Independent appraisal valuation of software developed by

CyberSecure Solutions Inc.

- Sample Report -

Valuation Date	May 23rd, 2023
Expiration Date	May 23rd, 2024
Report Date	June 16th, 2023

Prepared by: Eqvista

TABLE OF CONTENTS

SUMMARY OF FINDINGS

May 23rd 2023

Purpose and scope

We have performed a calculation agreement, as the term is defined in the NACVA Professional Standards. We performed certain calculation procedures for ShieldNet Suite (Hereinafter referred to as "Software"), a software application developed by CyberSecure Solutions Inc., as of May 23rd 2023. The specific calculation procedures are detailed in paragraphs ("Valuation of Software") of our calculation report. The calculation procedures were performed solely to assist in the matter of the Developer, and the resulting calculation of value should not be used for any other purpose or any other party for any purpose. The estimate of value that resulted from a calculation engagement is expressed as a calculated value.

In a calculation engagement, the valuation analyst and the client agree on the specific valuation approaches and valuation methods the valuation analyst will use and the extent of valuation procedures the valuation analyst will perform to estimate the value of the subject interest. A calculation engagement does not include all the procedures required in a valuation engagement, as that term is defined in the NACVA Professional Standards. Had a valuation engagement been performed, the results might be different.

Summary of Findings

TEN MILLION, ONE HUNDRED AND SEVENTY THOUSAND DOLLARS
$10,170,000

This conclusion is subject to the Statement of Assumptions and Limiting Conditions found on page 32 and to the Valuation Analyst's Representation found on page 34. We have no obligation to update this report or our conclusion of value for information that comes to our attention after the date of this report.

Eqvista Inc.

OVERVIEW OF VALUATION

Table 1

	Valuation of Software	Weight	Weighted Value of Software
Income Approach	$15,310,000	50%	$7,655,000
Market Approach	$4,980,000	25%	$1,245,000
Reproduction Cost Approach	$5,090,000	25%	$1,272,500
Concluded Value of Software			$10,172,500
Rounded			**$10,170,000**

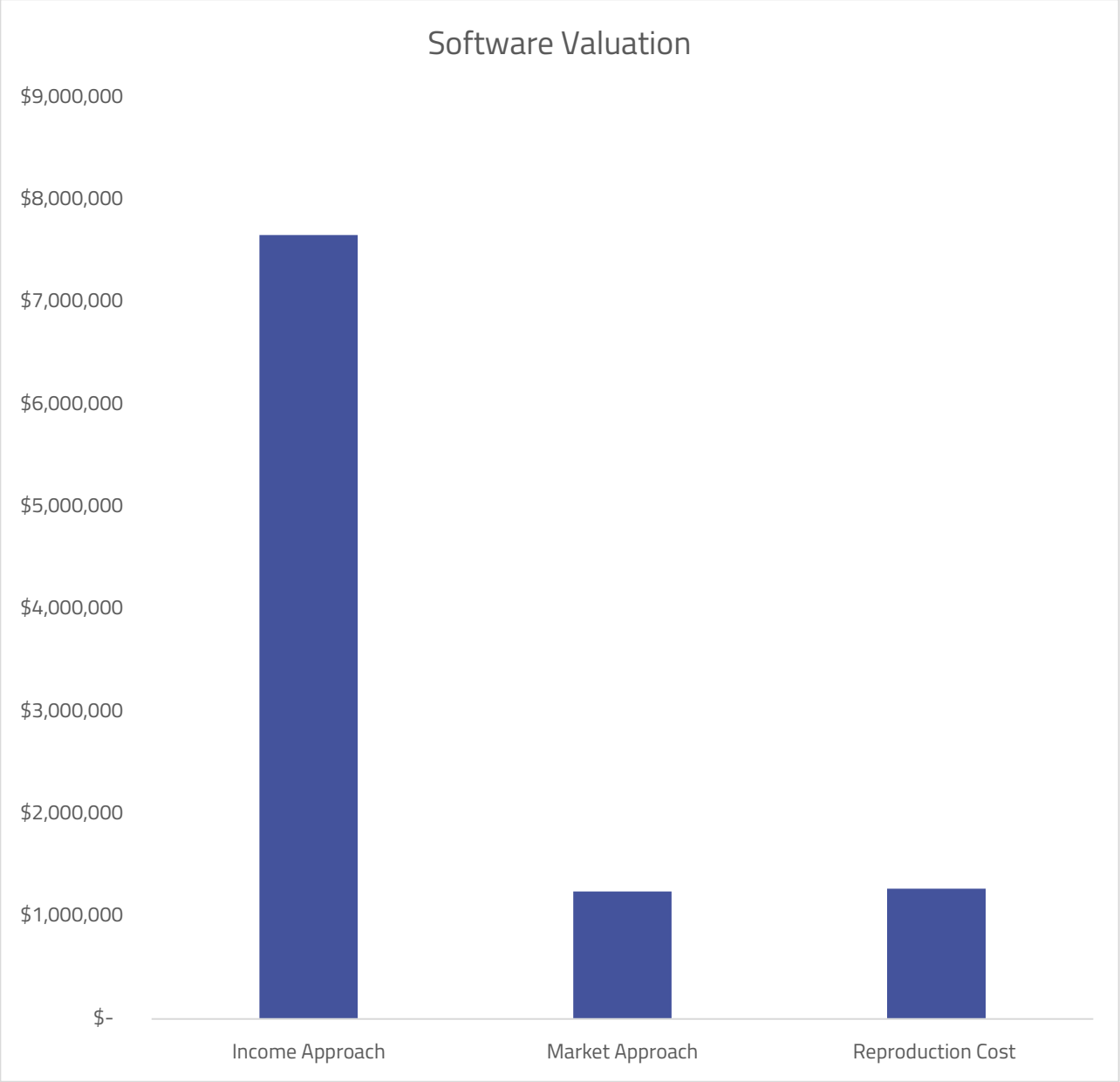
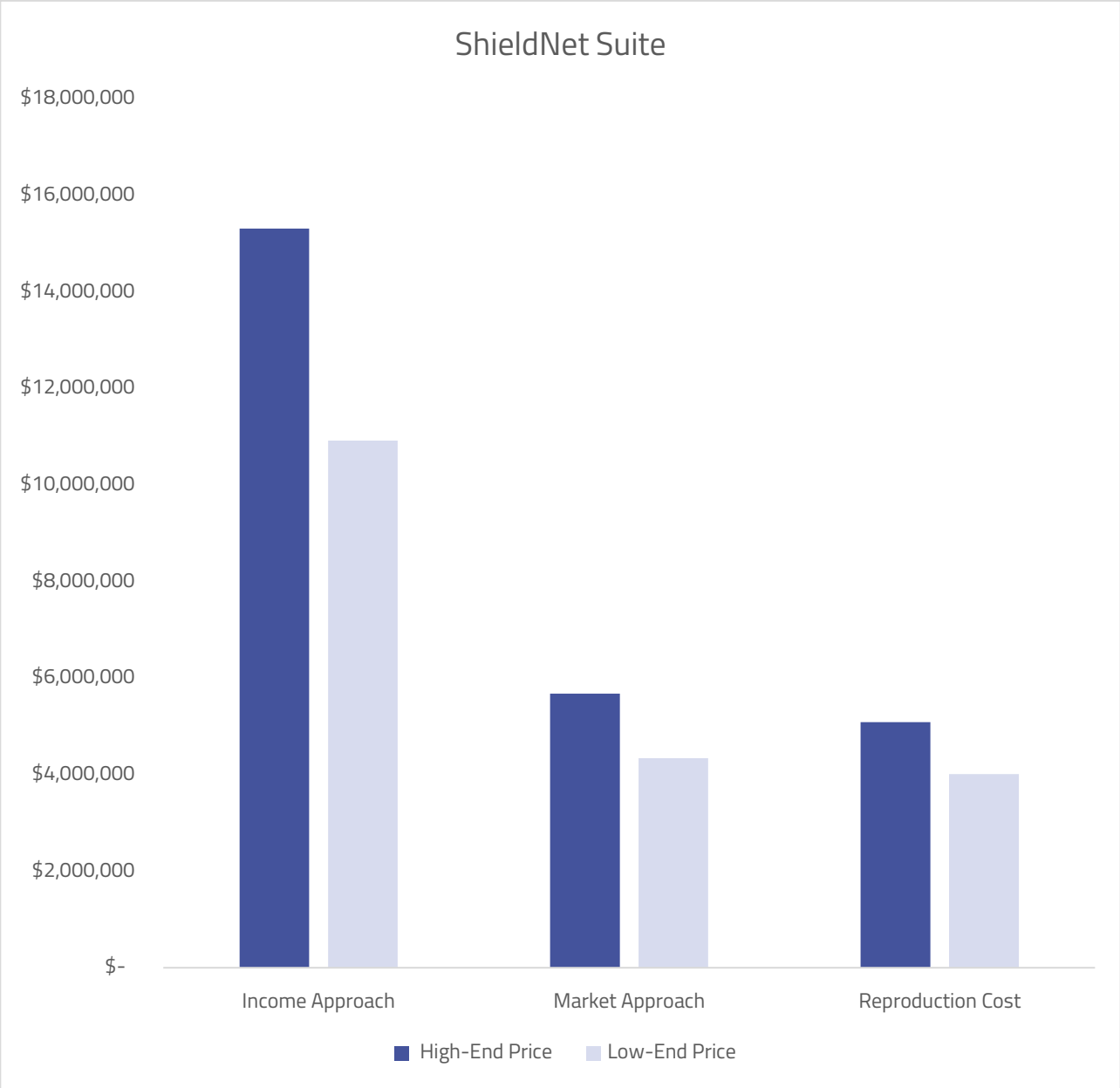


Table 2

	High-End Price	Low-End Price
Income Approach	$15,310,000	$10,920,000
Market Approach	$5,680,000	$4,340,000
Reproduction Cost Approach	$5,090,000	$4,010,000



SOFTWARE INFORMATION

ShieldNet Suite

ShieldNet Suite is a flagship cybersecurity software that offers an integrated suite of advanced tools and features, empowering organizations to proactively defend their digital infrastructure. With an emphasis on adaptability and customization, ShieldNet Suite can be tailored to meet the unique security needs of businesses across various sectors.

Key Components of ShieldNet Suite:

- **Threat Intelligence Platform**: ShieldNet Suite incorporates a robust threat intelligence platform that continuously monitors global cyber activities, analyzes emerging threats, and provides actionable insights to organizations. This platform leverages advanced machine learning algorithms and data analytics techniques to identify potential risks and enable proactive threat mitigation strategies.

- **Network Security Suite:** The network security suite within ShieldNet provides a comprehensive set of tools for protecting the integrity and confidentiality of network communications. It includes features such as firewalls, intrusion detection and prevention systems (IDPS), secure gateways, and virtual private network (VPN) solutions. These components work harmoniously to safeguard network infrastructure from unauthorized access, malware, and other network-based threats.

- **Endpoint Protection System:** ShieldNet Suite incorporates an advanced endpoint protection system that secures devices, endpoints, and user access points against a wide range of cyber threats. This component combines next-generation antivirus, anti-malware, and anti-ransomware technologies with behavior monitoring and machine learning algorithms to detect and prevent malicious activities at the endpoint level.

- **Security Analytics and Incident Response:** The security analytics and incident response module of ShieldNet Suite provides organizations with comprehensive visibility into their cybersecurity posture. It includes advanced log analysis, real-time threat monitoring, and incident response capabilities. This component enables organizations to proactively detect and respond to security incidents, minimizing the impact of potential breaches and ensuring a swift return to normalcy.

DEVELOPMENT TEAM

CyberSecure Solutions Inc. is a cutting-edge cybersecurity firm specializing in providing comprehensive security solutions to organizations worldwide. Incorporated in 2013, the Company has rapidly emerged as a trusted partner for businesses seeking comprehensive protection against cyber threats. Headquartered in Austin, Texas, CyberSecure Solutions leverages its strategic location to collaborate with industry leaders and drive innovation in the cybersecurity domain. The development team consists of four main developers, hereinafter referred to as the "Developer," and they are as follow:

Emily Johnson (CTO)
Emily is an accomplished software developer with over 8 years of experience in the industry. She holds a Bachelor's degree in Computer Science from Stanford University, where she graduated with honors.

Prior to joining CyberSecure Solutions, Emily started her career at Google, one of the world's leading technology companies. During her time at Google, she contributed to the development of their flagship search engine, working on optimizing algorithms for faster and more accurate search results. Her deep understanding of search algorithms and data structures allowed her to make significant improvements to the search engine's performance.

Seeking new challenges, Emily joined Microsoft, where she worked on their cloud computing platform. She played a key role in designing scalable and reliable systems to support the growing demand for cloud services. Her expertise in system architecture and distributed computing contributed to enhancing the platform's efficiency and resilience.

David Chen (Full Stack Developer)
David is a seasoned software developer with a track record of 7 years in the industry. He holds a Master's degree in Computer Engineering from MIT, specializing in artificial intelligence and machine learning.

David's career took off at Amazon, a global e-commerce and cloud computing giant. During his tenure at Amazon, he worked on their recommendation system, leveraging state-of-the-art machine learning algorithms to personalize user experiences. His contributions significantly improved the accuracy and effectiveness of the system, leading to increased customer satisfaction and engagement.

Seeking a new challenge, David joined Facebook, one of the world's largest social media platforms. At Facebook, he focused on developing data analysis tools for the advertising platform. His expertise in data mining and statistical analysis allowed him to extract valuable insights from vast amounts of user data, enabling advertisers to optimize their campaigns and achieve better results.

Alongside his industry work, David is an avid researcher and has published several papers in top-tier conferences. His research contributions focus on the intersection of machine learning and natural language processing. His work has garnered attention and recognition from the academic community.

Sarah Thompson (Front End Developer)
Sarah Thompson is a versatile software developer with 7 years of experience in the industry. She completed her Bachelor's degree in Software Engineering at Carnegie Mellon University, where she excelled in software design and development.

Sarah's career began at a startup called TechStart, where she developed web applications using a wide range of technologies, including HTML, CSS, JavaScript, and PHP. Her work at TechStart allowed her to gain a solid foundation in full-stack web development and understand the challenges involved in building scalable and user-friendly applications.

Seeking further growth opportunities, Sarah joined a leading e-commerce company known for its innovative approach to online shopping. At the company, she worked on their back-end systems, focusing on optimizing performance and improving the efficiency of data processing. Her contributions led to faster page load times and enhanced overall user experience.

Sarah's passion for front-end development and creating visually appealing interfaces led her to join a design agency specializing in web and mobile application design. In this role, she collaborated closely with designers to bring their visions to life, translating design mockups into functional and interactive websites. Her attention to detail and ability to seamlessly blend aesthetics with functionality set her apart as a talented developer.

Michael Rodriguez (Back End Developer / SecOps developer)
Michael Rodriguez is an experienced software developer specializing in cybersecurity, with 9+ years of experience in the industry. He holds a Ph.D. in Computer Science from the University of California, Berkeley, with a focus on cryptography and network security.

Michael's career started at a government organization specializing in cybersecurity. In this role, he conducted vulnerability assessments and developed secure software solutions to protect critical systems from cyber threats. His expertise in encryption algorithms and network security allowed him to design robust security frameworks that safeguarded sensitive data and prevented unauthorized access.

Seeking a broader impact, Michael joined a leading cybersecurity firm known for its cutting-edge solutions. At the firm, he worked on developing encryption algorithms and protocols to address emerging security challenges. His contributions to the field of cybersecurity were highly regarded, and he had the opportunity to collaborate with renowned experts in the industry.

Michael's expertise in cybersecurity and his ability to understand complex vulnerabilities made him a sought-after consultant. He provided security audits and guidance to various organizations, helping them identify and mitigate potential risks. His comprehensive approach and deep understanding of cybersecurity principles contributed to the success of numerous projects.

INDUSTRY REPORT

This section aims to describe the cybersecurity market in the U.S. to get an overall background information about the industry the Software is servicing.

Cybersecurity is the practice of protecting programs, networks, and systems from digital attacks. These cyberattacks are usually aimed at accessing, changing, damaging, or destroying sensitive data and interrupting business processes. Cybersecurity against online threats undertakes greater significance in today's changing digital landscape. It has become vital among organizations due to rapidly increasing cybercrimes, frauds, threats, risks, and vulnerabilities. Several factors, including an increase in the frequency and sophistication of cyber threats, the emergence of disruptive digital technologies, and stringent data protection regulations for information security are driving the growth of the cybersecurity market.

Key Players:

The major players operating in the global cybersecurity market are Fortinet, Inc. (U.S.), Cisco Systems, Inc. (U.S.), Juniper Networks, Inc. (U.S.), Palo Alto Networks, Inc. (U.S.), IBM (U.S.), Check Point Software Technologies Ltd. (Israel), F5 Networks, Inc. (U.S.), FireEye, Inc. (U.S.), Splunk Inc. (U.S.), Symantec Corporation (U.S.), Oracle (U.S.), Microsoft Corporation (U.S.), Intel (U.S.) Imperva Inc(U.S.), CyberArk Software Ltd. (U.S.), RSA Security LLC. (U.S.), among others.

Driver:

Cybersecurity Mesh Architecture (CSMA) to simplify the security infrastructure. With the help of a number of supporting layers and modularization of security services, CSMA aims to increase security's composability and scalability. In the cyber security market, CSMA helps an organization to accomplish greater security with fewer resources by fostering a more integrated and collaborative security environment. This security strategy is particularly suited to the move to hybrid, multi-cloud settings where businesses may need to provide uniform security across many, changing and growing IT environments.

To address changing security concerns, CSMA allows a more collaborative, adaptable, and scalable approach. Security analytics and intelligence, distributed identity fabric, centralized policy and posture management, and consolidated dashboards are the four core components of CSMA. The basic layers are defined by CSMA to improve the interoperability of security systems. The organization gains from this in terms of security in a number of ways, including better efficiency, consistent security, flexible and scalable security, enhanced cooperation, and intelligent security design.

Restraint: Lack of cybersecurity professionals

As technology advances, the network architecture for cyber security rises in complexity. Threats cannot effectively target today's virtual company because there are too many access points. Still, there are not enough qualified cyber security specialists who can recognize and counteract such sophisticated and zero-day assaults. Organizations are vulnerable to security threats as a result of this scarcity of competent security professionals.

Network flaws are the focus of cyber-attacks, which leverage weaknesses to gain access to corporate networks. Rising levels of complexity have led to the emergence of several new zero-day threats. Attackers utilize undetectable tactics and strategies to get into an organization's corporate network. Due to a lack of knowledge about sophisticated cyber threats, organizations underinvest in their security infrastructures, which causes enormous losses and can hinder the cybersecurity market growth. Additionally, businesses with urgent cyber security needs have seen a severe lack of competent specialists within their firms, which increases their susceptibility to attacks.

Opportunity: IoT security to play a vital role in the cyber security market

IoT security may be thought of as a cybersecurity tactic and defense system that defends against the potential for cyberattacks that explicitly target physically linked IoT devices. Any connected IoT device is open to a bad actor's breach, compromise, and control, making it possible for them to eventually infiltrate, steal user data, and bring down systems.

IoT devices now make up 30% of all devices on enterprise networks, which has triggered a shift in business processes owing to the technology's quick development and acceptance. These devices' rich data sources offer insightful information that is useful for real-time decision-making and accurate predictive modeling. In the cybersecurity market, IoT is also a crucial facilitator of digital transformation in the workplace, having the potential to increase employee satisfaction, workforce productivity, corporate efficiency, and profitability.

Challenge: Difficulties in addressing the complexity of advanced threats

Mobile devices are increasingly being targeted by cyberattacks worldwide. They are getting more advanced, and every month a number of new malware types are discovered that target mobile devices. The number, breadth, and sophistication of targeted threats and cyberattacks have considerably expanded during the past five years, making them the most serious security problem for any business.

Cybercriminals breach networks of corporations and steal data using sophisticated attack tactics, leaving such firms open to attack. Understanding the types of cyberattacks has gotten difficult because of the variety of threats. In order to forecast, identify, and defend mobile devices, enterprises are searching for complete mobile security solutions. For the cyber security market, dealing with the complexity of sophisticated threats represents a considerable problem.

APPROACH TO METHODS

The purpose of this valuation is to determine the fair market value of the Software, as described previously, therefore, it is essential to understand the basic concept of fair market value:

Definition of Fair Market Value

The most commonly used definition of Fair Market Value is located in Revenue Ruling 59-60.

This revenue ruling defines Fair Market Value as "...the price at which the property would change hands between a willing buyer and a willing seller when the former is not under any compulsion to buy and the latter is not under any compulsion to sell, both parties having reasonable knowledge of relevant facts. Court decisions frequently state in addition that the hypothetical buyer and seller are assumed to be able, as well as willing, to trade and to be well informed about the property and concerning the market for such property."

This is the most widely used definition of Fair Market Value in valuation. It also implies that the value is to be stated in cash or cash equivalents that the property would have been on the open market for a long enough time to be influenced by market values to establish the true value.

Valuation of the Software

There are many acceptable methods used in valuation, however the three basic approaches that must be considered by the Valuation Analyst are:

1. The Income Approach
2. The Market Approach, and
3. The Asset-Based Approach

Further details about the three valuation approaches are explained below.

Income Approach

The Income Approach is an income-oriented approach where the model estimates the value of the business based of the business' potential income generating ability in the future. The computation is to calculate the present value of the business by capitalizing a series of income streams based on a multi-period forecast. A common and widely used model under the Income Approach is the Discounted Cashflow Method for valuation of a business.

Considering that the Developer has provided sophisticated and well-considered cash-flow forecast specifically for the future sales revenue and operating expense of the Software, the Valuation Analyst decides to adapt the Income Approach in valuation of the Software.

Market Approach

The Market Approach is fundamental to valuation as fair market value is determined by the market. Under this approach, the Valuation Analyst attempts to find developed software that are providing the same, or similar services or functionality with the Company and use their transaction data to determine the fair market value of the Software.

Regarding the nature of the Market Approach, the Valuation Analyst researches for Guideline Precedent Transactions (GPTs) that the Target Company is engaged in the cybersecurity industry in the *Trademark Comparables AG Database*. The Valuation Analysis is able to find three GPTs that can be adopted for the Valuation of the Software.

Asset-Based Approach

The Asset-Based Approach, sometimes referred to as the Cost-Based Approach, is an asset-oriented valuation method. The Cost-Based Approach estimates the value of a software based on the costs incurred in its development or reproduction. The method focuses on determining the expenses associated with creating or acquiring the software and considers these costs as the basis for determining the fair market value of the software.

The Cost-Based Approach in valuation of Software can be conducted by capitalizing the historical expenses relating to development of the Software. The related expenses can be payroll expense, consultation fee, testing fee, research, and development, etc... After discussion with the Developer, the cost history of the development of the Software is not clear and not fully booked, therefore adapting the historical methodology might not be the most appropriate. Thus, the Valuation Analyst decides to use the reproduction cost method in determining the value of the Software under the Cost-Based Approach.

Overall, the **Income Approach**, **Market Approach**, and the **Reproduction Cost Method** is adopted in this valuation of the Software and it is further explained in the following Section.

THE INCOME APPROACH

As previously discussion, the Income Approach is adopted in the valuation of the Software. The valuation analyst has decided to use the Discounted Cashflow Model to calculate the present value of the future cashflow projection of the Software, and use the Perpetual Growth Model to estimate the present value of the terminal value of the Software. Details of the principle, methodology, and result is presented in the following:

Discounted Cashflow (DCF) Model

The Discounted Cashflow Model is one of the most theoretically correct methods of valuation. It is premised on the concept that the Software's value is based on the present value of all future cashflows that flow to the business. The formula for the Discounted Cashflow Model is as follows:

$$PV = \sum_{t=1}^{t=n} \frac{CF_t}{(1+k)^t} \quad (1)$$

Equation (1) shows the core concepts in the DCF Model, where:

- PV = Present Value of sum of the future cashflow of the Software
- CF_t = Future Cashflow at time t
- k = Discount Rate
- n = Number of forecast period

In essence, the DCF Model requires a Software's forecast to be made of future cashflow, going out far enough into the future until an assumed stabilization of the cashflows occurs for the Software being valued. However, future cashflows have to be discounted to consider the so-called, "time-value of money," further detail of the discount rate is elaborated in Section – Discount and Capitalization Rate.

After calculating the present value of the cashflow projections, it is important to also consider the Terminal Value of the Software. The Terminal Value indicates the value of the Software for succeeding periods beyond the forecasted period. A common approach to determine the terminal value of the Software is by adapting the Perpetual Growth Model (the PG Model). The PG Model assumes that the Software will generate stable cashflow at a constant rate continues indefinitely. The Terminal Value is determined using the following formula under the PG Model:

$$Terminal\ Value = \frac{CF_n*(1+g)}{(k-g)} \quad (2)$$

Equation (2) shows the formula to calculate the Terminal Value of the Software, where:

- CF_n = Cashflow forecast of last projection period
- g = rate of constant growth of cashflow beyond forecasted projection

The Terminal Value can be considered as the lump-sum of the indefinite cashflow in the succeeding period beyond forecasted period at period $t = n$. Therefore, it is essential to apply the discount rate at period n to the Terminal Value to calculate the Present Value of the Terminal Value.

Financial Forecast and Valuation Result

The Company has provided financial forecast specifically associated with the Software for the period FY2023 to FY2030 on the basis of the Developer's own assumption and expert knowledge. The Valuation Analysis is not liable for any parts on the financial forecast and it is purely based on the Developer's Input, however, the Valuation Analysis has conducted market research on some key variables to see if the financial forecast is in-line with market data.

The financial forecast of the Software is principally based on the following component:

1. Price

As advised by Management, the Software will generate revenue through receiving subscription fee from its users, and the Software will be priced at $580 per year, and it is projected to increase by 3% each year after FY2023. The Valuation Analyst has conducted market research on similar cybersecurity products and compared the pricing of the Software with 5 other cybersecurity software. The result is as follow:

Table 2

Name of Software	Price (per year)
Cybershield System	$480
SecureNet Solution	$430
CyberGuard Technology	$550
Sentinel CyberDefense	$800
ArmorTech Cybersecurity	$750

As seen in Table 2, the prices of 5 different cybersecurity software are listed and the price range is $430 to $800. Being priced at $580 per year is within the product price range of the market, the Valuation Analyst therefore did not adjust the pricing of the Software.

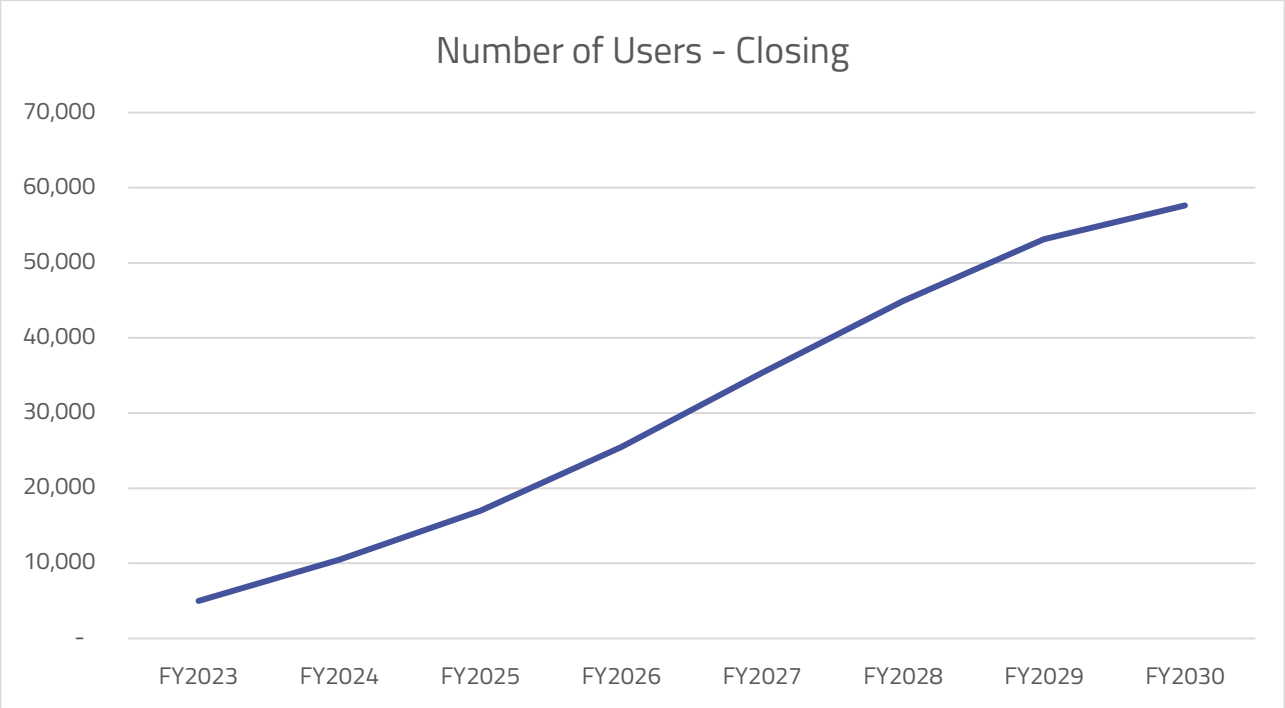
2. Subscriptions / Number of Users

The development team uses their expert knowledge and acquired experience about the cybersecurity market to estimate the number of users the Software will have for the period FY2023 to FY2030. Management expects to have 12,000 new users by the end of FY2023 and approximately 213,000 users by the end of FY2030. The breakdown of the estimation is as shown in Table 3.

Table 3

	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030
No. of Users - Beginning	-	5,000	10,500	17,025	25,471	35,373	44,928	53,155
New Users	5,000	6,000	8,100	11,340	14,742	17,690	19,459	20,432
Churn Rate	(-)	(500)	(1,575)	(2,894)	(4,839)	(8,136)	(11,232)	(15,947)
No. of Users - Closing	5,000	10,500	17,025	25,471	35,373	44,928	53,155	57,641

** The forecast on the number of users is estimated base on the management's own input.*



3. Operating Expenses

Operating Expenses primarily comprises Selling and Marketing Expenses (S&M), as well as Software Maintenance Expenses. Management has estimated that S&M would be at a high level initially then gradually relaxes overtime as the Software is getting recognized.

On the other hand, the Maintenance Expense is initially estimated to be 10% of FY2023 sales revenue and increase by 2% for each subsequent year's sales revenue. This means the forecast Maintenance Expense is 12%, 14%, 16% for FY2024, FY2025, FY2026 respectively.

The projection of Total Operating Expense is an essential area for assessment to see if the projection is in agreement with market sense. Table 4 shows the breakdown of the Total Operating Expense and the percentage of Total Operating Expense to revenue.

Table 4

	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030
Marketing Expense	$2,030,000	$4,704,525	$7,856,893	$12,107,171	$16,164,066	$19,635,550	$22,087,643	$22,614,335
Maintenance Expense	$319,000	$752,724	$1,361,861	$2,260,005	$3,463,728	$4,833,366	$6,258,165	$7,401,055
Total Operating Expense	$2,349,000	$5,457,249	$9,218,754	$14,367,176	$19,627,794	$24,468,917	$28,345,808	$30,015,390
Percentage of Revenue	**81.00%**	**87.00%**	**88.00%**	**89.00%**	**85.00%**	**81.00%**	**77.00%**	**73.00%**

As shown in Table 4, the forecast Total Operating Expense is above 80% of revenue across the period FY2023 to FY2030. This is consistent with the market data researched by the Valuation Analyst from the BVDataWorld database. The Valuation Analyst has searched for industry with NAICS code – 541519 *"Other Computer Related Services"* with sales range of 1Mm to 3MM, and found that the average Operating Expenses to Net Sales is 86.7%, 90.7%, and 91.5% for FY2022, FY2021, and FY2020 respectively.

4. Tax Rate

The revenue generated from the Software, after deducting the Operating Expenses, is subject to federal taxation. For calculation purposes, a federal tax rate of 21% is used in the financial forecast.

5. Terminal Growth Rate

The Terminal Growth Rate (TGR) represent the constant rate that the revenue stream of Software is expected to grow perpetually. TGR is approximated by using the average of the predicted U.S. inflation rate in 2023 to 2028 as sourced from the October 2022 International Monetary Fund World Economic Outlook Database.

The following table shows the financial projections of the Software.

Table 5

	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	Terminal
Price	$580.00	$597.40	$615.32	$633.78	$652.80	$672.38	$692.55	$713.33	
Number of User	5,000	10,500	17,025	25,471	35,373	44,928	53,155	57,641	
Revenue	**$2,900,000**	**$6,272,700**	**$10,475,857**	**$16,142,894**	**$23,091,522**	**$30,208,539**	**$36,812,738**	**$41,116,972**	
Marketing Expense	$(2,030,000)	$(4,704,525)	$(7,856,893)	$(12,107,171)	$(16,164,066)	$(19,635,550)	$(22,087,643)	$(22,614,335)	
Maintenance Expense	$(319,000)	$(752,724)	$(1,361,861)	$(2,260,005)	$(3,463,728)	$(4,833,366)	$(6,258,165)	$(7,401,055)	
Operating Income	**$551,000**	**$815,451**	**$1,257,103**	**$1,775,718**	**$3,463,728**	**$5,739,622**	**$8,466,930**	**$11,101,582**	
Taxation	$(115,710)	$(171,245)	$(263,992)	$(372,901)	$(727,383)	$(1,205,321)	$(1,778,055)	$(2,331,332)	
Net Income	**$435,290**	**$644,206**	**$993,111**	**$1,402,818**	**$2,736,345**	**$4,534,302**	**$6,688,875**	**$8,770,250**	
Capex	$-	$-	$-	$-	$-	$-	$-	$-	
Change in W.C.	$-	$-	$-	$-	$-	$-	$-	$-	
Free Cashflow	**$435,290**	**$644,206**	**$993,111**	**$1,402,818**	**$2,736,345**	**$4,534,302**	**$6,688,875**	**$8,770,250**	**$41,060,717**
Period Years	0.50	1.50	2.50	3.50	4.50	5.50	6.50	7.50	7.50
Discount Factor	0.87706	0.67466	0.51897	0.39921	0.30708	0.23622	0.18171	0.13977	0.13977
P.V. of Free Cashflow	**$389,335**	**$460,956**	**$568,490**	**$642,416**	**$1,002,480**	**$1,328,940**	**$1,568,332**	**$1,645,079**	**$7,701,963**

Note: 1: Capex abbreviates for Capital Expenditure, it is accounted for as Maintenance Expense.
2: W.C. abbreviates for Working Capital, as it is Software Product, Working Capital is minimal.
3: Period indicates the time, in years, the free cashflow is received as from the Valuation Date.
4: Discount Factor is calculated based on Discount Rate of 25.00%, further details in Section *"Discount and Capitalization Rate."*
5: Terminal Free Cashflow indicates the Terminal Value as calculated in Table 5.

Following Equation 2, the Terminal Value of the Software is calculated based on the financial forecast assumption, as shown in Table 6 below.

Table 6

Terminal Cashflow	$9,033,358
Discount Rate	25.00%
Constant Growth Rate	3.00%
Terminal Value	$41,060,717

Overall, for the valuation of the Software, it is the sum of the present value of the free cashflow and present value of the Terminal Value which is calculated to be $15,307,992 (**$15,310,000 rounded).**

Sensitivity Analysis – Income Approach

Under the Income Approach, the Discount Rate is a fundamental concept and also an important element that affect the Valuation of the Software. The Valuation Analysis therefore adopted a sensitivity analysis on the discount rate by adjusting the discount rate by 5% interval, the result is shown in Table 7:

Table 7

Discount Rate	**Software Valuation**	**Rounded**
20%	$22,943,029	$22,940,000
25%	$15,307,992	**$15,310,000**
30%	$10,920,807	**$10,920,000**

It is shown in Table 7 the value of software when the discount rate is adopted at 20%, 25% and 30%. It is noticed that there is a negative relationship between the discount rate and the value of the Software which means that as the discount rate increases, the value of the Software decreases.

The Valuation Analyst has used discount rate at 25% as the floor for the sake of prudence, and therefore concluded that the value of the Software should lie between **$10,920,000** and **$15,310,000**.

THE MARKET APPROACH

To find the value of the Software using the Market Approach, the Guideline Precedent Transaction (GPT) Method was implemented.

Guideline Precedent Transaction Method

In order to apply this method, the Valuation Analyst conducted a search on the Database from *Trademark Comparables AG* with the following requirement:

1) The Target Company's software must be engaged in the cybersecurity industry.
2) The Target Company's software must provide similar product/service with the Software.
3) The Guideline Precedent Transaction must be within 5 Years of Valuation Date.

Based on the above criteria, the Valuation Analyst has identified three GPTs, and the details of these GPTs are as follows:

Table 8

Closed-Date	Acquirer	Target Company	Software/Rev[(1)]
2018	CapitalVest Holdings	Cybershield Systems, Inc.	1.275
2019	Evergreen Investments Group	CyberGuard Technologies, Inc.	1.717
2022	Nexus Capital Partners	ArmorTech Cybersecurity, Inc.	2.200
			Summary of Multiple
		Average	1.731
		10th Percentile	1.363
		25th Percentile	1.496
		Median	1.717
		75th Percentile	1.958
		90th Percentile	2.103

Note: (1) The Software/Rev multiples are obtained directly from Trademark Comparables AG.

The Median Software/Rev multiple is adopted for the Valuation of the Software. The calculation of the Software value is presented in the Table below:

Table 9

Software/Rev	1.717
FY2023 Revenue	$2,900,000
Indicated Value of Software	$4,978,333
Rounded	**$4,980,000**

Sensitivity Analysis – Market Approach

Under the Market Approach, the value of the Software is determined by the selected multiple derived from transaction multiple of comparable software companies. However, using one absolute transaction multiple might not fully reflect the true value of the Software because there is no absolute comparability between software products. Therefore, the Valuation Analyst decided to use a sensitivity analysis to better cater the true value of the Software using the Maker Approach, as shown in Table 10 below:

Table 10

	Software / Rev Multiple	Indicated Software Value	Rounded
25th Percentile	1.496	$4,337,917	**$4,340,000**
Median	1.717	$4,978,333	$4,980,000
75th Percentile	1.958	$5,679,167	**$5,680,000**

The Valuation Analyst adopted the transaction multiple of the 25th Percentile and 75th Percentile to calculate a range of the value for the Software. The result indicates that the value of the Software should lie between **$4,340,000** and **$5,690,000.**

REPRODUCTION COST METHOD

The Reproduction Cost Method allows the Valuation Analyst to estimate the historical cost of the Software by measuring the cost of replicating it based on current prevailing prices. This is can then be implemented as "floor" to the Software Valuation.

The simplest and basic interpretation of the development cost of the software is using the concept of time. In the context of reproduction cost method, the times indicates how long it takes to reproduce the software and the cost indicates the expense for the time used, i.e., the average monthly cost per software developer over the development period.

In order to find the time required for replication of the Software, a widely accepted method is adopted and it is called the COCOMO II Model, this is explained later-on in this Section. First, it is necessary to determine the Fully Loaded Cost of the Developer per month for the Software development. After consulting with the Developer, they have provided the information and breakdown about the Employment Related Expense and they are as follow.

Table 11

Employee's Job Title	Number of Employees	Total Annual Salary
Software Engineers (Developer)	4	$360,000
Tester/Analyst/Security	1	$60,000
CTO	1	$180,000
Total	6	$600,000

The Employee's job title and their respective earning is presented in Table 11. As advised by the Developer, the total annual salary of employees is $600,000 on a pre-tax basis.

As the Fully Loaded Cost of Employee includes all of the expenses associated with hiring an employee, it is essential to also consider any tax, insurance, and overhead arose due to hiring. These additional expenses are highlighted in Table 12 below.

Table 12

Fully Loaded Cost	As Absolute Value	As a Percentage of Salary
Social Security Tax	$37,200	6.20%
Medicare Tax	$8,700	1.45%
Overhead (Include: Training/Travel)	$60,000	10.00%
Total	$105,900	17.65%

There are two types of taxes that need to be paid according to the Federal Insurance Contributions Act, and they are the *Social Security Tax* and the *Medicare Tax* which they are taxed at 6.20% and 1.45% respective, as shown in Table 12. In addition, as advised by the Developer, there are other expenses such as employee training costs and travelling which are approximated 10% the costs of salary.

The calculation of the cost per employee on a fully loaded cost basis is presented in Table 13 below:

Table 13

Fully Loaded Cost	**As Absolute Value**
Total Annual Salary	$600,000
Total Other Employee Related Expense	$105,900
Fully Loaded Cost	**$705,900**
Number of Employees	6
Average Annual Cost per Employee	**$117,650**
Number of months	12
Average Monthly Cost per Employee	$9,804.17
Rounded	**$9,804**

The calculated average monthly cost per employee is **$9,804** and this cost is adopted in the COCOMO II Model to evaluation the replication cost of the Software in this Valuation.

After establishing the cost of the Software replication, it is essential now to determine the time it takes to replicate the Software. This is estimated by adapting the COCOMO II Model as earlier mentioned.

The COCOMO II Model

The COCOMO II Model Constructive Cost Model is a software cost estimation model widely used in the software development industry. It provides a framework to estimate the effort, time and cost required to develop and maintain software products. The Model considers various factors that would influence the development effort and cost of the software and these factors are grouped into two categories: drivers and scalers. The driver factors are used to adjust the basic effort and cost estimates based on product-specific characteristics, whereas scaler factors are used to account for environmental and organizational factors.

There are 2 key equations in the Model that estimates the amount of effort and time it will take to develop a software product.

$$PM = A * [KNSLOC]^{E} * \prod_{i=1}^{17} EM_i \qquad 3$$

Equation 3 estimates the time effort that the key personnel of an organisation devoted to specific product, where:

PM = Person Months
A = the multiplicative constant
KNSLOC = thousands of new source lines of code
E = the exponent, a function of the scale factors
EM1 through EM17 = the effort multipliers corresponding to the cost driver ratings

The calculation of *E,* the exponent function is as follow:

$$E = B + 0.01 * \sum_{j=1}^{5} SF_j \qquad 4$$

Equation 4 estimates for the exponent function where the scaler factors are considered;

B = the exponential constant.
SF1 through SF5 = the scale factors corresponding to the scaler ratings.

The constant *A* and *B* are extracted from empirical studies conducted by *Boehm et al. 2000*[1], and the authors have calculated that the constant A and B should take values 2.94 and 0.91 respectively. It is noted that these constants may be recalibrated by using updated dataset, however, the valuation analyst does not have the expertise in the software engineering field, nor has available dataset, therefore, the valuation analyst decides to adapt the same constant in this case.

Note: 1 Boehm et al., November 2020, Software development cost estimation approaches—A survey.

Methodology and Result

In order to assess the 17 driver factors and the 5 scaler factors, the valuation analyst reviewed different aspects of the software and development team, and converted this information into corresponding values, as shown in Table 14 below:

Table 14

Drivers Factors		Rating	Effort Multiplier
PRODUCT			
RELY	Required System Reliability	N	1.00
DATA	Database Size	L	0.90
CPLX	Software System Complexity	L	0.87
RUSE	Required Reusability	VH	1.15
DOCU	Documentation Match to Life-cycle Needs	VH	1.23
COMPUTER			
TIME	Execution Time Constraint	VH	1.629
STOR	Main Storage Constraint	H	1.05
PVOL	Platform Volatility	L	0.87
PERSONNEL			
ACAP	Analyst Capability	N	1.00
PCAP	Programmer Capability	H	0.88
PCON	Personnel Continuity	VH	0.81
AEXP	Applications Experience	VH	0.81
PEXP	Platform Experience	VH	0.85
LTEX	Language and Tool Experience	H	0.91
PROJECT			
TOOL	Use of Software Tools	VH	0.78
SITE	Multisite Development	H	0.93
SCED	Required Development Schedule	N	1.00
Product of the Effort Multipliers			**0.42**

Scale Factors		Rating	Scale Value
PREC	Precedentedness	VH	1.24
FLEX	Development Flexibility	VH	1.01
RESL	Architecture/Risk Resolution	VH	1.41
TEAM	Team Cohesion	EC	0.00
PMAT	Process Maturity	EC	0.00
Sum of the Scale Factors			**3.66**
Exponent			**0.9466**

Further details on the rating and effort multiplier, see Appendix I.

Table 14 shows the responses from the Developer and it is converted into rating and the respective Effort Multiplier or Scale Value. In summary, the production of the effort multiplier is 0.42 and the value of the exponent is 0.9466. After obtaining this information, the Valuation Analyst is now able to calculate the total person months, or the amount of effort, required in order to replicate the software.

After consultation with the development team, it was determined that the size of the Software was about 600,000 lines of codes for ShieldNet Suite. The Developer also advised that the Software's lines of code are mostly functional. The Valuation Analyst does not possess the background knowledge of software coding, nor the stance, to examine the truthfulness of the information given. This valuation is conducted purely based on the information provided by the Developer and no additional evaluation is done on the raw data. The result is shown in Table 15 below:

Table 15

Type of cost	**ShieldNet Suite**
Thousands of new source lines of code	600.00
Functional Lines of Code (90%)	540.00
Obsolescence (20%)	-108.00
Total functional lines of code	432.00
Person Months	388.374
Cost per Person Month	$9,804
Total Cost	**$3,807,680**

The Valuation Analyst has taken in account for obsolescence in software and applied a 20% obsolescence rate to the software. Software obsolescence might incur due to functional, technological, or economical changes that affects the functionality of the software. For instance, the hardware or software required for information retrieval being repeatedly replaced by newer devices and system, which make the original software increasingly incompatible.

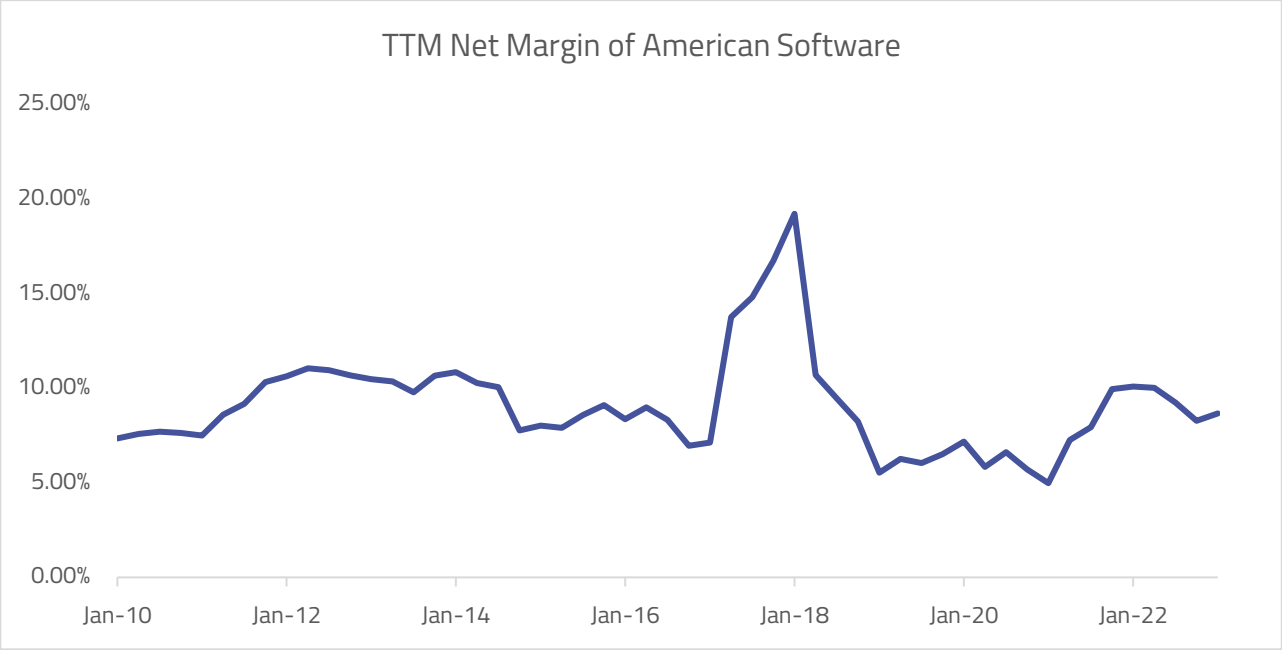
Overall, as shown in Table 15, it is calculated that the estimated cost of replicating ShieldNet Suite is **$3,807,680**.

Value of Software

In order to put a fair market value to the Software, the total cost of reproducing the Software should be accounted for in all aspects. It is important to understand that the calculated reproduction cost does not reflect the total cost of reproduction as it does not recognize the economic cost of reproducing the Software. There are two components that should also be considered when valuing the Software, and they are the Developer's Profit Cost Component, and the Entrepreneurial Incentive Cost Component.

Developer's Profit Cost Component

The developer's profit cost component should also be accounted for because it indicates the compensation for the Developer's decision to develop the Software. The valuation analyst decides to use the average net profit margin of the software industry as proxy for this required return. According to the dataset, as sourced in *Macrotrends*, the average net profit margin for American Software from 2010 – 2023 is 8.67%, as shown below.



Online sourced: macrotrends, American Software Profit Margin 2010-2023.

The net profit margin of **8.67%** is adopted and this is applied to the replicated cost as previously calculated. The overall result is shown in Table 13.

Entrepreneurial Incentive Cost Component

The entrepreneurial incentive cost component considers the opportunity cost for deciding to develop the Software. This component indicates the value of the trade-off of other investment opportunities with similar risk level. In essence, the value of the opportunity cost can be estimated by the value of the required return of the software development.

In order to approximate the required rate return of software development, the valuation analyst decides to use the Weighted Average Cost of Capital WACC of the software industry. This is a common and widely accepted approach to determine the required rate return because WACC expresses the return demanded by both bondholders and shareholders, to provide the funds for the software development.

The valuation analyst has used comparable cybersecurity software companies to estimate the WACC and the result indicates that a WACC of 25% should be adopted.

Total Cost of Reproduction

Considering the actual reproduction cost, the Developer's Profit Cost Component, and the Entrepreneurial Incentive Cost Component, the total cost of reproduction is shown below in Table 16.

Table 16

	Actual Cost of Reproduction	Developer's Profit Cost Component	Entrepreneurial Incentive Cost Component	Total Cost of Reproduction
ShieldNet Suite	$3,807,680	$330,126	$951,920	$5,089,726
Rounded				**$5,090,000**

Sensitivity Analysis – Reproduction Cost Approach

It is noted that there are two crucial assumptions in the COCOMO II Model presented in this valuation, and they are the percentage of functional lines of code of the Software and the rate of obsolescence. The Valuation Analyst currently assumes functional lines of code at 90% and rate of obsolescence at 20%. However, changes in these factors may lead to significant changes in the valuation result, therefore, the Valuation Analyst conducted a sensitivity analysis on the cost of reproduction of the Software by adjusting the percentage of functional lines of code and the rate of obsolescence.

Table 17

ShieldNet Suite		Percentage of functional lines of code						
		100%	95%	**90%**	85%	80%	75%	70%
Rate of Obsolescence	10%	$4,703,222	$4,480,316	$4,256,783	$4,032,584	$3,807,680	$3,582,024	$3,355,562
	15%	$4,455,511	$4,244,345	$4,032,584	$3,820,194	$3,607,136	$3,393,364	$3,178,830
	20%	$4,207,020	$4,007,631	**$3,807,680**	$3,607,136	$3,405,960	$3,204,111	$3,001,541
	30%	$3,707,485	$3,531,771	$3,355,562	$3,178,830	$3,001,541	$2,823,660	$2,645,143
	35%	$3,456,315	$3,292,505	$3,128,234	$2,963,475	$2,798,197	$2,632,366	$2,465,944
	40%	$3,204,111	$3,052,254	$2,899,970	$2,747,233	$2,594,015	$2,440,285	$2,286,006
	45%	$2,950,780	$2,810,930	$2,670,686	$2,530,025	$2,388,921	$2,247,346	$2,105,265

Table 18

Value of ShieldNet Suite		Percentage of functional lines of code						
		100%	95%	**90%**	85%	80%	75%	70%
Rate of Obsolescence	10%	$6,286,797	$5,988,839	$5,690,041	$5,390,355	$5,089,726	$4,788,092	$4,485,380
	15%	$5,955,681	$5,673,416	$5,390,355	$5,106,454	$4,821,658	$4,535,910	$4,249,142
	20%	$5,623,523	$5,357,000	**$5,089,726**	$4,821,658	$4,552,746	$4,282,935	$4,012,160
	30%	$4,955,795	$4,720,918	$4,485,380	$4,249,142	$4,012,160	$3,774,386	$3,535,763
	35%	$4,620,056	$4,401,092	$4,181,511	$3,961,277	$3,740,350	$3,518,684	$3,296,227
	40%	$4,282,935	$4,079,948	$3,876,390	$3,672,226	$3,467,420	$3,261,929	$3,055,704
	45%	$3,944,308	$3,757,370	$3,569,906	$3,381,884	$3,193,271	$3,004,027	$2,814,107

The results in Table 17 show the production cost of ShieldNet Suite, and Table 18 shows that total reproduction cost of the Software by including the Developer's Profit Cost Component and Entrepreneurial Incentive Cost Component as each level.

It can be seen that there is a positive correlation between the percentage of functional lines of code and the reproduction cost of the Software. This indicates that the lower the percentage of functional lines of code the Software has, the lower the cost of reproduction. On the other hand, there is a negative correlation between the rate of obsolescence and the reproduction cost of the Software. This means the lower the rate of obsolescence, the larger the reproduction cost.

The implication of the scenario-based analysis is that the valuation analyst can provide a degree of measurement, or *"safety net,"* to the uncertainty in the model's assumption or information. For instance, the valuation analyst did not

conduct any check or assessment on the Software's percentage of functional lines of code, and by using a scenario-based analysis, the valuation analyst can observe the effect of adapting different percentages has on the reproduction cost, and thus draw a more considerate conclusion on the overall reproduction cost.

As advised by the development team, they have spent overall 11 years developing the software. The Valuation Analyst believes using an obsolescence rate at 30% is an appropriate, reasonable and prudence practice, given the level of technological advantage in the past decade.

It is also advised by the Developer that 90% of line of code is functional in the Software, however, in reality it is somewhat difficult and costly to achieve this amount of code coverage. A more common code coverage is 80% and it is widely accepted among the software developers. Thus, the valuation analyst believes that by adapting a percentage of functional lines of code between 70% to 90% would provide a more realistic and accurate cost of reproduction of the Software.

Overall, considering the scenario-based analysis as well as the above-mentioned reasoning, the valuation analyst determined that the total cost of reproduction of the Software should lie between 70% to 90% of functional lines of codes at 20% obsolescence rate, as shown below:

Table 19

Total Cost of Reproduction		Percentage of functional lines of code				
		90%	85%	80%	75%	70%
Rate of Obsolescence	20%	$5,089,726	$4,821,658	$4,552,746	$4,282,935	$4,012,160
Rounded		**$5,090,000**	$4,820,000	$4,550,000	$4,280,000	**$4,010,000**

Overall, the valuation analyst determined that the total reproduction cost of the Software should lie between **$5,090,000** to **$4,010,000**.

RECONCILIATION OF VALUE

In order to determine the value of the Software, the Valuation Analyst derived indications under the Income Approach, Market Approach, and the Reproduction Cost Approach.

The Income Approach was weighted at 50% because the Income Approach focuses on the Software's ability to generate income and is theoretically the most accurate method for determining value. Using the Income Approach also cater the future prospect of the Software.

The Market Approach and the Reproduction cost Approach are both weighted equally at 25%. The Market Approach and Reproduction Cost Approach both do not consider the income-generating ability of the Software. The Market Approach provides insight into market expectations for the cybersecurity industry as a whole, which can be accurate in arriving at fair value of the Software. However, the software of the GPTs is not exact match for the Software. The Reproduction Cost Approach by its nature would act as a floor to the valuation of Software.

Table 20

	Valuation of Software	Weight	Weighted Value of Software
Income Approach	$15,310,000	50%	$7,655,000
Market Approach	$4,980,000	25%	$1,245,000
Reproduction Cost Approach	$5,090,000	25%	$1,272,500
Concluded Value of Software			$10,172,500
Rounded			**$10,170,000**

Overall, the Valuation of ShieldNet Suite is derived at **$10,170,000**. The Valuation Analyst also provided a range for the Valuation of the Software under individual valuation approach, as shown in Table 2.

ASSUMPTIONS AND LIMITING CONDITIONS:

1. The conclusion of value arrived at herein is valid only for the stated purpose as of the date of the valuation.

2. Software information provided by the Developer or representative, in the course of this engagement, have been accepted without any verification as fully and correctly reflecting the software development conditions and operating results for the respective periods, except as specifically noted herein. Eqvista, Inc. has not reviewed, or compiled the Software information provided to us and, accordingly, we express no opinion or any other form of assurance on this information.

3. Public information and industry and statistical information have been obtained from sources we believe to be reliable. However, we make no representation as to the accuracy or completeness of such information and have performed no procedures to corroborate the information.

4. We do not provide assurance on the achievability of the results forecasted by or for the Software because events and circumstances frequently do not occur as expected; differences between actual and expected results may be material; and achievement of the forecasted results is dependent on actions, plans, and assumptions of management.

5. The conclusion of value arrived at herein is based on the assumption that the current level of management expertise and effectiveness would continue to be maintained, and that the character and integrity of the enterprise through any sale, reorganization, exchange, or diminution of the owners' participation would not be materially or significantly changed.

6. This report and the conclusion of value arrived at herein are for the exclusive use of our client for the sole and specific purposes as noted herein. They may not be used for any other purpose or by any other party for any purpose. Furthermore, the report and conclusion of value are not intended by the author and should not be construed by the reader to be investment advice in any manner whatsoever. The conclusion of value represents the considered opinion of Eqvista, Inc., based on information furnished to them by the subject company and other sources.

7. Neither all nor any part of the contents of this report especially the conclusion of value, the identity of any valuation specialists, or the firm with which such valuation specialists are connected or any reference to any of their professional designations should be disseminated to the public through advertising media, public relations, news media, sales media, mail, direct transmittal, or any other means of communication without the prior written consent and approval of Eqvista, Inc.

8. Future services regarding the subject matter of this report, including, but not limited to testimony or attendance in court, shall not be required of Eqvista, Inc. unless previous arrangements have been made in writing.

9. Eqvista, Inc. has not determined independently whether the subject company is subject to any present or future liability relating to environmental matters including, but not limited to CERCLA/Superfund liability nor the scope of any such liabilities. Eqvista, Inc.'s valuation takes no such liabilities into account, except as they have been reported to Eqvista, Inc. by the subject company or by an environmental consultant working for the subject company, and then only to the extent that the liability was reported to us in an actual or estimated dollar amount. Such matters, if any, are noted in the report. To the extent such information has been reported to us, Eqvista, Inc. has relied on it without verification and offers no warranty or representation as to its accuracy or completeness.

10. No change of any item in this valuation report shall be made by anyone other than Eqvista, Inc., and we shall have no responsibility for any such unauthorized change.

11. Unless otherwise stated, no effort has been made to determine the possible effect, if any, on the subject business due to future Federal, state, or local legislation, including any environmental or ecological matters or interpretations thereof.

12. Except as noted, we have relied on the representations of the owners, management, and other third parties concerning the value and useful condition of all equipment, real estate, investments used in the business, and any other assets or liabilities, except as specifically stated to the contrary in this report. We have not attempted to confirm whether or not all assets of the business are free and clear of liens and encumbrances or that the entity has good title to all assets.

13. All facts and data set forth in the report are true and accurate to the best of the valuation analyst's knowledge and belief. We have not knowingly withheld or omitted anything from our report affecting our value estimate.

14. Unless otherwise provided for in writing and agreed to by both parties in advance, the extent of the liability for the completeness or accuracy of the data, opinions, comments, recommendations and/or conclusions shall not exceed the amount paid to the valuation analysts for professional fees and, then, only to the parties for whom this report was originally prepared.

15. The conclusion reached in this report is based on the standard of value as stated and defined in the body of the report. An actual transaction in the business or business interest may be concluded at a higher value or lower value, depending on the circumstances surrounding the company, the subject business interest and/or the motivations and knowledge of both the buyers and sellers at that time. Eqvista, Inc. makes no guarantees as to what values individual buyers and sellers may reach in an actual transaction.

16. No opinion is intended to be expressed for matters that require legal or other specialized expertise, investigation or knowledge beyond that customarily employed by valuation analysts valuing businesses.

VALUATION ANALYST'S REPRESENTATION

1. The statements of fact contained in this report are true and correct.

2. The reported analysis, opinions, and conclusions are limited only by the reported assumptions and limiting conditions and are our personal, impartial, and unbiased professional analyses, opinions, and conclusions.

3. We have no present or prospective interest in the property that is the subject of this report, and we have no personal interest with respect to the parties involved.

4. We have performed no services, as a valuation analyst or in any other capacity, regarding the property that is the subject of this report within the three-year period immediately preceding acceptance of this assignment.

5. We have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.

6. Our engagement in this assignment was not contingent upon developing or reporting predetermined results.