FROST & SULLIVAN

KnowBe4
Human error. Conquered.

2017 North American Cybersecurity Awareness and Training Platform Customer Value Leadership Award

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With the rapidly evolving world of internet crime, recent case-law requires organizations to take "reasonable measures" to protect their networks, especially their last line of defense—their employees. Many hackers are using so-called social engineering tactics to target human reactions via phishing and spear-phishing emails to create an easy access point to a company's network, stealing data and consumers' personal information—e.g., confidential documents, credit card numbers, and social security numbers, or worse, infect the network with ransomware causing downtime. Phishing emails deceive vulnerable employees by recreating or acting like legitimate emails from another employee, manager, customer, or organization, and attempt to capture valuable information from the recipient.

With persistent threats such as these, organizations cannot solely rely on security software solutions to prevent data breaches; they also need to educate employees to react appropriately and identify scam emails. Currently phishing emails remain a pervasive attack vector against organizations, boasting high success rate in acquiring valuable information from their targets. Spear-phishing attacks deceive targets at a 90+ percent rate because they have a personalized element that manipulates a person into believing an email is authentic. Hackers pose as a trusted source that people are familiar with in an attempt to trick them into clicking on malicious links which prompt recipients to type in confidential information such as their credentials, credit card information, and critical organizational data or personal information.

Organizations cannot afford to leave inadequate security measures in place for their network; however, many companies deploy only software solutions that do not provide sufficient security, leaving organizations paying too much for second-rate technology. Insufficient security solutions allow network attacks that devour a company's capital and revenue because recovery is expensive and breaches lose the trust of customers.

Finally, if for-profits and non-profits do not educate and train their employees on how to identify and block social engineering attacks, these organizations will continue to fall victim to criminal attacks via the internet and find themselves on tomorrow's front page.

KnowBe4's Customer Impact and Business Impact

Florida-based KnowBe4 is a leader in the security awareness industry providing an integrated phishing training and simulation platform to facilitate its clients' need to combat the ever-evolving hacker model. Leveraging nearly 30 years of experience and the expertise of Kevin Mitnick, KnowBe4's chief hacking officer and labeled "the most famous hacker in the world," the company serves over 14,000 customers worldwide to train employees to "Think Before You Click". KnowBe4 understands that hackers try to leverage human error to bypass logical faculty and deceive employees to attack organizations; therefore, it provides a platform that focuses around combating those faults.

Additionally, KnowBe4 has the world's most extensive library of security awareness training content—including videos, games, newsletters, interactive modules, and posters—that improves employees' Phish-prone™ percentage. On average, KnowBe4's platform can help organizations cut employees' tendency to fall for phishing scams from nearly 16 percent to just 1.2 percent over the course of one year.

Unmatched Security Training and Simulated Phishing Solutions

The company's new Automated Security Awareness Program (ASAP) is a free online tool for IT professionals to customize and manage a training program by answering a questionnaire about their organization—e.g., their industry, specific regulations, and employees' issues that need targeting. KnowBe4's ASAP tool then suggests relevant courses and allows IT professionals to create a training program and course schedule specifically tailored to their organization's needs. The platform takes the guesswork out of the equation and allows quick deployment of KnowBe4's security awareness training solutions direct to employees.

Another new tool the company provides for free is Email Exposure Check Pro (EEC) that conducts a deep web search on the email addresses of an organization that are publicly available to detect the most at risk employees—e.g., email addresses included in data breaches. The EEC reveals the email attack surface an organization needs to focus on, to reduce a hacker's chance of breaching the network. A third example is KnowBe4's free Weak Password Test (WPT) tool helps clients recognize employees that are prone to using non-complex or previously used passwords.

KnowBe4 provides clients with an unlimited use of over 1,500 phishing templates that customers can email to their employees to simulate actual phishing emails—e.g., LinkedIn IT support, Domino's coupon, or a password reset—to test employees on how they respond to phishing attempts. Clients can create custom templates and randomize their delivery, allowing customers to see how employees react to various phishing attempts, re-enforcing the need to pay attention to email content, and preventing employees from warning each other (promoting personal reliance).

Organizations can utilize KnowBe4's Social Engineering Indicators feature to teach employees to recognize red flags in simulated phishing email fields—e.g., subject, attachments, and body text. In the event an employee takes the bait, enterprises can create mock landing pages to observe how far an employee will dive into the phishing scam such as filling out forms with personal or confidential company information on an outside webpage or website. Additionally, Second Chance is a feature that detects questionable information within an email; it informs employees and asks if they wish to proceed anyway. If they choose to continue, Second Chance gives them the option to go "back in time" and roll back their decision.

Furthermore, KnowBe4's clients can generate extensive reporting to show what percentage of employees take the bait—or even answer back to the hackers—with a

breakdown on each person, allowing their internal security awareness team to focus its efforts on employees who need help recognizing malicious emails. The company's Smart Groups feature is an ad-hoc, real-time query tool that allows organizations to search their employee database through a customizable set of criteria, e.g., a manager's name, number of times an employee fails a test level, and date range. The feature is comprehensive and customizable and updates employee data every 15 minutes or less for near-time information through KnowBe4's Active Directory Integration.

KnowBe4's Smart Groups feature allows clients to upgrade the security level of each employee, utilizing rules-driven phishing template deployment. For example, employees are set to a certain difficulty level between 1 and 5—if they consistently pass or cannot pass their current level, they are either promoted or demoted a phishing template level to continue challenging their responses to phishing attempts.

AIDA™, a machine learning artificial intelligence platform, is a chatbot that simulates ways that an attacker engages people through different channels—e.g., email, text message, or voicemail. It aims to convince a target that the phishing methods are legitimate contact attempts from outside organizations, such as their dentist's office or Facebook. If an employee replies (negatively or positively) AIDA will respond like a human and continue to test employee response until a graded conclusion can be rendered from the interaction. The platform is available through KnowBe4's diamond level service.

The company understands that content is an essential aspect of information retention; therefore, it creates materials in various forms for clients— for instance, ranging from extremely corporate-friendly and "safe" to more edgy styles using humor. Different content types are available to diamond level customers at no additional cost.

Customer-centric Solutions Promoting Extraordinary Company Growth

KnowBe4 consistently grows its company through customer and business acquisitions. The company leverages inbound marketing techniques to earn potential clients' trust via its free tools that prove they are a leader in the cybersecurity training and simulation industry. KnowBe4's inbound sales staff—split between small and mid-sized businesses and enterprises—is in-house, operating out of its Tampa Bay corporate office. Additionally, the company generates leads from whitepapers, webinars, and building relationships with companies through networking. KnowBe4's momentum is a direct result of the methodical way it approaches potential clients and maintains its innovative edge with its customer-centric solutions.

The company's growth velocity and trajectory—300 percent year-over-year increase—pave the way to position it as the number one security awareness vendor by the first quarter of 2018, rapidly surpassing competing vendors in the space. KnowBe4 impresses Frost & Sullivan with its quarter-to-quarter growth throughout 2017. For example, in Q3 of 2015, its revenue were $2 million; however, by Q2 of 2017 revenues reached $14 million—with the most significant quarter-to-quarter increase in Q4 of 2016, increasing revenues by $4

million. Due to its rapid growth, KnowBe4 is hiring employees to facilitate its growth and innovations allowing it to serve its clients better as well as focus its efforts on marketing to expand its global presence.

Contributing to its growth, KnowBe4 acquires companies that improve its offerings to clients, such as Security Awareness Company (SAC), which was acquired for an undisclosed amount and paid for itself in less than five months. The company recently acquired Securable.io to further expand its security awareness training platform to bring more value to its clients. Furthermore, private equity and venture capital (VC) investment firms regularly approach the company, but until recently KnowBe4 consistently declined because its positive cash flow does not require investments. However, recognizing a partner as a globally respected brand that has deep relationships with enterprises across industry verticals, KnowBe4 closed a deal in October 2017 with Goldman Sachs Growth Equity to receive a Series B of $30 million funding to continue growing its brand across industries globally.

Conclusion

More than ever, organizations need to protect their network environments and add their employees as a last line of defense "human firewall." Many cybersecurity awareness training and simulation platforms are insufficient and do not fulfill specific organizational needs. KnowBe4 leverages its understanding of the behavior and logic of hackers and the way people retain information to create the most comprehensive, best-in-class platform in the security awareness training industry. With its customer-centric solutions, future-facing innovations, company acquisitions, and strong overall performance, KnowBe4 earns Frost & Sullivan's 2017 Customer Value Leadership Award for its cybersecurity awareness and training platform.

Significance of Customer Value Leadership

Ultimately, growth in any organization depends upon customers purchasing from a company and then making the decision to return time and again. Delighting customers is, therefore, the cornerstone of any successful growth strategy. To achieve these dual goals (growth and customer delight), an organization must be best-in-class in three key areas: understanding demand, nurturing the brand, and differentiating from the competition.

- Shift competitors' customers
- Increase renewal
- Increase upsell
- Customer value
- Increase market penetration

- Increase equity
- Improve recognition/ recall
- Inspire customers
- Value leadership
- Clarify value proposition

DEMAND

BRAND

Customer Value Leadership

COMPETITIVE POSITIONING

- Clarify superior positioning
- Superior value to customers
- Competitors fall behind
- Best implementation
- Value mapping

Understanding Customer Value Leadership

Customer Value Leadership is defined and measured by two macro-level categories: Customer Impact and Business Impact. These two sides work together to make customers feel valued and confident in their products' quality and long shelf life. This dual satisfaction translates into repeat purchases and a high lifetime of customer value.

Key Benchmarking Criteria

For the Customer Value Leadership Award, Frost & Sullivan analysts independently evaluated two key factors—Customer Impact and Business Impact—according to the criteria identified below.

Customer Impact

Criterion 1: Price/Performance Value
Criterion 2: Customer Purchase Experience
Criterion 3: Customer Ownership Experience
Criterion 4: Customer Service Experience
Criterion 5: Brand Equity

Business Impact

Criterion 1: Financial Performance
Criterion 2: Customer Acquisition
Criterion 3: Operational Efficiency
Criterion 4: Growth Potential
Criterion 5: Human Capital

Best Practices Recognition: 10 Steps to Researching, Identifying, and Recognizing Best Practices

Frost & Sullivan analysts follow a 10-step process to evaluate Award candidates and assess their fit with select best practice criteria. The reputation and integrity of the Awards are based on close adherence to this process.

	STEP	OBJECTIVE	KEY ACTIVITIES	OUTPUT
1	**Monitor, target, and screen**	Identify Award recipient candidates from around the globe	• Conduct in-depth industry research • Identify emerging sectors • Scan multiple geographies	Pipeline of candidates who potentially meet all best-practice criteria
2	**Perform 360-degree research**	Perform comprehensive, 360-degree research on all candidates in the pipeline	• Interview thought leaders and industry practitioners • Assess candidates' fit with best-practice criteria • Rank all candidates	Matrix positioning of all candidates' performance relative to one another
3	**Invite thought leadership in best practices**	Perform in-depth examination of all candidates	• Confirm best-practice criteria • Examine eligibility of all candidates • Identify any information gaps	Detailed profiles of all ranked candidates
4	**Initiate research director review**	Conduct an unbiased evaluation of all candidate profiles	• Brainstorm ranking options • Invite multiple perspectives on candidates' performance • Update candidate profiles	Final prioritization of all eligible candidates and companion best-practice positioning paper
5	**Assemble panel of industry experts**	Present findings to an expert panel of industry thought leaders	• Share findings • Strengthen cases for candidate eligibility • Prioritize candidates	Refined list of prioritized Award candidates

STEP		OBJECTIVE	KEY ACTIVITIES	OUTPUT
6	**Conduct global industry review**	Build consensus on Award candidates' eligibility	• Hold global team meeting to review all candidates • Pressure-test fit with criteria • Confirm inclusion of all eligible candidates	Final list of eligible Award candidates, representing success stories worldwide
7	**Perform quality check**	Develop official Award consideration materials	• Perform final performance benchmarking activities • Write nominations • Perform quality review	High-quality, accurate, and creative presentation of nominees' successes
8	**Reconnect with panel of industry experts**	Finalize the selection of the best-practice Award recipient	• Review analysis with panel • Build consensus • Select recipient	Decision on which company performs best against all best-practice criteria
9	**Communicate recognition**	Inform Award recipient of Award recognition	• Inspire the organization for continued success • Celebrate the recipient's performance	Announcement of Award and plan for how recipient can use the Award
10	**Take strategic action**	Upon licensing, company is able to share Award news with stakeholders and customers	• Coordinate media outreach • Design a marketing plan • Assess Award's role in future strategic planning	Widespread awareness of recipient's Award status among investors, media personnel, and employees

The Intersection between 360-Degree Research and Best Practices Awards

Research Methodology

Frost & Sullivan's 360-degree research methodology represents the analytical rigor of our research process. It offers a 360-degree-view of industry challenges, trends, and issues by integrating all 7 of Frost & Sullivan's research methodologies. Too often companies make important growth decisions based on a narrow understanding of their environment, leading to errors of both omission and commission. Successful growth strategies are founded on a thorough understanding of market, technical, economic, financial, customer, best practices, and demographic analyses. The integration of these research disciplines into the 360-degree research methodology provides an evaluation platform for benchmarking industry participants and for identifying those performing at best-in-class levels.

360-DEGREE RESEARCH: SEEING ORDER IN THE CHAOS

About Frost & Sullivan

Frost & Sullivan, the Growth Partnership Company, enables clients to accelerate growth and achieve best-in-class positions in growth, innovation and leadership. The company's Growth Partnership Service provides the CEO and the CEO's Growth Team with disciplined research and best practice models to drive the generation, evaluation and implementation of powerful growth strategies. Frost & Sullivan leverages more than 50 years of experience in partnering with Global 1000 companies, emerging businesses, and the investment community from 45 offices on six continents. To join our Growth Partnership, please visit http://www.frost.com.