for associated equipment sold with or without a software license arrangement, such as servers, locks and fingerprint readers. Customers are not obligated to buy third party hardware from the Company, and may procure these items from a number of suppliers. Revenue is recognized at a point in time once the hardware is shipped to the customer. Hardware items are generally invoiced in full on execution of the arrangement.

Support and Maintenance

Support and maintenance revenue consists of fees for unspecified upgrades, telephone assistance and bug fixes. The Company satisfies its support and maintenance performance obligation by providing "stand-ready" assistance as required over the contract period. The Company records deferred revenue (contract liability) at time of prepayment until the term of the contract begins. Revenue is recognized over time on a ratable basis over the contract term. Support and maintenance contracts are one to five years in length and are generally invoiced in advance at the beginning of the term. Support and Maintenance revenue for subscription licenses is carved out of the total license cost at 18% and recognized on a ratable basis over the license term.

Professional Services

Professional services revenues consist primarily of fees for deployment and optimization services, as well as training. The majority of the Company's consulting contracts are billed on a time and materials basis, and revenue is recognized based on the amount billable to the customer in accordance with practical expedient ASC 606-10-55-18. For other professional services contracts, the Company utilizes an input method and recognizes revenue based on labor hours expended to date relative to the total labor hours expected to be required to satisfy its performance obligation.

Contracts with Multiple Performance Obligations

Some contracts with customers contain multiple performance obligations. For these contracts, the Company accounts for individual performance obligations separately if they are distinct. The transaction price is allocated to the separate performance obligations on a relative standalone selling price basis. The standalone selling prices are determined based on overall pricing objectives, taking into consideration market conditions and other factors, including the value of the contracts, the cloud applications sold, customer demographics, geographic locations, and the number and types of users within the contracts.

The Company considered several factors in determining that control transfers to the customer upon shipment of hardware and availability of download of software. These factors include that legal title transfers to the customer, the Company has a present right to payment, and the customer has assumed the risks and rewards of ownership.

Accounts receivable from customers are typically due within 30 days of invoicing. The Company does not record a reserve for product returns or warranties as amounts are deemed immaterial based on historical experience.

Costs to Obtain and Fulfill a Contract

Costs to obtain and fulfill a contract are predominantly sales commissions earned by the sales force and are considered incremental and recoverable costs of obtaining a contract with a customer. These costs are deferred and then amortized over a period of benefit determined to be four years. These costs are included as capitalized contract costs on the balance sheet. The period of benefit was determined by taking into consideration customer contracts, technology, and other factors based on historical evidence. Amortization expense is included in selling, general and administrative expenses in the accompanying consolidated statements of operations.

Deferred Revenue

Deferred revenue includes customer advances and amounts that have been paid by customers for which the contractual maintenance terms have not yet occurred. The majority of these amounts are related to maintenance contracts for which the revenue is recognized ratably over the applicable term, which generally is 12-60 months. Contracts greater than 12 months are segregated as long term deferred revenue. Maintenance contracts include provisions for unspecified when-and-if available product updates and customer telephone support services. At December 31, 2024 and 2023, amounts in deferred revenue were approximately $443,000 and $515,000, respectively.

4. *Business Combinations*

In accordance with ASC 805, *Business Combinations* (ASC 805), the Company recognizes the tangible and intangible assets acquired and liabilities assumed based on their estimated fair values. Determining these fair values requires management to make significant estimates and assumptions, especially with respect to intangible assets.

The Company recognizes identifiable assets acquired and liabilities assumed at their acquisition date fair value. Goodwill as of the acquisition date is measured as the excess of consideration transferred over the net acquisition date fair value of the assets acquired and the liabilities assumed and represents the expected future economic benefits arising from other assets acquired that are not individually identified and separately recognized. While the Company uses its best estimates and assumptions as part of the purchase price allocation process to accurately value assets acquired and liabilities assumed at the acquisition date, its estimates are inherently uncertain and subject to refinement. Assumptions may be incomplete or inaccurate, and unanticipated events or circumstances may occur, which may affect the accuracy or validity of such assumptions, estimates or actual results. As a result, during the measurement period, which may be up to one year from the acquisition date, the Company records adjustments to the assets acquired and liabilities assumed with the corresponding offset to goodwill to the extent that it identifies adjustments to the preliminary purchase price allocation. Upon the conclusion of the measurement period or final determination of the values of assets acquired or liabilities assumed, whichever comes first, any subsequent adjustments are recorded to the consolidated statements of operations.

5. *Goodwill and acquired intangible assets*

Goodwill is not amortized, but is evaluated for impairment annually, or whenever events or changes in circumstances indicate that the carrying value may not be recoverable. The Company has determined that there is a single reporting unit for the purpose of conducting this goodwill impairment assessment. For purposes of assessing potential impairment, the Company estimates the fair value of the reporting unit, based on the Company's market capitalization, and compares this amount to the carrying value of the reporting unit. If the Company determines that the carrying value of the reporting unit exceeds its fair value, an impairment charge would be required. The annual goodwill impairment test will be performed as of December 31st of each year. Refer Note G for more information regarding the impairment of goodwill in 2022.

Intangible assets acquired in a business combination are recorded at their estimated fair values at the date of acquisition. The Company amortizes acquired definite-lived intangible assets over their estimated useful lives based on the pattern of consumption of the economic benefits or, if that pattern cannot be readily determined, on a straight-line basis.

6. *Cash Equivalents*

Cash equivalents consist of liquid investments with original maturities of three months or less. At December 31, 2024 and 2023, cash equivalents consisted of a money market account.

7. *Accounts Receivable*

Accounts receivable are carried at original amount less an estimate made for doubtful receivables based on a review of all outstanding amounts on a monthly basis. Management determines the allowance for doubtful receivables by regularly evaluating individual customer receivables and considering a customer's financial condition, credit history, and current economic conditions. Accounts receivable are written off when deemed uncollectible.

Accounts receivable at December 31, 2024 and 2023 consisted of the following:

	December 31,	
	2024	**2023**
Accounts receivable	$ 1,351,482	$ 2,207,311
Allowance for doubtful accounts	(633,253)	(1,005,785)
Accounts receivable, net of allowances for doubtful accounts	$ 718,229	$ 1,201,526

Bad debt expenses (if any) are recorded in selling, general, and administrative expense.

The allowance for doubtful accounts for the years ended December 31, 2024 and 2023 is as follows:

	Balance at Beginning of Year	**Charged to Costs and Expenses**	**Deductions from Reserves**	**Balance at End of Year**
Year ended December 31, 2024 Allowance for Doubtful Accounts	$ 1,005,785	$ 16,265	$ (388,797)	$ 633,253
Year ended December 31, 2023 Allowance for Doubtful Accounts	$ 573,785	$ 750,000	$ (318,000)	$ 1,005,785

8. *Equipment and Leasehold Improvements, Intangible Assets and Depreciation and Amortization*

Equipment and leasehold improvements are stated at cost. Depreciation is provided for in amounts sufficient to relate the cost of depreciable assets to operations over the estimated service lives, principally using straight-line methods. Leasehold improvements are amortized over the shorter of the life of the improvement or the lease term, using the straight-line method.

The estimated useful lives used to compute depreciation and amortization for financial reporting purposes are as follows:

	Years
Equipment and leasehold improvements	
Equipment	3 - 5

	Years
Furniture and fixtures	3 - 5
Software	3
Leasehold improvements	life or lease term

Intangible assets other than goodwill consist of patents, trade name, proprietary software, and customer relationships. Patent costs are capitalized until patents are awarded. Upon award, such costs are amortized using the straight-line method over their respective economic lives. If a patent is denied, all costs are charged to operations in that year. Trade names, proprietary software, and customer relationships are amortized over the economic useful life.

9. *Impairment or Disposal of Long Lived Assets, including Intangible Assets*

The Company reviews long-lived assets, including intangible assets subject to amortization, whenever events or changes in circumstances indicate that the carrying amount of such an asset may not be recoverable. Recoverability of these assets is measured by comparison of their carrying amount to the future undiscounted cash flows the assets are expected to generate. If such assets are considered impaired, the impairment to be recognized is equal to the amount by which the carrying value of the assets exceeds their fair value determined by either a quoted market price, if any, or a value determined by utilizing a discounted cash flow technique. In assessing recoverability, the Company must make assumptions regarding estimated future cash flows and discount factors. If these estimates or related assumptions change in the future, the Company may be required to record impairment charges. Intangible assets with determinable lives are amortized over their estimated useful lives, based upon the pattern in which the expected benefits will be realized, or on a straight-line basis, whichever is greater. There were no impairments in 2024 and 2023.

10. *Advertising Expense*

The Company expenses the costs of advertising as incurred. Advertising expenses for 2024 and 2023 were approximately $353,000 and $340,000, respectively.

11. *Research and Development Expenditures*

Research and development expenses include costs directly attributable to the conduct of research and development programs primarily related to the development of our software products and improving the efficiency and capabilities of our existing software. Such costs include salaries, payroll taxes, employee benefit costs, materials, supplies, depreciation on research equipment, services provided by outside contractors, and the allocable portions of facility costs, such as rent, utilities, insurance, repairs and maintenance, depreciation and general support services. All costs associated with research and development are expensed as incurred.

12. *Earnings Per Share of Common Stock ("EPS")*

The Company's EPS is calculated by dividing net loss applicable to common stockholders by the weighted-average number of common shares outstanding during the reporting period. Diluted EPS includes the effect from potential issuances of common stock, such as stock issuable pursuant to the exercise of stock options and warrants, when the effect of their inclusion is dilutive. All BIO-key shares issued and outstanding for all periods reflect BIO-key's 1-for-18 reverse stock split, which was effective December 21, 2023.

13. *Accounting for Stock-Based Compensation*

The Company accounts for share based compensation in accordance with the provisions of ASC 718-10, "Compensation — Stock Compensation," which requires measurement of compensation cost for all stock awards at fair value on date of grant and recognition of compensation over the service period for awards expected to vest. The majority of its share-based compensation arrangements vest over a three year vesting schedule. The Company expenses its share-based compensation under the ratable method, which treats each vesting tranche as if it were an individual grant. The fair value of stock options is determined using the Black-Scholes valuation model and requires the input of certain assumptions. These assumptions include estimating the length of time employees will retain their vested stock options before exercising them (the "expected option term"), the estimated volatility of its common stock price over the option's expected term, the risk-free interest rate over the option's expected term, and the Company's expected annual dividend yield. Changes in these subjective assumptions can materially affect the estimate of fair value of stock-based compensation and consequently, the related amount recognized as an expense in the consolidated statements of operations. As required under the accounting rules, the Company reviews its valuation assumptions at each grant date and, as a result, the Company is likely to change its valuation assumptions used to value employee stock-based awards granted in future periods. The values derived from using the Black-Scholes model are recognized as expense over the service period, net of estimated forfeitures (the number of individuals that will ultimately not complete their vesting requirements). The estimation of stock awards that will ultimately vest requires significant judgment. The Company considers many factors when estimating expected forfeitures, including types of awards, employee class, and historical experience. Actual results, and future changes in estimates, may differ substantially from current estimates. Options and warrants to outsiders are accounted for under ASC 718.

The following table presents share-based compensation expenses included in the Company's consolidated statements of operations:

	Year ended December 31,	
	2024	2023
Selling, general and administrative	$ 201,100	$ 209,134
Research, development and engineering	42,150	56,598
	$ 243,250	$ 265,732

14. *Income Taxes*

The provision for, or benefit from, income taxes includes deferred taxes resulting from the temporary differences in income for financial and tax purposes using the liability method. Such temporary differences result primarily from the differences in the carrying value of assets and liabilities. Future realization of deferred income tax assets requires sufficient taxable income within the carryback, carryforward period available under tax law. The Company evaluates, on a quarterly basis whether, based on all available evidence, if it is probable that the deferred income tax assets are realizable. Valuation allowances are established when it is more likely than not that the tax benefit of the deferred tax asset will not be realized. The evaluation, as prescribed by ASC 740-10, "Income Taxes," includes the consideration of all available evidence, both positive and negative, regarding historical operating results including recent years with reported losses, the estimated timing of future reversals of existing taxable temporary differences, estimated future taxable income exclusive of reversing temporary differences and carryforwards, and potential tax planning strategies which may be employed to prevent an operating loss or tax credit carryforward from expiring unused. Because of the Company's historical performance and estimated future taxable income, a full valuation allowance has been established.

The Company accounts for uncertain tax provisions in accordance with ASC 740. The ASC clarifies the accounting for uncertainty in income taxes recognized in an enterprise's financial statements. The ASC prescribes a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. The ASC provides guidance on de-recognition, classification, interest and penalties, accounting in interim periods, disclosure and transition.

15. *Leases*

In accordance with ASC 842, *Leases* (ASC 842), the Company records a right-of-use (ROU) asset and a lease liability on the balance sheet for all leases with terms longer than 12 months and classifies them as either operating or finance leases.

At the inception of an arrangement, the Company determines whether the arrangement is or contains a lease based on the unique facts and circumstances present and the classification of the lease including whether the contract involves the use of a distinct identified asset, whether the Company obtains the right to substantially all the economic benefit from the use of the asset, and whether the Company has the right to direct the use of the asset. Leases with a term greater than one year are recognized on the balance sheet as ROU assets, lease liabilities and, if applicable, long-term lease liabilities. The Company has elected not to recognize on the balance sheet leases with terms of one year or less under practical expedient in paragraph ASC 842-20-25-2. For contracts with lease and non-lease components, the Company has elected not to allocate the contract consideration, and to account for the lease and non-lease components as a single lease component.

Lease liabilities and their corresponding ROU assets are recorded based on the present value of lease payments over the expected lease term. The implicit rate within our operating leases are generally not determinable and, therefore, the Company uses the incremental borrowing rate at the lease commencement date to determine the present value of lease payments. The determination of the Company's incremental borrowing rate requires judgment. The Company determines the incremental borrowing rate for each lease using our estimated borrowing rate, adjusted for various factors including level of collateralization, term and currency to align with the terms of the lease. The operating lease ROU asset also includes any lease prepayments, offset by lease incentives.

An option to extend the lease is considered in connection with determining the ROU asset and lease liability when it is reasonably certain we will exercise that option. An option to terminate is considered unless it is reasonably certain we will not exercise the option.

16. *Recent Accounting Pronouncements*

In June 2016, the FASB issued ASU 2016-13, Financial Instruments-Credit Losses (Topic 326), referred to herein as ASU 2016-13, which significantly changes how entities will account for credit losses for most financial assets and certain other instruments that are not measured at fair value through net income. ASU 2016-13 replaces the existing incurred loss model with an expected credit loss model that requires entities to estimate an expected lifetime credit loss on most financial assets and certain other instruments. Under ASU 2016-13 credit impairment is recognized as an allowance for credit losses, rather than as a direct writedown of the amortized cost basis of a financial asset. The impairment allowance is a valuation account deducted from the amortized cost basis of financial assets to present the net amount expected to be collected on the financial asset. Once the new pronouncement is adopted by the Company, the allowance for credit losses must be adjusted for management's current estimate at each reporting date. The new guidance provides no threshold for recognition of impairment allowance. Therefore, entities must also measure expected credit losses on assets that have a low risk of loss. For instance, trade receivables that are either current or not yet due may not require an allowance reserve under currently generally accepted accounting principles, but under the new standard, the Company will have to estimate an allowance for expected credit losses on trade receivables under ASU 2016-13. ASU 2016-13 is effective for the Company for annual periods, including interim periods within those annual periods, beginning on January 1, 2023. The Company has adopted the accounting standard.

NOTE B—REVENUE FROM CONTRACTS WITH CUSTOMERS

Disaggregation of Revenue

The following table summarizes revenue from contracts with customers for the years ended December 31, 2024 and 2023:

	North America	Africa	EMESA*	Asia	December 31, 2024
License fees	$ 2,410,624	$ 1,490,256	$ 1,282,176	$ 6,314	$ 5,189,370
Hardware	154,931	-	391,764	85,000	631,695
Services	898,686	162,467	47,353		1,108,506
Total revenues	$ 3,464,241	$ 1,652,723	$ 1,721,293	$ 91,314	$ 6,929,571

	North America	Africa	EMESA*	Asia	December 31, 2023
License fees	$ 1,971,348	$ 552,630	$ 1,801,381	$ 16,651	$ 4,342,010
Hardware	147,815	0	1,013,295	32,900	1,194,010
Services	1,116,935	101,816	981,848	18,286	2,218,885
Total revenues	$ 3,236,097	$ 654,446	$ 3,796,524	$ 67,837	$ 7,754,905

* EMESA – Europe, Middle East, South America

Revenue recognized during the year ended December 31, 2024 from amounts included in deferred revenue at the beginning of the year was approximately $508,000. Revenue recognized during the year ended December 31, 2023 from amounts included in deferred revenue at the beginning of the year was approximately $467,000. Total deferred revenue (contract liability) was approximately $970,000 and $443,000 at December 31, 2024 and 2023, respectively. The contract liability is derived by an 18% carve-out on subscription orders which is based on industry standards and our current maintenance and support charge for perpetual licenses. Services revenue decreased $1,110,379 from year ended December 31, 2023 to December 31, 2024 which was largely attributed to one customer with a 70% cost the services. License fees increased $847,297 from year ended December 31, 2023 to December 31, 2024 which a trend that we expect to continue.

Transaction Price Allocated to the Remaining Performance Obligations

ASC 606 requires that the Company disclose the aggregate amount of transaction price that is allocated to performance obligations that have not yet been satisfied. The guidance provides certain practical expedients that limit this requirement, which the Company's contracts meet as follows:

- The performance obligation is part of a contract that has an original expected duration of one year or less, in accordance with ASC 606-10-50-14.

Deferred revenue represents the Company's remaining performance obligations related to prepaid support and maintenance, all of which is expected to be recognized from one to five years.

NOTE C—FAIR VALUES OF FINANCIAL INSTRUMENTS

Cash and cash equivalents, accounts receivable, due from factor, accounts payable and accrued liabilities are carried at, or approximate, fair value because of their short-term nature. The carrying value of the Company's notes and loan payables approximated fair value as the interest rates related to the financial instruments approximated market.

Warrants were valued using the Black-Scholes model. The volatility for warrants were based on the five-year term of the warrants. We also substituted the Bloomberg one year volatility resulting in approximately $10,000 less in the sensitivity analysis.

NOTE D—CONCENTRATION OF RISK

Financial instruments which potentially subject the Company to risk primarily consist of cash, and cash equivalents, investment in debt security, and accounts receivables.

The Company maintains its cash and cash equivalents with various financial institutions, which, at times may exceed insured limits. The exposure to the Company is solely dependent upon daily bank balances and the respective strength of the financial institutions. The Company was not in excess of coverage at December 31, 2024 and December 31, 2023. The Company has not incurred any losses on these accounts.

The Company extends credit to customers on an unsecured basis in the normal course of business. The Company's policy is to perform an analysis of the recoverability of its receivables at the end of each reporting period and to establish allowances where appropriate. The Company analyzes historical bad debts and contract losses, customer concentrations, and customer credit-worthiness when evaluating the adequacy of the allowances.

For the year ended December 31, 2024 one customer accounted for 24% of total revenue and 4% of accounts receivable. For the year ended December 2023, three customers accounted for 34% of total revenue.

At December 31, 2024, two customers accounted for 36% of the total accounts receivable. At December 31, 2023, three customers accounted for 66% of total accounts receivable.

NOTE E—INVENTORY

Inventory is stated at the lower of cost, determined on a first in, first out basis, or realizable value. The Company periodically evaluates inventory items and establishes reserves for obsolescence accordingly. The Company also reserves for excess quantities, slow moving goods, and for other impairment of value based upon assumptions of future demand and market conditions. The reserve on inventory in 2023 and 2024 is due to slow moving inventory purchased for projects in Nigeria and other slow moving inventory. The Company is looking into other markets and opportunities to sell or return the product. The total inventory below accounts for selective product that ships quarterly to customers worldwide and through Amazon.

Inventory is comprised of the following as of December 31:

	2024	2023
Finished goods	$ 4,098,513	$ 4,373,056
Fabricated assemblies	53,289	59,184
Reserve on finished goods	(3,773,495)	(3,986,500)
Total inventory	$ 378,307	$ 445,740

NOTE F—EQUIPMENT AND LEASEHOLD IMPROVEMENTS

Equipment and leasehold improvements consisted of the following as of December 31:

	2024	2023
Equipment	$ 1,016,802	$ 1,012,958
Furniture and fixtures	225,978	225,978
Software	49,143	49,143
Leasehold improvements	44,106	34,903
	1,336,029	1,322,982
Less accumulated depreciation and amortization	(1,195,831)	(1,102,805)
Total	$ 140,198	$ 220,177

Depreciation was $93,026 and $75,136 for 2024 and 2023, respectively. Amounts are recorded in selling, general, and administrative expense as well as in cost of services. Additions for the years ending 12/31/2024 and 12/31/23 were $13,047 and $1,000, respectively. There have been no write-offs or adjustments for the years ending 12/31/2024 and 12/31/2023.

NOTE G—INTANGIBLE ASSETS AND GOODWILL

Intangible assets consisted of the following as of December 31:

	2024	2023
Trade name	$ 130,000	$ 130,000
Proprietary software	420,000	420,000
Customer relationships	1,692,860	1,692,860
Patents and patents pending	365,080	365,080
	2,607,940	2,607,940
Less accumulated amortization	(1,510,310)	(1,199,950)
Total	$ 1,097,630	$ 1,407,990

Aggregate amortization expense for 2024 and 2023 was approximately $310,000 and $355,000, respectively. Estimated minimum amortization expense based on straight line amortization of the software license rights for each of the next five years and thereafter approximates the following:

Years ending December 31	
2025	$ 267,000
2026	$ 224,000
2027	$ 223,000
2028	$ 141,000
2029	$ 117,000
Thereafter	$ 125,630
Total	$ 1,097,630

Goodwill

The Company concluded the amounts in goodwill had been fully impaired and accordingly wrote-off the entire balance in full for the Swivel Secure Europe LTD acquisition, due the reversal of the earnout payable based on the 2022 revenue achievement as at December 31, 2022.

NOTE H - INVESTMENTS

Equity Investment in Privately Held Company

On November 27, 2024, the Company purchased 5,000,000 shares (the "Boumarang Shares") of common stock of Boumarang, Inc., an early-stage private technology company developing sustainable long-range drone technology for commercial applications. The Boumarang Shares represent approximately 7.92% of the issued and outstanding shares of Boumarang, Inc. and the Company has no corporate governance or control rights. The Boumarang Shares were purchased from Fiber Food Systems, Inc. ("Fiber Food"), an early-stage company engaged in developing global food security solutions, in consideration of the issuance of 595,000 shares of the Company's common stock. Fiber Food is not a principal stockholder of Boumarang and has no corporate governance or control rights.

The purchase agreement between the Company and Fiber Food contemplates collaboration between the parties regarding potential strategic and commercial transactions, including acquiring assets or equity interests in other operating companies, integrating the Company's identity access management solutions into Fiber Food's offerings, and introducing the Company to its customers, affiliates and business contacts who are potential users of the Company's solutions, in each case pursuant to future definitive agreements on terms to be negotiated by the parties. The Company has engaged in discussions with Fiber Food and Boumarang regarding the contemplated collaboration, but no definitive agreements have been executed. In the event that at any time during the nine-month period after the closing of the transaction the Company values the Boumarang Shares at less than $5,000,000 on its balance sheet, the Company has the right to cause Fiber Food to repurchase the Boumarang Shares from the Company in exchange for the return of the shares of Company common stock issued in exchange for the Boumarang Shares. The purchase agreement also contains a standstill which prohibits the Company, Fiber Food, Boomerang and their respective affiliates and representatives for a period of two years, from, among other things, initiating any business combination, restructuring, tender offer, proposal to seek representation on the board of directors, or any proxy solicitation, instigating, encouraging or assisting any third party from doing any of the forgoing, or acquiring any debt or equity securities of any other party.

The Boumarang Shares constitute an investment in a privately held company for which there is no trading market and are carried at fair value. Fair value is the exchange price that would be received for an asset or paid to transfer a liability (exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. When determining the fair value measurements for assets and liabilities required to be recorded at fair value, the Company considers the principal or most advantageous market in which it would transact and considers assumptions that market participants would use in pricing the asset or liability, such as inherent risk, non-performance risk and credit risk. The Company follows ASC Topic 820 – "Fair Value Measurement," which establishes a three-level valuation hierarchy for disclosure of fair value measurements. The valuation hierarchy categorizes assets and liabilities measured at fair value into one of three different levels depending on the observability of the inputs employed in the measurement. The three levels are defined as follows:

Level 1: Quoted prices (unadjusted) for identical assets or liabilities in active markets.

Level 2: Inputs other than quoted prices included within Level 1 that are either directly or indirectly observable for the asset or liability, including quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in inactive markets, inputs other than quoted prices that are observable for the asset or liability and inputs that are derived from observable market data by correlation or other means.

Level 3: Inputs for the asset or liability that are not based on observable market data (unobservable inputs).

The Boumarang Shares are classified as a Level 3 asset and have been valued based on a combination of recent sales of Boumarang common stock to third parties and a third party valuation applying a discounted cash flow analysis which included discounts for lack of control and lack of marketability, small company risk premium, and specific company risk premium based on Boumarang being an early-stage pre-revenue company. The lack of control and marketability discounts were based on published studies and transfer restrictions contained in Boumarang's corporate governance documents.

Due to the inherent uncertainty of determining the fair value of investments that do not have a readily available market value, the fair value of the Boumarang Shares may fluctuate from period to period and the fair value of the Boumarang Shares may differ significantly from the values that would have been used had a ready market existed for such shares and may differ materially from the values that the Company may ultimately realize. The early-stage pre-revenue status and unproven technology of Boumarang raise uncertainties that could impact the recoverability of the investment in the Boumarang Shares.

ASC 321-10-35 requires annual impairment testing for equity securities without readily determinable fair values.

NOTE I—ACCRUED LIABILITIES

Accrued liabilities consisted of the following as of December 31:

	2024	2023
Compensation	$ 549,217	$ 326,007
Compensated absences	299,152	327,252
Accrued legal and accounting fees	161,000	264,976
Taxes	55,986	152,986
Employee expenses reimbursement	154,209	124,209
Sales tax payable	18,147	19,282
Other	41,021	91,136
Total	$ 1,278,732	$ 1,305,848

For the years ended 12/31/2024 from 12/31/2023, there were increases in compensation costs related to commission payments due of approximately, $223,000 and increases in employee expenses reimbursement due to timing of reimbursements of approximately $30,000. These increases were offset by decreases for the years ended 12/31/2024 from 12/31/2023 of approximately $28,000 for a lower vacation time accrual, approximately $104,000 for lower legal and accounting fees, approximately $97,000 for taxes, approximately $1,135 for sales tax, and approximately $50,000 for miscellaneous accrued expenses.

NOTE J—NOTE PAYABLE

Securities Purchase Agreement dated June 24, 2024

On June 24, 2024, the Company entered into and closed a note purchase agreement (the "Purchase Agreement") which provided for the issuance of a $2,360,000 principal amount senior secured promissory note (the "2024 Note"). The 2024 Note carries an original issue discount of $350,000 and the Company agreed to pay $10,000 to the Lender to cover its transaction costs, which were deducted from the proceeds of the 2024 Note resulting in a total of $2,000,000 being funded to the Company at closing. The proceeds will be used for general working capital.

The principal amount of the 2024 Note is due eighteen months (18) following the date of issuance. Interest under the 2024 Note accrues at a rate of nine percent (9%) per annum. All repayments of principal due under the 2024 Note will be subject to an exit fee of seven percent (7%) of the principal amount being repaid (the "Exit Fee"). Commencing six months after the date of issuance of the Note (the "Redemption Start Date"), Lender shall have the right to redeem up to $270,000 of principal amount under the 2024 Note each month which amount plus the Exit Fee will be due and payable three (3) business days after Lender's delivery of a redemption notice to the Company. At the end of each month following the Redemption Start Date, if the Company has not reduced the outstanding balance under the 2024 Note by at least $270,000, then by the fifth (5th) day of the following month, the Company must either pay to Lender the difference between $270,000 and the amount, if any, redeemed in such month plus the Exit Fee, or the outstanding balance due under the Note will automatically increase by one percent (1%).

The 2024 Note is secured by a lien on substantially all of the Company's assets and properties and the Company's obligations under the Note are guaranteed by Pistol Star, Inc., a wholly owned subsidiary of the Company. The 2024 Note can be prepaid in whole or in part without penalty at any time. In the event that the Company receives any proceeds in connection with any fundraising or financing transaction (including any warrant exercises), it will be required to make a mandatory prepayment equal to the lesser of (i) forty percent (40%) of the amount raised in such transaction and (ii) the full amount due under the 2024 Note.

The 2024 Note provides for customary events of default, including, among other things, the event of non-payment of principal, interest, fees or other amounts, a representation or warranty proving to have been incorrect when made, failure to perform or observe covenants within a specified period of time, the bankruptcy or insolvency of the Company or of all or a substantial part of its property, and monetary judgment defaults of a specified amount. Upon the occurrence of an Event of Default, Lender may (i) cause interest on the outstanding balance to accrue at an interest rate equal to the lesser of twenty two (22%) or the maximum rate permitted under applicable law, and (ii) accelerate all amounts due under the 2024 Note plus an amount equal to (a) fifteen percent (15%) of the amount due under the 2024 Note for each default that is considered a major trigger event (as defined), and (b) five percent (5%) of the amount due under the 2024 Note for each occurrence of any default that is considered a minor trigger event (as defined), in any case not to exceed twenty five percent (25%).

The Company received gross proceeds of approximately $1.9 million in connection with a financing transaction (see Note N Warrants). In accordance with the terms of the 2024 Note, on October 1, 2024, 40% of the proceeds received, or approximately $762,600, was used to prepay amounts due under the 2024 Note.

Subsequent to the period ending December 31, 2024, the Company entered into two Exchange Agreements with the holder of the Note and agreed to partition the original Note two new Promissory Notes in the original principal amounts of $629,000 and $205,000, respectively, reducing the outstanding principal amount of the original Note to approximately $738,400.

NOTE K—CONVERTIBLE NOTE PAYABLE

Securities Purchase Agreement dated December 22, 2022

On December 22, 2022, the Company entered into and closed a securities purchase agreement (the "Purchase Agreement") which issued a $2,200,000 principal amount senior secured promissory note (the "Note"). At closing, a total of $2,002,000 was funded, with the proceeds to be used for general working capital.

The principal amount of the Note was due six months following the date of issuance, subject to one six-month extension by the Company. Interest under the Note accrues at a rate of 10% per annum, payable monthly through month six and at the rate of 12% per annum in months seven through twelve, payable monthly. The Note is secured by a lien on substantially all of the Company's assets and properties can be prepaid in whole or in part without penalty at any time.

In connection with the issuance of the Note, the Company issued to the investor 38,889 shares of Common Stock (the "Commitment Shares") valued at $18.00 per share and a warrant (the "Warrant") to purchase 11,112 shares of common stock (the "Warrant Shares") at an exercise price of $54.00 per share, exercisable commencing on the date of issuance with a term of five years. The warrant was valued at $94,316 (see Note N).

On October 31, 2023 the Company repaid $1,400,000 of principal due under the Note, and on December 21, 2023 the Company repaid the remaining principal balance of $800,000 due under the Note.

As of December 31, 2023, the Note was paid in full.

NOTE L—LEASES

The Company's leases office space in New Jersey, Minnesota, New Hampshire, Madrid and Hong Kong with lease termination dates in 2025 and 2027. The property leased in China is paid monthly as used, without a formal agreement. The following tables present the components of lease expense and supplemental balance sheet information related to the operating leases were:

	Year ended December 31, 2024	Year ended December 31, 2023
Lease cost		
Operating lease cost	$ 45,787	$ 166,161
Total lease cost	$ 45,787	$ 166,161
Balance sheet information		
Operating right-of-use assets	$ 73,372	$ 36,905
Operating lease liabilities, current portion	$ 24,642	$ 37,829
Operating lease liabilities, non-current portion	48,994	-
Total operating lease liabilities	$ 73,636	$ 37,829
Weighted average remaining lease term (in years) – operating leases	2.67	0.67
Weighted average discount rate – operating leases	5.50%	5.50%

Supplemental cash flow information related to leases were as follows:

Cash paid for amounts included in the measurement of operating lease liabilities	$ 63,914	$ 213,783

Maturities of operating lease liabilities were as follows as of December 31, 2024:

2025	$	28,195
2026		29,267
2027		22,477
Total future lease payments		79,939
Less: imputed interest		(6,303)
Total	$	73,636

NOTE M—COMMITMENTS AND CONTINGENCIES

Distribution Agreement

Swivel Secure had a distribution agreement with Swivel Secure Limited ("SSL"). Terms of the agreement include the following:

1. The initial term of the agreement ends on January 31, 2027 and will be automatically extended for additional one-year terms thereafter unless either party provides written notice to the other party not later than 30 days before the end of the term that it does not wish to extend the term.

2. SSL appoints Swivel Secure as the exclusive distributor of SSL's products, to market, sell and distribute in the EMEA (Europe, Middle East and Africa), excluding the United Kingdom and Republic of Ireland, for a defined discount on the sale price.

3. Swivel Secure is expected to generate a certain minimum level of orders of SSL products each year during the term of the agreement. If Swivel Secure fails to meet such minimum level of orders in any year, the exclusive distribution rights will terminate and Swivel Secure will serve as a non-exclusive distributer of SSL Products.

The Company and Swivel Secure Limited terminated the Distribution Agreement in the fourth quarter 2024. The Company made a business decision to that our PortalGuard and WEB-key solutions be sold versus the Swivel Secure Limited solutions to increase gross profit by close to 50%. The termination of the agreement did not result in any penalties or inventory returns.

Litigation

From time to time, the Company may be involved in litigation relating to claims arising out of its operations in the normal course of business. As of December 31, 2024, the Company was not a party to any pending lawsuits.

NOTE N— EQUITY

1. Preferred Stock

Within the limits and restrictions provided in the Company's Certificate of Incorporation, the Board of Directors has the authority, without further action by the shareholders, to issue up to 5,000,000 shares of preferred stock, $.0001 par value per share, in one or more series, and to fix, as to any such series, any dividend rate, redemption price, preference on liquidation or dissolution, sinking fund terms, conversion rights, voting rights, and any other preference or special rights and qualifications.

2. Common Stock

Holders of common stock have equal rights to receive dividends when, as and if declared by the Board of Directors, out of funds legally available therefor. Holders of common stock have one vote for each share held of record and do not have cumulative voting rights.

Holders of common stock are entitled, upon liquidation of the Company, to share ratably in the net assets available for distribution, subject to the rights, if any, of holders of any preferred stock then outstanding. Shares of common stock are not redeemable and have no preemptive or similar rights. All outstanding shares of common stock are fully paid and nonassessable.

Issuances of Common Stock

On June 18, 2021, the stockholders approved the 2021 Employee Stock Purchase Plan. Under the terms of this plan, 43,834 shares of common stock are reserved for issuance to employees and officers of the Company at 85% of the lower of the closing price of the common stock as reported on the Nasdaq Capital Market at the first day or the last day of the offering period. Eligible employees are granted an option to purchase shares under the plan funded by payroll deductions. The Board may suspend or terminate the plan at any time, otherwise the plan expires June 17, 2031. During 2024 and 2023, 2.641, and 17,478 shares respectively were issued under the ESPP to employees, which resulted in a $775, and $4,343 non-cash compensation expense respectively for the Company

On December 22, 2022, the Company issued the Commitment Shares. See Note K - Convertible Note Payable for more information.

Issuances of Restricted Stock

Restricted stock consists of shares of common stock that are subject to restrictions on transfer and risk of forfeiture until the fulfillment of specified conditions. The fair value of nonvested shares is determined based on the market price of the Company's common stock on the grant date. Restricted stock is expensed ratably over the term of the restriction period.

The Company issued 178,963 shares of restricted common stock to certain employees of the Company and 9,168 of shares of restricted common stock were forfeited during fiscal year 2024. The Company issued 16,404 shares of restricted common stock to certain employees of the Company and 3,752 of shares of restricted common stock were forfeited during fiscal year 2023. These shares vest in equal annual installments over a three-year period from the date of grant.

Restricted stock compensation for the years ended December 31, 2024 and 2023 was $224,470 and $225,487, respectively.

Issuances to Directors, Executive Officers & Consultants

During the 2024 and 2023 years, the Company issued 12,048 and 3,078 shares of common stock respectively to its directors in lieu of payment of board fees, valued at $18,005 and $39,007 respectively.

Warrants

Warrants Issued with a Warrant Exercise Agreement:

On September 12, 2024, the Company entered into a Warrant Exercise Agreement ("inducement agreement") with an existing institutional investor for the immediate exercise of certain outstanding warrants that the Company issued on October 30, 2023. Pursuant to the warrant inducement agreement, the investor agreed to exercise outstanding warrants to purchase an aggregate of 1,030,556 shares of the Company's common stock at an amended exercise price of $1.85. The gross proceeds from the exercise of the warrants was approximately $1.9 million, prior to deducting placement agent fees and estimated offering expenses. In consideration for the immediate exercise of the warrants, the Company also agreed to issue to the investor unregistered Series A Warrants to purchase an aggregate of 1,030,556 shares of the Company's common stock and unregistered Series B Warrants to purchase an aggregate of 1,030,556 shares of the Company's common stock, each with an exercise price of $1.85 per share. The Series A Warrants and Series B Warrants share substantially the same terms, are immediately exercisable and will expire five years from the date of issuance.

Warrants Issued with Convertible Note:

See Note K - Convertible Note Payable for the warrant issued with a convertible note in 2022.

Valuation Assumptions for Warrants:

The Company records the warrants at their fair value which is determined using the Black-Scholes valuation model on the date of the grant. The fair value of the warrants issued in 2023 and 2022 were estimated with the following assumptions:

	Years ended December 31,	
	2024	**2023**
Weighted average risk-free interest rate	3.34%	4.63%
Weighted average exercise price	$ 1.85	$ 3.15
Weighted average exercise period	5	5
Weighted average Volatility of stock price	577%	817%

The volatility for each issuance is determined based on the review of the experience of the weighted average of historical daily price changes of the Company's common stock over the expected exercise period. The five-year volatility is higher than the one-year rate from Bloomberg of 245%, based on several reverse-splits of BIO-key's stock over the five-year period. The risk-free rate is based on the U.S. Treasury yield curve in effect at the time of grant for periods corresponding with the years to maturity.

A summary of warrant activity is as follows:

	Total Warrants	Weighted average exercise price	Weighted average remaining life (in years)	Aggregate intrinsic value
Outstanding, as of December 31, 2022	270,672	104.95	2.59	—
Granted	2,534,148	3.15		
Exercised	(177,890)	0.0018		
Forfeited	—	—		
Expired	(438)	—		
Outstanding, as of December 31, 2023	2,626,492	$ 104.95	4.37	—
Granted	2,061,112	1.85		
Exercised	(1,903,222)	1.00		
Forfeited	—	—		
Expired	(13,889)	—		
Outstanding, as of December 31, 2024	2,770,493	$ 10.99	4.19	—

The aggregate intrinsic value in the table above represents the total intrinsic value, based on the Company's closing stock price of $1.71, $3.00, and $10.62 as of December 31, 2024, 2023 and 2022, respectively, which would have been received by the warrant holders had all warrant holders exercised their options as of that date. There were no in-the-money warrants exercisable as of December 31, 2024, 2023 and 2022.

NOTE O—STOCK OPTIONS

2023 Stock Incentive Plan

On December 14, 2023, the stockholders approved the 2023 Stock Incentive Plan. The 2023 Plan reserves 333,334 shares of common stock for issuance of options, restricted stock, and other equity based awards to employees, officers, directors, consultants advisors and independent contractors of the Company. Options are issued at exercise prices which may not be below 100% of fair market value (or 110% of the fair market value if, at the time the option is granted, the participant owns, directly or indirectly, more than 10% of the total combined voting power of all classes of our stock) and have terms not to exceed ten years. Options issued under the 2023 Plan vest pursuant to the terms of stock option agreements with the recipients. In the event of a change in control, certain awards issued under this plan may be subject to additional acceleration of vesting as may be provided in the participants' written agreement or as determined by the Board or Compensation Committee. The 2023 Plan expires on December 13, 2033, unless terminated earlier. In 2024 the Company issued 177,433 restricted shares to employees of which 7,817 were forfeited. The Company also issued 7,761 shares to the Board of Directors for payments of Board fees.

2015 Stock Option Plan

On January 27, 2016, the stockholders approved the 2015 Equity Incentive Plan (the "2015 Plan"). The 2015 Plan initially reserved 10,417 shares of common stock for issuance of options, restricted stock, and other equity based awards to employees, officers, directors, and consultants of the Company. In 2021, the stockholders approved an amendment to the 2015 to increase the shares of common stock authorized for issuance under the 2015 Plan from 10,417 shares to 43,834 shares together with other technical changes. The term of stock options granted under the 2015 Plan, may not exceed ten years, exercise prices may not be below 100-110% of fair market value, and vesting occurs over time periods set forth in written agreements with the recipients. In the event of a change in control, certain stock awards issued under the 2015 Plan may be subject to additional acceleration of vesting as may be provided in the participants' written agreement. The 2015 Plan expires in December 2025.

Non-Plan Stock Options

Periodically, the Company has granted options outside of the 2015 Plan to various employees and consultants. In the event of change in control, as defined, certain of the non-plan options outstanding vest immediately.

Stock Option Activity

Information summarizing option activity is as follows:

	Number of Options			Weighted average exercise price		Weighted average remaining life (in years)	Aggregate intrinsic value	
	2015 Plan	Non Plan	Total					
Outstanding, as of December 31, 2022	**6,241**	4,724	**11,313**	$	**299.61**	**2.07**	$	**0**
Granted	—	—	—		—			
Exercised	—	—	—		—			
Forfeited	(151)	—	(151		94.44			
Expired	(1,548)		(1,895)		256.30			
Outstanding, as of December 31, 2023	**4.542**	4,724	**9,266**	$	**311.16**	**0.96**	$	**0**
Granted	—	—	—		—			
Exercised	—	—	—		—			
Forfeited	(348)	—	(348)		93.60			
Expired	(1,187)	(4,724)	(5,911)		380.51			
Outstanding, as of December 31, 2024	**3,007**	-	**3,007**	$	**197.31**	**1.14**	$	**0**
Vested or expected to vest at December 31, 2024			**3,007**	$	**197.31**	**1.14**	$	**0**
Exercisable at December 31, 2024			**3,007**	$	**197.31**	1.14	$	**0**

The options outstanding and exercisable at December 31, 2024 were in the following exercise price ranges:

	Options Outstanding				Options Exercisable		
Range of exercise prices	**Number of shares**		**Weighted average exercise price**	**Weighted average remaining life (in years)**	**Number exercisable**		**Weighted average exercise price**
$93.60 - 169.92	1,857	$	144.71	1.67	1,857	$	144.71
$169.93 - 504.00	1,150		282.24	0.22	1,150		282.24
$93.60 - 504.00	3,007				3,007		

The aggregate intrinsic value in the table above represents the total intrinsic value, based on the Company's closing stock price of $1.71, $3.00, and $10.62 as of December 31, 2024, 2023 and 2022, respectively, which would have been received by the option holders had all option holders exercised their options as of that date. There were no in-the-money options exercisable as of December 31, 2024, 2023 and 2022.

The weighted average fair value of options granted during the years ended December 31, 2024 and 2023 was $0 as no options were granted in either year. The total intrinsic value of options exercised during the years ended December 31, 2024 and 2023 was $0 as no options were exercised in either year. The total fair value of shares vested during the years ended December 31, 2024 and 2023 was $0 (none vested) and $18,310. respectively.

As of December 31, 2024, there was no future forfeiture adjusted compensation costs related to nonvested stock options.

NOTE P—INCOME TAXES

The components of net loss consist of the following:

	Year ended December 31, 2024	Year ended December 31, 2023
United States	$ (2,767,752)	$ (7,279,970)
Hong Kong	(222,901)	(627,146)
Nigeria	(223,426)	(203,700)
Spain	(1,086,613)	(411,021)
Total	$ (4,300,692)	$ (8,521,837)

There was no provision for current federal, foreign or state taxes for both of the years ended December 31, 2024 and 2023 as a result of taxable losses incurred in these jurisdictions. The provision for income tax benefits consist of the following (in thousands):

	Year ended December 31, 2024	Year ended December 31, 2023
Current – federal,	$ -	$ -
state		
foreign		
Deferred- Federal		40,986
States		
Foreign	(22,998)	(175,000)
Total	(22,998)	(134,014)
Change in valuation allowance		
Provision for income tax expense (benefit)	$ (22,998)	$ (134,014)

Significant components of deferred tax assets and liabilities are as follows at December 31, 2024 and 2023 :

	December 31, 2024	December 31, 2023
Accrued compensation	$ 154,457	$ 112,201
Allowance for doubtful accounts	20,513	90,405
Research and development expenses	1,216,601	1,017,551
Capital loss carry forward	114,251	114,251
Stock-based compensation	34,299	32,408
Equipment and leasehold improvements	(6,268)	(12,353)
Intangible assets - US	-	-
Intangible assets - Foreign	-	(145,000)
Reserve - Foreign	-	150,000
Inventory reserve	781,213	828,668
Interest expense	-	-
Operating lease liabilities	(16,346)	-
Other	1,000	1,000
Tax credits	1,554,541	1,748,235
Operating lease right-of-use assets	16,406	206
Net operating loss and research and credit carryforwards	11,824,622	13,277,118
Valuation allowance	(15,740,289)	(17,214,690)
Net deferred tax liability	$ -	$

The Company has a valuation allowance against the full amount of its net deferred taxes due to the uncertainty of realization of the deferred tax assets due to operating loss history of the Company. The Company currently provides a valuation allowance against deferred taxes when it is more likely than not that some portion, or all of its deferred tax assets will not be realized. The valuation allowance could be reduced or eliminated based on future earnings and future estimates of taxable income. With a full valuation allowance, any change in the deferred tax asset or liability is fully offset by a corresponding change in the valuation allowance. At December 31, 2024 and 2023, the Company provided a valuation allowance on its net deferred tax assets of $15,740,289 and $17,214,690 respectively.

As of December 31, 2024, the Company has U.S. federal net operating loss carryforwards of approximately $54.6 million. Approximately $36 million are subject to expiration between 2025 and 2037, and $18.6 million net operating loss carryforwards have no expiration date. These net operating loss carryforwards could be subject to the limitations under Section 382 of the Internal Revenue Code due to changes in the equity ownership of the Company. In addition, the Company has net operating loss carry forwards from various states of approximately $5.9 million which expire from 2026 through 2043.

A reconciliation of the effective income tax rate on operations reflected in the statements of operations to the US federal statutory income tax rate is presented below.

	Year ended December 31, 2024	**Year ended December 31, 2023**
Federal statutory income tax rate	21%	21%
State taxes, net of federal benefit	0.82	(1.41)
Permanent differences	(1.84)	1.97
Expiration of net operating loss and research credit carryforwards	(46.14)	(7.84)
Expiration and forfeiture of stock options	-	-
foreign rate differential	(7.23)	(5.84)
rate change	(0.41)	(1.05)
Other	0.14	(9.08)
Valuation allowance	33.98	(0.24)
Effective tax rate	0.32%	(2.5)%

The Company has not been audited by the Internal Revenue Service ("IRS") or any states in connection with income taxes. The Company files income tax returns in the U.S. federal jurisdiction and various state jurisdictions. The periods from 2020 through 2024 remain open to examination by the IRS and state jurisdictions.

The Company's subsidiary in Nigeria has not filed its required returns since inception. Management believes that when the returns are filed, no taxes will be owed due to the losses incurred during those periods. The Company is not subject to minimum tax during the first four years of operations. As a result, management could not calculate the amount of net operating loss carryforwards that are available to offset future taxable income. We estimate that the potential penalties for non-filing will be minimal due to the losses. The Company is currently working on the filings and expects to be current by December 31, 2025.

The Company's subsidiary in Hong Kong has not filed its required returns in several years. Management believes that when the returns are filed, no taxes will be owed due to losses incurred during those periods. As a result, management could not calculate the amount of net operating loss carryforwards are available to offset future taxable income. We estimate that the potential penalties for non-filing will be minimal due to the losses. The Company will be working on the filings during 2025 and expects to be current in 2026.

The Company believes it is not subject to any tax audit risk beyond those periods. The Company's policy is to recognize interest and penalties accrued on any unrecognized tax benefits as a component of income tax expense. The Company does not have any accrued interest or penalties associated with any unrecognized tax benefits, nor was any interest expense incurred during the years ended December 31, 2024 and 2023.

NOTE Q

The Company has established a savings plan under section 401(k) of the Internal Revenue Code. All employees of the Company, after completing one day of service, are eligible to enroll in the 401(k) plan. Participating employees may elect to defer a portion of their salary on a pre-tax basis up to the limits as provided by the IRS Code. The Company is not required to match employee contributions but may do so at its discretion. The Company made no matching contributions during the years ended December 31, 2024 and 2023. The plan passed its 2023 annual non-discrimination test, and expects to pass the 2024 annual non-discrimination test.

NOTE R—EARNINGS PER SHARE (EPS)

Items excluded from the diluted per share calculation because the exercise price was greater than the average market price of the common shares, and they were also excluded from diluted earnings per share due to anti-dilution:

	Years ended December 31,	
	2024	**2023**
Stock options	3,007	9,266
Warrants	2,770.493	270,672
Total	2,773,500	279,938

NOTE S—QUARTERLY FINANCIAL DATA (UNAUDITED AND RESTATED)

The Company is providing restated quarterly unaudited consolidated financial information for interim periods occurring within the year ended December 31, 2023.

The need for the restatement arose out of the results of certain financial analysis the Company performed in the course of preparing its year-end 2023 consolidated financial statements. In the course of the audit of the Company's consolidated financial statements for the fiscal year ended December 31, 2023, the Company determined that certain errors were made which require the restatement of the Company's previously issued financial statements for the interim periods occurring within the year ended December 31, 2023. These errors resulted in the overstatement of accounts receivable and revenue, understatements in certain allowances for accounts receivable and certain reserves for inventory, and an understatement of net loss and total stockholders' equity which errors may also impact other amounts included in the financial statements. The Company attributes the errors principally to a material weakness in internal controls over the recording and processing of revenues, allowances for accounts receivable and certain reserves for inventory, which the Company worked to remediate in 2024. We have put newly trained management in control of our EMEA invoice processing and revenue recognition process. Additionally, we have added more inventory analysis in our quarterly closing process.

The restated consolidated balance sheet line items for the first, second and third fiscal quarters of 2023 are as follows:

		Originally Reported			**Adjustment**			**Restated**	
	Three Months Ended **March 31, 2023**	Six Months Ended **June 30, 2023**	Nine Months Ended **September 30, 2023**	Three Months Ended **March 31, 2023**	Six Months Ended **June 30, 2023**	Nine Months Ended **September 30, 2023**	Three Months Ended **March 31, 2023**	Six Months Ended **June 30, 2023**	Nine Months Ended **September 30, 2023**
Accounts receivable, net	$ 3,362,203	$ 3,178,785	$ 2,799,218	$ (900,000)	$ (1,100,000)	$(1,300,000)	$ 2,462,203	$ 2,078,785	$ 1,499,218
Inventory	4,427,815	4,384,098	4,289,213	(500,000)	(1,500,000)	(2,500,000)	3,927,815	2,884,098	1,789,213
Total current assets	8,936,084	8,531,330	7,820,339	(1,400,000)	(2,600,000)	(3,800,000)	7,536,084	5,931,330	4,020,339
Accumulated deficit	(116,773,695)	(118,196,573)	(118,834,397)	(1,400,000)	(2,600,000)	(3,800,000)	(118,173,695)	(120,796,573)	(122,634,397)
Total Stockholders' Equity	5,156,755	3,845,091	3,314,451	(1,400,000)	(2,600,000)	(3,800,000)	3,756,755	1,245,091	(485,549)
Total Liabilities and Stockholders' Equity	11,106,057	10,583,245	9,749,380	(1,400,000)	(2,600,000)	(3,800,000)	9,706,057	7,983,245	5,949,380

The restated line items of the consolidated statements of comprehensive income for the three-month periods ended March 31, 2023, June 30, 2023, and September 30, 2023 are as follow:

		Originally Reported			**Adjustment**			**Restated**	
	Q1	Q2	Q3	Q1	Q2	Q3	Q1	Q2	Q3
License fees	$2,478,556	$ 1,235,771	$ 950,015	$ (900,000)	$ 1,578,556	$ 1,235,771	$ 950,015		
Total revenues	3,083,767	1,928,929	1,817,108	(900,000)	-	-	2,183,767	1,928,929	1,817,108
Cost of hardware - Reserve	-	-	-	500,000	1,000,000	1,000,000	500,000	1,000,000	1,000,000
Total costs and other expenses	820,274	606,111	476,604	500,000	1,000,000	1,000,000	1,320,274	1,606,111	1,476,604
Gross profit	2,263,493	1,322,818	1,340,504	(1,400,000)	(1,000,000)	(1,000,000)	863,493	322,818	340,504
Selling, general and administrative	1,931,732	1,943,164	1,547,376	200,000	200,000	1,931,732	2,143,164	1,747,376	
Total Operating Expenses	2,621,891	2,501,345	2,106,062	-	200,000	200,000	2,621,891	2,701,345	2,306,062
Operating loss	(358,398)	(1,178,527)	(765,558)	(1,400,000)	(1,200,000)	(1,200,000)	(1,758,398)	(2,378,527)	(1,965,558)
Loss before provision for income tax	(288,322)	(1,279,878)	(638,013)	(1,400,000)	(1,200,000)	(1,200,000)	(1,688,322)	(2,479,878)	(1,838,013)
Net loss	(288,322)	(1,422,878)	(637,824)	(1,400,000)	(1,200,000)	(1,200,000)	(1,688,322)	(2,479,878)	(1,838,013)
Comprehensive Net loss	(288,322)	(1,422,878)	(637,824)	(1,400,000)	(1,200,000)	(1,200,000)	(1,688,322)	(2,479,878)	(1,838,013)
Comprehensive loss	(216,176)	(1,402,994)	(602,460)	(1,400,000)	(1,200,000)	(1,200,000)	(1,616,176)	(2,459,994)	(1,802,649)
Basic and Diluted Loss per Common Share	(0.52)	(2.56)	(1.12)	(2.52)	(2.16)	(2.11)	(3.04)	(4.45)	(3.22)

The restated line items of the consolidated statements of comprehensive income for the six-month period ended June 30, 2023 and nine-month period ended September 30, 2023 are as follows:

	Originally Reported		**Adjustment**		**Restated**	
	Six Months Ended **June 30, 2023**	Nine Months Ended **September 30, 2023**	Six Months Ended **June 30, 2023**	Nine Months Ended **September 30, 2023**	Six Months Ended **June 30, 2023**	Nine Months Ended **September 30, 2023**
License fees	$ 3,714,327	$ 4,664,341	$ (900,000)	$ (900,000)	$ 2,814,327	$ 3,764,341
Total revenues	5,012,696	6,829,804	(900,000)	(900,000)	4,112,696	5,929,804
Cost of hardware - reserve	-	-	1,500,000	2,500,000	1,500,000	2,500,000
Total costs and other expenses	1,426,385	1,902,989	1,500,000	2,500,000	2,926,385	4,402,989
Gross profit	3,586,311	4,926,815	(2,400,000)	(3,400,000)	1,186,311	1,526,815
Selling, general and administrative	3,874,896	5,422,272	200,000	400,000	4,074,896	5,822,272
Total Operating Expenses	5,123,237	7,229,298	200,000	400,000	5,323,237	7,629,298
Operating loss	(1,536,926)	(2,302,483)	(2,600,000)	(3,800,000)	(4,136,926)	(6,102,483)
Loss before provision for income tax	(1,568,200)	(2,206,212)	(2,600,000)	(3,800,000)	(4,168,200)	(6,006,212)
Net loss	(1,711,200)	(2,349,023)	(2,600,000)	(3,800,000)	(4,311,200)	(6,149,023)

	Originally Reported		Adjustment		Restated	
	Six Months Ended June 30, 2023	Nine Months Ended September 30, 2023	Six Months Ended June 30, 2023	Nine Months Ended September 30, 2023	Six Months Ended June 30, 2023	Nine Months Ended September 30, 2023
Comprehensive net loss	(1,711,200)	(2,349,023)	(2,600,000)	(3,800,000)	(4,311,200)	(6,149,023)
Comprehensive loss	(1,619,170)	(2,221,629)	(2,600,000)	(3,800,000)	(4,219,170)	(6,021,629)
Basic and Diluted Loss per Common Share	(3.07)	(4.12)	(4.67)	(6.67)	(7.74)	(10.79)

NOTE T—SUBSEQUENT EVENTS

On January 8, 2025, the Company issued 14,970 shares of common stock in repayment of $25,000 of the principal due on the 2024 Note.

On January 10, 2025, 679 shares of restricted common stock were forfeited by employees who left the Company before the lapse of the restriction period applicable to such shares.

On January 10, 2025, 5,000 shares of restricted common stock were forfeited by employees who left the Company before the lapse of the restriction period applicable to such shares.

On January 15, 2025, the Company entered into a warrant exercise agreement under which the counterparty agreed to exercise outstanding warrants to purchase 2,061,112 shares of common stock at an exercise price of $1.85 per share resulting in gross proceeds of approximately $3.8 million, prior to deducting placement agent fees and estimated offering expenses. In connection with this transaction, the Company issued additional warrants to purchase an aggregate 3,091,668 shares of common stock at an exercise price of $2.15 per share.

On January 15, 2025, the Company issued 149,635 shares of common stock in repayment of $205,000 of the principal due on the 2024 Note.

On January 15, 2025, the Company issued 340,000 shares of common stock in repayment of $629,000 of the principal due on the 2024 Note.

On January 17, 2025, the Company issued 431,000 shares of common stock upon the exercise of warrants.

On January 23, 2025, the Company issued 427,112 shares of common stock upon the exercise of warrants.

On February 14, 2025, the Company issued 241,000 shares of common stock upon the exercise of warrants.

On March 13, 2025, the Company issued 491,000 shares of common stock upon the exercise of warrants.

On March 20, 2025, the Company issued 8,913 shares of common stock to its directors in payment of board fees.

On March 20, 2025, the Company issued 2,500 shares of restricted stock to new employees which vest over three-years.

The forgoing issuances of common stock after December 31, 2024 total 2,106,130 shares representing a 56% increase in the Company's outstanding shares of common stock since December 31, 2024, less forfeitures.

On March 28, 2025, 1,893 shares of restricted common stock were forfeited by an employee who left the Company before the lapse of the restriction period applicable to such shares.

EXHIBIT INDEX

Exhibit No.	Exhibit
2.1	Stock Purchase Agreement by and among the Company, Thomas J. Hoey, and PistolStar, Inc. dated June 6, 2020 (incorporated by reference to Exhibit 2.1 to the Current Report on Form 8-K, filed with the SEC on July 7, 2020)
2.2	Stock Purchase Agreement by and among the Company, Alex Rocha and Swivel Secure Europe, SA dated February 2, 2022 (incorporated by reference to Exhibit 2.1 to the Current Report on Form 8-K, filed with the SEC on February 3, 2022)
2.3	Amendment No. 1 to Stock Purchase Agreement by and among the Company, Alex Rocha and Swivel Secure Europe, SA dated March 4, 2022 (incorporated by reference to Exhibit 2.1 to the Current Report on Form 8-K, filed with the SEC on March 9, 2022)
3.1	Certificate of Incorporation of BIO-key International, Inc., a Delaware corporation (incorporated by reference to Exhibit 3.1 to the current report on Form 8-K, filed with the SEC on January 5, 2005)
3.2	Bylaws (incorporated by reference to Exhibit 3.3 to the current report on Form 8-K, filed with the SEC on January 5, 2005)
3.3	Certificate of Amendment to Certificate of Incorporation (incorporated by reference to Appendix A to the definitive proxy statement, filed with the SEC on January 18, 2006)
3.4	Certificate of Amendment of Certificate of Incorporation of Bio-key International, Inc., a Delaware corporation (incorporated by reference to Exhibit 3.4 to the annual report on Form 10-K, filed with the SEC on March 31, 2015)
3.5	Certificate of Elimination of BIO-key International, Inc. filed October 6, 2015 (incorporated by reference to Exhibit 3.5 to the registration statement on Form S-1 File No. 333-208747 filed with the SEC on December 23, 2015)
3.6	Certificate of Designation of Preferences, Rights and Limitations of Series A-1 Convertible Preferred Stock (incorporated by reference to Exhibit 3.1 to the current report on Form 8-K, filed with the SEC on November 2, 2015)
3.7	Certificate of Designation of Preferences, Rights and Limitations of Series B-1 Convertible Preferred Stock (incorporated by reference to Exhibit 3.1 to the quarterly report on Form 10-Q, filed with the SEC on November 16, 2015)
3.8	Certificate of Amendment of Certificate of Incorporation of Bio-key International, Inc., a Delaware corporation (incorporated by reference to Exhibit 3.1 to the current report on Form 8-K, filed with the SEC on December 28, 2016)
3.9	Certificate of Amendment of Certificate of Incorporation of Bio-Key International, Inc., a Delaware corporation (incorporated by reference to Exhibit 3.1 to the current report on Form 8-K, filed with the SEC on November 19, 2020)
3.10	Certificate of Amendment to Certificate of Incorporation of BIO-key International, Inc., a Delaware corporation (incorporated by reference to Exhibit 3.1 to the current report on Form 8-K filed with the SEC on December 19, 2023)
4.1	Specimen Stock Certificate (incorporated by reference to Exhibit 4.1 to the registration statement on Form SB-2, File No. 333-16451)
4.2	Common Stock Purchase Warrant dated May 6, 2020 (incorporated by reference to Exhibit 10.7 to the quarterly report on Form 10-Q filed with the SEC on June 8, 2020)
4.3	Common Stock Purchase Warrant dated June 29, 2020 (incorporated by reference to Exhibit 10.3 to the current report on Form 8-K filed with the SEC on July 1, 2020)
4.4	Form of Pre-Funded Warrant (incorporated by reference to Exhibit 4.3 to Amendment No. 1 to the Registration Statement on Form S-1/A, filed with the SEC on July 17, 2020)

4.5	Form of Warrant (incorporated by reference to Exhibit 4.2 to Amendment No. 1 to the Registration Statement on Form S-1/A, filed with the SEC on July 17, 2020)
4.6	Form of Common Warrant (incorporated by reference to Exhibit 4.9 to Amendment No. 1 to Registration Statement on Form S-1 filed with the SEC on October 26, 2023)
4.7	Form of Pre-Funded Warrant (incorporated by reference to Exhibit 4.10 to Amendment No. 1 to the Registration Statement on Form S-1, filed with the SEC on October 26, 2023)
4.8	Form of Warrant Agency Agreement (incorporated by reference to Exhibit 4.11 to Amendment No. 1 to the Registration Statement on Form S-1, filed with the SEC on October 26, 2023)
4.9	Form of Common Warrant (incorporated by reference to Exhibit 4.1 to the current report on Form 8-K filed with the SEC on December 21, 2023)
4.10	Form of Pre-Funded Warrant (incorporated by reference to Exhibit 4.2 to the current report on Form 8-K filed with the SEC on December 21, 2023)
4.11	Form of Series A Common Stock Purchase Warrant (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed September 16, 2024)
4.12	Form of Series B Common Stock Purchase Warrant (incorporated by reference to Exhibit 4.2 to the Company's Current Report on Form 8-K filed September 16, 2024)
4.13	Form of Series A Common Stock Purchase Warrant (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed January 16, 2025)
4.14	Form of Series B Common Stock Purchase Warrant (incorporated by reference to Exhibit 4.2 to the Company's Current Report on Form 8-K filed January 16, 2025)
4.15	BIO-key International, Inc. Description of Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934 (incorporated by reference to Exhibit 4.5 to the annual report on Form 10-K filed with the SEC on April 1, 2022
10.1***	Employment Agreement by and between BIO-key International, Inc. and Mira LaCous dated November 20, 2001 (incorporated by reference to Exhibit 10.39 to the current report on Form 8-K, filed with the SEC on January 22, 2002)
10.2***	Employment Agreement, effective March 25, 2010, by and between the Company and Michael W. DePasquale (incorporated by reference to Exhibit 10.93 to the annual report on Form 10-K, filed with the SEC on March 26, 2010)
10.3***	Employment Agreement by and between BIO-key International, Inc. and Cecilia Welch dated May 15, 2013 (incorporated by reference to Exhibit 10.42 to the annual report on Form 10-K, filed with the SEC on March 31, 2014)
10.4***	Employment Agreement by and between BIO-key International, Inc. and James Sullivan dated April 5, 2017 (incorporated by reference to Exhibit 10.42 to the annual report on Form 10-K, filed with the SEC on March 29, 2021)
10.5	First Amendment to Lease Agreement by and between BIO-key International, Inc. and BRE/DP MN LLC dated September 12, 2013 (incorporated by reference to Exhibit 10.44 to the annual report on Form 10-K, filed with the SEC on March 31, 2014)
10.6***	BIO-key International, Inc. 2015 Equity Incentive Plan (incorporated by reference to Appendix B to the definitive proxy statement filed with the SEC on December 15, 2015)
10.7	Software License Purchase Agreement Dated November 11, 2015 by and among BIO-key Hong Kong Limited, Shining Union Limited, WWTT Technology China, Golden Vast Macao Commercial Offshore Limited, Giant Leap International Limited (incorporated by reference to Exhibit 10.36 to the registration statement on Form S-1 File No. 333-208747 filed with the SEC on December 23, 2015)
10.8***	Form Non-Plan Option Agreement between the Company and certain of its directors, officers, employees and contractors (incorporated by reference to Exhibit 10.4 to the quarterly report on Form 10-Q filed with the SEC on May 15, 2017)

10.9	Securities Purchase Agreement dated May 23, 2018 by and between the Registrant and Giant Leap International Limited (incorporated by reference to Exhibit 10.1 to the current report on Form 8-K, filed with the SEC on May 30, 2018)
10.10	Securities Purchase Agreement dated May 23, 2018 by and between the Registrant and Micron Technology Development Limited (incorporated by reference to Exhibit 10.2 to the current report on Form 8-K, filed with the SEC on May 30, 2018)
10.11	Securities Purchase Agreement dated May 31, 2018 by and between the Registrant and Wong Kwok Fong (Kelvin) (incorporated by reference to Exhibit 10.1 to the current report on Form 8-K, filed with the SEC on June 4, 2018)
10.12	GLP 2nd Amendment to Lease dated July 27, 2018 (incorporated by reference to Exhibit 10.26 to the annual report on Form 10-K, filed with the SEC on April 1, 2019)
10.13	Marlen 4th Amendment to Lease dated June 2, 2018 (incorporated by reference to Exhibit 10.27 to the annual report on Form 10-K, filed with the SEC on April 1, 2019)
10.14	Common Stock Purchase Warrant dated July 10, 2019 (incorporated by reference to Exhibit 10.5 to the quarterly report on Form 10-Q, filed with the SEC on August 14, 2019)
10.15	Sales Incentive Agreement with Technology Transfer Institute dated March 25, 2020. (incorporated by reference to Exhibit 10.1 to the quarterly report on Form 10-Q, filed with the SEC on June 8, 2020)
10.16	Form of Technology Transfer Institute Warrant. (incorporated by reference to Exhibit 10.2 to the quarterly report on Form 10-Q, filed with the SEC on June 8, 2020)
10.17	Common Stock Purchase Warrant dated May 6, 2020. (incorporated by reference to Exhibit 10.7 to the quarterly report on Form 10-Q, filed with the SEC on June 8, 2020)
10.18***	Form of Restricted Stock Award Agreement under the BIO-key International, Inc. Amended & Restated 2015 Equity Incentive Plan (incorporated by reference to Exhibit 10.1 to the current report on Form 8-K, filed with the SEC on August 28, 2020)
10.19***	BIO-key International, Inc. 2021 Employee Stock Purchase Plan (incorporated by reference to Appendix A to the definitive proxy statement filed with the SEC on May 4, 2021)
10.20***	BIO-key International, Inc. Amended and Restated 2015 Equity Incentive Plan (incorporated by reference to Appendix B to the definitive proxy statement filed with the SEC on May 4, 2021)
10.21	Management Services Agreement dated March 8, 2022 by and among Swivel Aman-FZCO, Swivel Secure Europe, SA, and Alex Rocha (incorporated by reference to Exhibit 10.1 to the quarterly report on Form 10-Q filed with the SEC on May 23, 2022)
10.22	Option Agreement dated March 8, 2022 by and between the Company and Alex Rocha (incorporated by reference to Exhibit 10.2 to the quarterly report on Form 10-Q filed with the SEC on May 23, 2022)
10.23	Distribution Agreement dated October 23, 2020 by and between Swivel Secure Europe, SA and Swivel Secure Limited (incorporated by reference to Exhibit 10.3 to the quarterly report on Form 10-Q filed with the SEC on May 23, 2022) +
10.24	Deed of Variation dated January 26, 2022 by and between Swivel Secure Europe, SA and Swivel Secure Limited (incorporated by reference to Exhibit 10.4 to the quarterly report on Form 10-Q filed with the SEC on May 23, 2022) +
10.25	Securities Purchase Agreement dated December 22, 2022 by and between the Company and AJB Capital Investments, LLC (incorporated by reference to Exhibit 10.1 to the current report on Form 8-K filed with the SEC on December 23, 2022)
10.26	Common Stock Purchase Warrant, dated December 22, 2022 (incorporated by reference to Exhibit 10.3 to the current report on Form 8-K filed with the SEC on December 23, 2022)
10.27	$2,200,000 Senior Secured Promissory Note, dated December 22, 2022 (incorporated by reference to Exhibit 10.2 to the current report on Form 8-K filed with the SEC on December 23, 2022)

10.28	Form of Securities Purchase Agreement (incorporated by reference to Exhibit 10.39 to Amendment No. 1 to Registration Statement on Form S-1 filed with the SEC on October 26, 2023)
10.29***	BIO-key International, Inc. 2023 Stock Incentive Plan (incorporated by reference to Exhibit 10.1 to the current report on Form 8-K filed with the SEC on December 19, 2023)
10.30	Securities Purchase Agreement, dated as of December 20, 2023, by and between BIO-key International, Inc. and Dillon Hill Investment Company LLC (incorporated by reference to Exhibit 10.1 to the current report on Form 8-K filed with the SEC on December 21, 2023)
10.31	Note Purchase Agreement dated June 24, 2024 by and between the Company and Streeterville Capital, LLC (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed June 28, 2024)
10.32	$2,360,000 Secured Promissory Note dated June 24, 2024 (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed June 28, 2024)
10.33	Security Agreement dated June 24, 2024 by and between the Company and Streeterville Capital, LLC (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed June 28, 2024)
10.34	Intellectual Property Security Agreement dated June 24, 2024 by and between the Company and Streeterville Capital, LLC (incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K filed June 28, 2024)
10.35	Guaranty dated June 24, 2024 by and between Pistol Star, Inc. and Streeterville Capital, LLC (incorporated by reference to Exhibit 10.5 to the Company's Current Report on Form 8-K filed June 28, 2024)
10.36	Form of Warrant Exercise Agreement, dated September 12, 2024, by and between the Company and the Investor (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed September 16, 2024)
10.37	Securities Purchase Agreement dated November 27, 2024, by and among BIO-key International, Inc., Fiber Food Systems, Inc. and Boumarang Inc. (incorporated by refence to Exhibit 10.1 to the Company's Current Report on Form 8-K filed December 3, 2024)
10.38	Form of Warrant Exercise Agreement, dated January 15, 2025, by and between BIO-key International, Inc. and the Investor (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed January 16, 2025)
10.39	Exchange Agreement, dated January 15, 2025, by and between BIO-key International, Inc. and Streeterville Capital, LLC (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed January 16, 2025)
10.40	Exchange Agreement, dated January 15, 2025, by and between BIO-key International, Inc. and Streeterville Capital, LLC (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed January 16, 2025)
19.1*	Insider Trading Policy
21.1*	List of subsidiaries of BIO-key International, Inc.
23.1*	Consent of Bush and Associates CPA
24.1*	Power of Attorney (included on signature page hereto)
31.1*	Certification of the Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2*	Certification of the Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1*	Certification of the Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2*	Certification of Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
97.1*	Clawback Policy dated October 2, 2023

101.INS*	Inline XBRL Instance
101.SCH*	Inline XBRL Taxonomy Extension Schema
101.CAL*	Inline XBRL Taxonomy Extension Calculation
101.DEF*	Inline XBRL Taxonomy Extension Definition
101.LAB*	Inline XBRL Taxonomy Extension Labels
101.PRE*	Inline XBRL Taxonomy Extension Presentation
104	Cover Page Interactive Data File (embedded within the Inline XBRL and contained in Exhibit 101)

* filed herewith

** Confidential treatment has been requested with respect to certain portions of this exhibit. Omitted sections have been filed separately with the Securities and Exchange Commission.

*** Management compensatory plan.

+ Certain portions of this exhibit (indicated by "[***]") have been omitted as the Company has determined that such portions are (a) not material and (b) would likely cause competitive harm to the Company if publicly disclosed.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

BIO-KEY INTERNATIONAL, INC.

Date: April 23, 2025

By: /s/ MICHAEL W. DEPASQUALE
Michael W. DePasquale
CHIEF EXECUTIVE OFFICER
(Principal Executive Officer)

Each person whose signature appears below constitutes and appoints Michael W. DePasquale and Cecilia Welch, or either of them, as such person's true and lawful attorneys-in-fact and agents, with full power of substitution and re-substitution, for such person and in such person's name, place and stead, in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K and any documents related to this report and filed pursuant to the Securities Exchange Act of 1934, as amended, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith as fully to all intents and purposes as such person might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof. This power of attorney shall be governed by and construed with the laws of the State of Delaware and applicable federal securities laws.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities on the dates indicated.

Signature	Title	Date
/s/ Michael W. DePasquale Michael W. DePasquale	Chairman of the Board of Directors, Chief Executive Officer and Director (Principal Executive Officer)	April 23, 2025
/s/ Cecilia C. Welch Cecilia Welch	Chief Financial Officer (Principal Financial and Accounting Officer)	April 23, 2025
/s/ Robert J. Michel Robert J. Michel	Director	April 23, 2025
/s/ Wong Kwok Fong Wong Kwok Fong	Director	April 23, 2025
/s/ Cameron Williams Cameron Williams	Director	April 23, 2025
/s/ Emmanuel Alia Emmanuel Alia	Director	April 23, 2025

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BIO-key®